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# Editor's NOTES

Will Waters

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## More reasons to push digitalisation

Strong demand for goods and severe disruption of international supply chains have continued throughout much of this year, putting further pressure on an air freight system already short of capacity. With peak season adding further demand, cargo handlers at many airports have also been under strain from a multitude of other factors including greater numbers of smaller shipments, the need to load and unload cabin cargo on freighters, stronger competition for staff, and unpredictable demand from chartered capacity. And shortages of truck drivers and freight forwarders lacking spare warehouse capacity has led to cargo waiting around longer than necessary in handling sheds. As handlers seek solutions, one positive has been a greater willingness to cooperate and find solutions to some of these congestion issues among air freight stakeholders and sometimes even competitors. And there have also been more open conversations between handlers, airlines and airports about what they can achieve, how to optimise resources, and temporary solutions to boost warehouse capacity (see ACHL report, from page 44). But better advance information from freight forwarder customers would help handlers manage and better plan their resources in general, as highlighted in the Europe report (page 10). Stakeholders within pharma logistics have also reported greater cooperation across the air logistics chain, with shippers keen to maintain the spirit of collaboration, as reported in the Airfreight Pharma conference report on page 28. Greater digitalisation will also help, and this process

continues to move forward, albeit slower than many would like. One interesting observation in the ACHL report is that the slowness of digitalisation is now deterring some young people from entering an industry that still requires pen and paper technology. But as older industry workers retire, the shift to digital will accelerate further.

Meanwhile, new technology continues to be introduced into cargo sheds, including fully autonomous ground vehicles being tested by Swissport, and the introduction of wearable technology (page 4).

Meanwhile, sustainability has come rapidly to the fore, and will play an even greater role as this decade progresses, highlights DB Schenker CEO Jochen Thewes in an interview on page 38. While we wait for a breakthrough in aviation fuel technology, improvements are possible through more efficient ground operations. And on the aircraft side, the newly launched A350 freighter promises greater efficiency than the capacity it will replace.

In the meantime, many observe that digitalisation also plays a key role here, alongside other technological developments. Anything that improves visibility and efficiency has a knock-on benefit for sustainability and costs – sometimes at the margin with quantitative improvements, and sometimes via qualitative leaps – as well as supporting customers' decisions. In many cases, we can't see what the benefits will be of new tech until it's introduced – as we are finding regularly now in our own personal use of digital tech – which is an added reason to push ahead.

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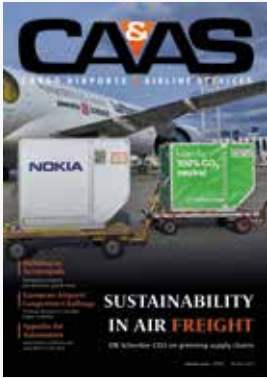
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# Appetite for automation

Air cargo sheds still trail logistics warehouses in implementing technology such as robotics, wearables, and AI. But some leading handlers and carriers are catching up, as the demand and applications for data keep increasing, reports Ian Putzger

**I**nternational air freight handler Dnata is literally flying when it comes to technology developments for its cargo terminal at Dallas/Ft Worth International airport (DFW). In partnership with tech start-up Gather AI, the handling company has launched autonomous drone operations inside the warehouse.

Buzzing through the facility, the drones

collect inventory data, count cases, read barcodes with their cameras, and map the environment. They are paired to a tablet device to provide live inventory data.

According to Dnata, the drones monitor shipments with 99.8% accuracy.

“This new technology enables us to significantly enhance efficiency and mitigate the risk of revenue leakage throughout the customer journey,” commented Guil-

laume Crozier, divisional vice-president for operations and product development, when the Dallas operation was unveiled in early October.

Other operators that have been exploring autonomous drone technology within air cargo handling warehouses include IAG Cargo at its facility in Madrid, where the FlytBase-developed drone technology completed various tasks including





accurately detecting and reading air waybills (AWBs) and identifying empty slot locations.

#### **Autonomous ground vehicles**

Unmanned ground vehicles are also beginning to move through air freight facilities. Although elevated transfer vehicles (ETVs) and material handling systems, capable of some or full automa-

tion, have been around for some time in advanced air cargo facilities, autonomous ground vehicles have been slower to enter the market. But Swissport is now testing an 'automated guided vehicle' (AGV), developed by Lödige Industries, in its airside facility at Frankfurt airport (FRA). The unit has a load capacity of up to 6,800 kilos and can move a variety of ULDs.

The AGVs can potentially replace the

manual transport of ULDs by slave pallet mover or other ground handling equipment and also eliminates the need for fixed ground transport routes, Lödige highlights. The AGV's data-based control "gives users full control over operations and allows the integration into a warehouse management system for execution of fully automated transport commands".

Within the terminal, the AGV connects



several strategic handover positions. These include the roller decks of the fully automated material handling system (MHS), the pharmaceutical area, the truck dock and other stations, with the AGV covering distances between 60 and 300 metres between these locations.

Swissport's 17,000 sqm new FRA facility, which opened in November 2020, is one of the handling firm's most innovative warehouses. It has an automated material handling system, designed and installed by Lödige, to store and retrieve ULDs, with the AGV capability "planned from the very beginning and fits in seamlessly as a complement to the existing systems". Swissport's local staff were also among the company's first employees to be equipped with a new cargo app that is currently being rolled out.

The automated material handling system "ensures efficient air cargo handling and storage, while the FAIR@Link slot booking app controls the access of trucks and optimises workflows", Swissport highlights.

Air France KLM Martinair Cargo and Paris airport authority Groupe ADP this autumn also began testing an innovative airside cargo transport solution at Paris-Charles de Gaulle Airport, using an autonomous electric vehicle developed by French startup OROK. They are intended to replace tractors and trailers usually used between cargo warehouses or baggage sorting centres and aircraft parking stands. The trial is being carried out at Air France Cargo's G1XL cargo warehouse and initially consists of transporting empty aircraft containers between two areas inside the facility using a 'demokart' prototype vehicle. The tests will then gradually evolve with the use of a new generation of more efficient vehicles. Rory Fidler, vice-president cargo technology at Menzies Aviation, favours the idea of using one warehouse as a test bed for new technologies and solutions. He is looking to deploy some new technologies at Menzies' facility at London Heathrow for proof of concept.

"Handling systems must introduce a much, much higher level of automation," he adds.



***Leysens: Many handlers are still evaluating their options for an intelligent warehouse management system able to leverage AI and AR***

### **Logistics warehousing developments**

Outside of air cargo handling facilities, automated vehicles are becoming increasingly common in general logistics warehousing, as they are already in some e-commerce warehouses. In November, Geodis revealed that it was fielding autonomous mobile robots at its distribution centre in Hong Kong. The facility is modified to accommodate an exclusive area for the autonomous units to operate, with QR coding to guide operations.

DHL Supply Chain is also in the process of rolling out autonomous forklifts in its warehouses. The deployment is part of the company's 'Accelerated Digitalisation' agenda designed to commercialise and scale innovative solutions. At the moment DHL is focusing on locations in Europe, the UK and North America for the rollout.

Global CIO and COO Markus Voss says these indoor robotic transport devices can theoretically be deployed in any of the logistics company's pallet-handling operations, adding: "We estimate that up to 30% of our global material-handling equipment fleet will use some form of robotic automation by 2030."

### **Wearable developments**

While autonomous vehicles are beginning to appear in air cargo warehouses, albeit more slowly than elsewhere, wearables have also been much slower to appear in air cargo sheds and have not achieved a lot of traction so far, unlike in their

logistics warehouse counterparts. This is somewhat surprising given the significantly lower cost, but also in light of early signs of promise. IATA was involved in a pilot programme with augmented reality in the warehouse three years ago, which indicated that operators could attain a 30% boost in the speed of cargo handling. In addition, the trial showed a 90% reduction in errors.

Hendrik Leysens, vice-president for global cargo operations at Swissport, attributes the slow progress to the need for a strong and intelligent warehouse management system to leverage AI and augmented reality. Many handlers are still evaluating the options and have not made the leap to a new platform to date.

### **Handling apps**

A lot of focus at the moment is on the development and use of apps. Swissport is introducing a new mobile application that will be installed on Android devices across the handler's network. This app enables warehouse staff to record every step of the process; and it opens the door to the use of new tools, says Leysens.

The proliferation of apps goes hand in hand with the drive to greater digitisation and data capture. By now, this is spreading from basic products and processes to more elaborate formats.

### **Mobile Digital Handling initiative**

In November, Lufthansa Cargo moved to a



## *Fidler: Favours using one warehouse as a test bed for new technologies and solutions*

new phase of its 'Mobile Digital Handling' initiative through a partnership with IBS Software that aims to digitalise critical handling processes for special products like pharmaceuticals, fresh produce and hazardous materials. Through the iCargo platform, this provides the airline's partners with a single-access, easy to use

set of mobile and web tools that handling agents can use to carry out specialised work flows and tasks.

In the opposite direction, information captured by handlers is made available to Lufthansa on a real-time basis. The platform also offers digital connectivity options for handlers via APIs.

But across the cargo handling sector, the availability of shipment data has been much improved through the deployment of Bluetooth readers and tags in the industry. Many of the major multinational handlers have begun installing readers in their facilities by now, and the early experiences have been encouraging. According to Leysens, this brought about a quantum leap in visibility, allowing forwarders to access shipment data, such as ambient temperature readings for perishable shipments. Previously Swissport's warehouses had been black holes to them, he quips.

### **Progress in users' attitudes**

Importantly, the progress on the technology front appears to have been matched by progress in users' attitudes. Earlier worries about shared data being used by other players in a competitive manner seem to be giving way to a greater readiness to share air waybill data on a platform for the benefit of all parties involved, notes Fidler; so, the flow of data between airlines, forwarders and



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handlers is improving.

Fidler is looking for similar progress in the warehouse for the adoption of technology. “The change management and the mindset of the people in the warehouse is to me the biggest challenge to rolling out next-gen technology,” he says. “There is a huge reticence to implement change, as it is often seen as a threat.”

Meanwhile, the quest for data is becoming all-encompassing, accelerated by the growth of e-commerce air freight traffic. Bert Selis, vice-president of air cargo and logistics at Liege airport, notes that the pursuit of e-commerce led to a fundamental change in thinking at the airport’s management. It brought about the realisation that e-commerce firms build digital flows first and then construct physical flows to match these, which led to a reassessment of the role of an airport. “It becomes a place in a

chain where data connect,” he says.

### **Airside vehicle management gains**

The flow of data between stakeholders is becoming an integral part of the interaction. Among the technology that handler Alliance Ground International deployed in its new 76,000 sq ft (7,000 sqm) off-airport facility that opened in October near Newark International airport was truck queuing and management software. The congestion that has plagued many gateways this year has led a growing number of handlers as well as airport authorities to the conclusion that truck access can be improved significantly with an online exchange of data in advance in order to speed up processes and direct arriving trucks to available gates.

A year ago, Dnata implemented an appointment and dock management platform at Dubai International airport that

integrates into its own system. The platform factors in multiple parameters, such as shipment characteristics and vehicle type, for slot allocation.

At a growing number of airports, handlers have no need to invest in truck management capability, as more and more airport authorities are intent on playing a more proactive role in the development of cargo business and are reaching out to providers of cargo community platforms. Frequently the first functionality from the range of available options that is chosen is truck management.

### **Data capture advances**

Besides tapping into data flows from other parties, handlers are also stepping up data capture on their premises. For Dnata’s cargo terminal at Singapore’s Changi airport, this begins at reception of freight with the use of Cargo Eye, a technology

*DHL Supply Chain is rolling out autonomous forklifts in its warehouses*







*AF-KLM is testing an airside cargo transport solution at CDG using an autonomous electric vehicle*

that uses 3D cameras in combination with algorithms to accurately capture shapes and dimensions of cargo.

The data captured there flows to 'Cargo Mind', a module that is integrated with Dnata's cargo management system. Cargo Mind comes into play for load planning, using algorithms to maximise loads on a plane by computing the best distribution of cargo among the ULDs in line for the flight.

Menzies' Fidler regards pallet building as one of the first applications of data analytics in the warehouse. By his estimate, this can achieve gains of about 10%.

### Improving flow forecasts

Another area where artificial intelligence is showing much promise is in planning. By combining historical data with various external macroeconomic data sets, Swissport is leveraging AI for its weekly and monthly forecasts. Leysens is looking

forward to advancing this to a more granular level. This could give a station a better idea how many trucks to expect at what time and the loads on board.

Data integration is essential to unfold the potential of AI and maximise the various data streams, he says. Ultimately what is needed is a central platform that can connect the various building blocks, a kind of brain for the whole system. This will open many new possibilities, from dynamic storage and yield management to volume optimisation and workload distribution, he reflects.

### Unified platform needed

He is not alone with this vision. Fidler also sees a unified platform as a crucial step on the technology journey for Menzies. By creating better structured and consistent, standardised processes with the help of technology, handlers

can change the rules of engagement with their clientele, he argues.

"Our customers want consistency, process adherence and accurate performance reporting," he says. "If we can create this standardisation, the airlines will move away from the current commercial model of RFP after three years and introduce much broader commercial agreements across the handlers' networks.

"Once systems are in place, it is essential to use them to their fullest and not to look for work-arounds," he adds.

The journey there will not be easy. The long lead times to implementation, the cost involved, and the fact that most available solutions follow a one-size-fits-all approach that ignores the differences in requirements between large hubs, medium-sized airports and small stations are all significant hurdles to overcome, Fidler notes. ■



# Ground handlers struggle with ‘new normal’ bottlenecks

European airports and their stakeholders have been battling with significant short-term congestion challenges, in part due to Covid-related capacity and demand volatility and workforce limitations. But they are also working on solutions to longer-term, structural issues linked to technology and personnel, reports Stuart Todd

**A**lmost two years since the start of the Covid-19 pandemic, European airports and their airlines, cargo handlers and other stakeholders are continuing to struggle with the ‘new normal’ in air cargo – or what may turn out to be a ‘current normal’, until passenger air services return to something approaching their pre-Covid patterns.

This current normal in air cargo, characterised by increased piece numbers and a drop in average weights per piece – triggered by Covid-19 and furthered by rapid e-commerce growth – combined with reduced bellyhold capacity and the more-volatile freighter and preighter charter and scheduled services that have

replaced them, have led to cargo ground handling emerging as a bottleneck in the overall air logistics supply chain, slowing transit times and causing major congestion and delays at many airports.

Handling agents, airport authorities, as well as forwarding and trucking sources, have told CAAS they expect the current operating challenges to persist for some time yet, despite their efforts to manage these altered flows.

## **Stretched resources**

Menzies Aviation’s executive vice president for cargo, Robert Fordree, acknowledges that the volumes of cargo the company is experiencing currently “are stretching our resources to the maximum, and we expect this to continue for the foreseeable future and at least

throughout 2022”.

He continues: “There is no doubt that we have seen a dramatic and significant rise in cargo volumes, exacerbated by high piece counts and the acceleration of e-commerce. For our industry this (surge in business) is extremely welcome and part of the reason we have given cargo such a significant focus in our overall global growth strategy.”

But he says “many traditional cargo gateways throughout the world are experiencing capacity challenges at present. This is due to the rapid increase in freighter activity and the associated cargo volumes. It is difficult to forecast this and even more difficult to ensure that the warehouse and logistics infrastructure is fully in place with such short notice,” Fordree notes.

“Our teams and those of our competitors continue to work hard on solutions that speed up cargo handling processes and enable us all to manage the throughput being experienced today. We have seen non-traditional gateway airports express a desire to provide cargo logistics solutions and we are actively engaged with a number of airports on cargo development initiatives.”

#### **FRA challenges**

Frankfurt Airport, Europe’s biggest hub for cargo, has been particularly severely



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“  
*The strong, sustained growth in air cargo,  
 especially with cabin loads on preighters,  
 ties up a large number of personnel*  
 ”

**Max Conrady**

affected by congestion since the start of this year’s fourth-quarter peak season, although volumes have consistently exceeded previous record highs since the end of 2020. For example, in the first three quarters of 2021, the German gateway posted its highest cargo volume to date. But cargo throughput continued to grow noticeably in October too, increasing by 10% year-on-year to more than 200,000 metric tonnes – a rise of 11.7% compared to October 2019.

“However, this strong growth,

characterised by a high number of loose and light pieces, challenges the handling processes,” explains Max Conrady, VP for cargo development at airport operator Fraport. “Also, the pattern of traffic has clearly changed since the rebound in passenger volume. Passenger and freight airlines often schedule flights at very short notice. On occasion, this leads to isolated but sharp peaks in volume during the course of any given day and at weekends. Even though we are only at around half 2019 passenger traffic levels

in total, these peaks come close to the volumes experienced pre-crisis.”

#### **Cabin pressure**

Conrady continues: “This requires the support of a great number of staff. At the same time, the strong, sustained growth in air cargo, especially with cabin load on preighters, again ties up a large number of personnel. As a result, cargo processes may also be delayed.”

He stresses that the continuous collection of imported goods “is also





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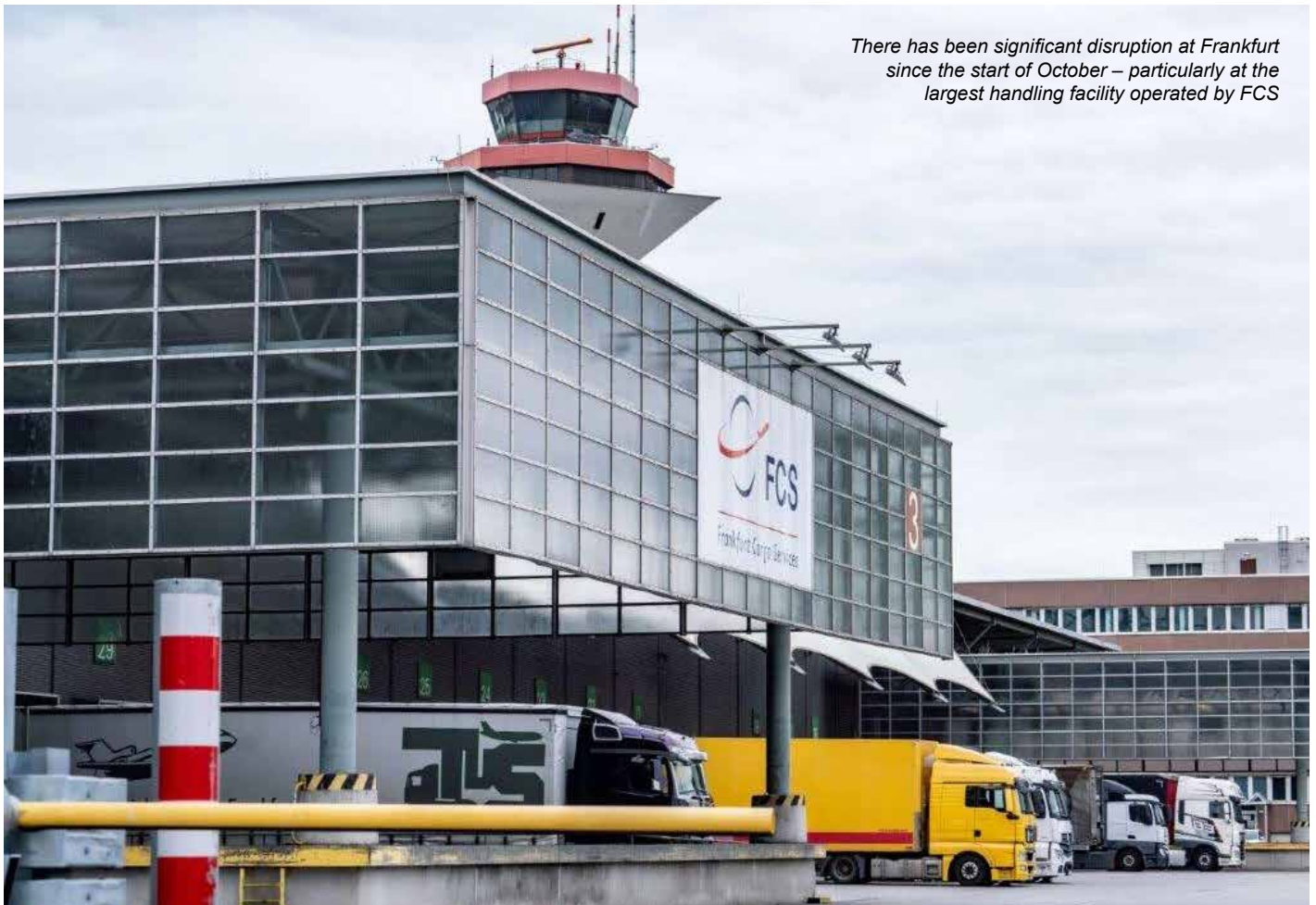
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*There has been significant disruption at Frankfurt since the start of October – particularly at the largest handling facility operated by FCS*

essential to smooth cargo handling processes”, but says that “for various reasons, it happens more often that goods remain longer in the warehouses on-site and thus take up space for newly arriving goods”.

The airport set up an air cargo community task force “to adapt to the new normal” in air cargo, with weekly meetings to “ensure transparent exchange and mutual support”, and where airport operator Fraport plays a moderator role.

#### **New measures**

“On top of this, all local partners have implemented numerous measures to relieve the situation,” Conrady says. “Fraport has, for example, all available employees in the cargo area on duty – no short-time working.

“In addition, if necessary, we check whether we can provide additional space for storage. We are also in constant contact with the cargo handling agents

when it comes to transport equipment – dollies, metal sheets, containers – in order to ensure efficient use.”

The crisis has seen a higher-than-normal level of operational cooperation between the various parties, including among competitors, in order to optimise the airport cargo community’s overall resources.

“Originally driven by customs, we have also made great efforts together with site partners to further develop our cargo data exchange platform – especially for imports, so that all parties involved get more transparency about the flow of goods,” Conrady says. “This will help to organise processes in a more robust way and at the same time strengthen the co-operation between partners.”

Despite such measures, the reality is ‘bottlenecks’ have formed since late September at Frankfurt and some other European air cargo hubs, in some cases because carriers and forwarders have

decided to switch some traffic from FRA to other airports.

#### **Severe stress**

For example, in early-November US forwarder Flexport launched a weekly air charter service from Hong Kong to Paris-CDG airport in response to congestion at Frankfurt and also at Amsterdam Schiphol. Flexport noted that new customs regulations in Germany were adding to the challenges facing ground handling agents’ (GHA) processes at a time they were already under severe stress, with loose cargo particularly taking more time to clear.

In early November, Stephan Haltmayer, CEO of Germany-based forwarder, Quick Cargo Services, described ground handling service quality at Frankfurt as “terrible”, which he attributed to a lack of additional manpower that was needed to offload belly cargo from passenger mode aircraft and also to handle charter flight arrivals.

“The GHAs are not flexible enough to



react to market needs,” he noted, with some carriers, meanwhile, avoiding flying to Frankfurt and instead favouring other airports.

### Long waits

“Truck companies are no longer accepting the long waiting hours because they cannot plan the allowed driving time for their drivers,” he added. “Therefore, they refrain from pickups at Frankfurt. This ‘disaster’ is costing forwarders a lot of money. Customers are not willing to accept the extra storage and truck waiting times. Whether it’s ‘peak’ (season) or not, it makes no difference. Service levels are in a bad way – lost shipments in crowded warehouses, cargo out in the rain on the tarmac, damage, part shipments and more. All this has increased.”

Jason Breakwell, commercial director at pan-European road feeder services operator Wallenborn Transports, highlights that there had been “significant disruption at Frankfurt since the start of October – notably at the largest handling

facility operated by FCS” – problems that had continued into November.

### Customs changes

“Whilst higher cargo volumes are a factor, other causes, including more freighters, more mixed ULDs, cabin cargo, lack of staff and the employment of inexperienced personnel, have also contributed,” he explained. “The ‘final straw’ at Frankfurt seems to have been the implementation of UCC (customs) requirements which, with hindsight, should not have been attempted during peak season.

“Overflow warehouses at Frankfurt have also become saturated and trucks have been waiting up to three days to be unloaded. The diversion of flights from Frankfurt initially eased some pressure, but ultimately led to logjams at other airports because cargo could not be dispatched (from there) to Frankfurt.”

Breakwell says that some forwarders at Frankfurt and other airports had stopped accepting deliveries, and this had added

to the volumes piling up at on-airport handling facilities and on the ramp.

### Rolling congestion

He went on to note that “rolling congestion” has been affecting road feeder services at other European airports in recent months, with Amsterdam Schiphol especially bad during October.

“We’ve not seen delays elsewhere on the same scale as Frankfurt and Amsterdam,” he noted. “Dwell times across Europe have been excessive, but all-cargo airports such as Leipzig, Liège, Luxembourg, Ostend and Vatry are mainly transit airports with fewer forwarders.

“I expect this volatility to be a challenge for months to come and am concerned that ‘skimpflation’ is creeping into supply chains – whereby prices go up, service levels go down, and end users start to ask why they’re paying a premium for air cargo. The industry as a whole needs to address this if it is to maintain the positive momentum achieved during the pandemic period.”

At a company level, Breakwell

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explained that Wallenborn has increased capacity to address lower productivity caused by congestion and has deployed more capacity to hubs that are receiving more charter and diverted flights to ensure supply chains remain intact.

**Unprecedented volumes**

Assessing the broader picture, Steven Verhasselt, VP commercial at Belgium’s Liège Airport, noted that a combination of “unprecedented” volumes of air cargo and a diminution in the average size of shipments have resulted in slowing transit times at airports.

“The bottleneck is ‘the airport’ and it is unfair to single out any of the parties involved – be it the airport operating company, airlines, handlers, customs, customs agents, truckers and consignees, who all deal with the cargo,” he notes. “It is a shared responsibility.

“The air freight logistics chain is indeed a chain and ‘solutions’ can only work if all the links in it are ready to play their part. Moving cargo through an airport is a combination of physical and digital processes. Making sure the correct information is available to the person who needs to deal with it is just as important as having the space to break down a pallet or having a truck dock available for loading.”

Commenting on how Liège has adapted to the ‘new normal’ in air cargo, Verhasselt says: “The investment programme was already in place; the addition of aircraft parking and first line handling capacity has continued and been completed on schedule.

“Over the last two years, we’ve doubled handling capacity and aircraft capacity in the airport’s Northside zone. At the same time, we invested heavily in the digitisation of processes at airport community level – and also in human resources, bringing talent to the airport. We launched WeCargo for innovators and start-ups, the Liege Airport academy for training programmes for airport jobs, and ‘job day’ events on-site at the airport with public and private partners.”

Back at Frankfurt Airport, Nina Strippel, COO and branch manager at German air cargo ground handler LUG, reveals that over the course of the pandemic, the company – like other handlers – has experienced a

huge increase in the number of pieces while the average weight per piece went down – initially because it was handling ‘mountains’ of masks, gloves and other equipment for protection against Covid-19. That surge in PPE shipments has now passed, but the ‘new normal’ type of air cargo it spawned continues to thrive, driven largely by the boom in cross-border e-commerce.

**Recruitment crisis**

Focusing on what this means for cargo handling agents, she notes: “Small and loose shipments require a lot more manpower compared to freight that can be moved by forklifts. Hiring staff has become extremely difficult, and to talk of a recruitment crisis is no exaggeration.

“The upshot is that the cargo handling agent can become a ‘bottleneck’ in the overall supply chain. This has been the case since the beginning of the pandemic and remains so today.”

Menzies Aviation’s Fordree agrees that higher piece counts needs increased labour resources if these shipments need to be broken down. “However, there are competing industries seeking the same people that have traditionally gravitated towards aviation and cargo,” he notes.

“We believe that there is a current period of settlement required for remuneration in a number of sectors and we are all working on creative solutions to retain existing talent and identify the next generation of employees. They will have a much greater focus on technology solutions, and we are therefore investing in this field with a number of projects underway in trial locations.”

**Sharing of shipment data**

In order to reduce the ‘bottleneck’ in cargo handling as much as possible, the different parties in the sector need to work together, particularly in the sharing of shipment data, LUG’s Strippel argues.

“This is something all players could do; but in most cases, we have no information about the shipment’s tonnage, the number of pieces, the weights or anything else before a flight takes off at origin. This means that in the best case of a long-haul flight, we can only finalise our shift



**Max Conrady,**  
*Fraport*



**Jason Breakwell,**  
*Wallenborn*



**Nina Strippel,**  
*LUG*



**Steven Verhasselt,**  
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planning 11 hours in advance, which is no time at all even if you have a lot of flexibility built-in to your operation. The data is, of course, available at a much earlier stage, and sharing it would help all parties involved to speed up the process, much to the benefit of everyone.”

### Resistance to data sharing

Strippel underlines that there was often resistance to data sharing between the various stakeholders in the air cargo industry “out of fear of being too transparent, giving too much information away to the possible detriment of the individual success of the company”.

She continues: “The serious obstacles to co-operation in the industry are illustrated in the following example: We asked some freight forwarders if they could share with us the data ‘capture’ they had for a particular shipment, the aim being to work together on the basis of having exactly the same information at our disposal.

“The response we received from one forwarder was that the company was paying its employees to enter the data into their system and that if they shared it with us this would amount to them incurring all the cost while we’d be ‘saving money’. I was shocked by this reply; but it showed how difficult it is for our industry to work on common goals.”

### Building intelligence

Fordree says that Menzies Aviation is in the process of building “a business intelligence-driven control tower that will enhance our data sharing capabilities with airline customers. There is every intention to increase the functionality on this platform to allow us to integrate and exchange a single source of the truth with all of the stakeholders in the chain, including forwarders.”

As to the lessons ground handlers have learned during the pandemic and the challenges that lie ahead, Fordree remarks: “The most obvious lesson is that a flexible and motivated workforce is essential to remaining competitive and responsive to our customers’ ever-changing needs. The volatility of flight schedules and peak demand has resulted

in unprecedented pressure on our teams, and whilst we are focused on recruiting the next generation of cargo employees, we need to retain and nurture the talent that we have today.”

### Appropriate infrastructure

He continues: “The main challenge will continue to be appropriate infrastructure that supports the cargo volumes of today; but as our business is historically cyclical, we could be storing up challenges for the future. As global logistics starts to balance out once more, we need to avoid being left with extensive warehouse capacity that we cannot fill.”

According to Liège Airport’s Verhasselt, the pandemic “has definitely changed the dynamics of the chain. Previously, an airport attracted an airline. The airline chose a handler for the build-up and loading of shipments and for unloading and breakdown. A GSA was appointed for sales to freight forwarders and a trucking company for final mile to a distribution centre of a sizeable consignee.

“In the new model, a lot of the airline capacity is in-sourced by consignees. The job of the handler might be limited to loading and unloading or expanded to sorting out ‘second line’ and last-mile distribution.”

### New patterns

He continues: “The shift has also seen airlines move into dedicated warehouses to control the chain, airplanes being chartered by freight forwarders, and e-commerce platforms in-sourcing all the services they need. The flexibility of all companies involved and their staff can only be admired – as the chain is still ‘delivering’, despite all these changes.”

The pandemic has also prompted “significant engagement” between airports and logistics property developers, who are both now working closely with ground handlers, Fordree adds.

“We are in discussion with a number of parties, and these remain confidential for now; but it is a very positive sign for the development of purpose-built, state-of-the-art and environmentally friendly cargo solutions,” he concludes. ■

*“As global logistics starts to balance out once more, we need to avoid being left with extensive warehouse capacity that we cannot fill”*

**Robert Fordree**

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# The making of an Aerotropolis – China’s Zhengzhou Airport

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In less than a decade, CGO has developed from a modest, domestically focused airport with Foxconn serving as its industrial anchor into a Tier 1 international airport and global air logistics hub alongside a thriving 415 sq km economic zone, reports John D. Kasarda, PhD



**A**n amazing story in air logistics and ‘aerotropolis’ development is playing out in Zhengzhou, the capital of Henan Province, central China’s most populous, a little over an hour’s flight time from Beijing and Shanghai. I initially got to know about Zhengzhou in 2010, researching its recruitment of Foxconn – Apple’s largest subcontractor – for a massive 200,000-worker iPhone assembly complex adjacent to Zhengzhou Xinzheng International Airport (CGO), 25 kilometres southeast of the downtown.

My first visit to Zhengzhou was in 2012 when municipal leaders invited me to prepare a strategic roadmap to help transform the area around CGO into an Aerotropolis, with Foxconn serving as its industrial anchor. Succinctly defined, an Aerotropolis is an airport-centered urban economic region that rapidly connects high-end manufacturers and business services to their global suppliers, mar-



*Foxconn’s massive 200,000-worker iPhone assembly complex adjacent to CGO served as ‘an industrial anchor’ to help transform the area around CGO into an Aerotropolis*

ketplaces, and enterprise partners. It represents an amalgam of international airport, multimodal logistics hub, and modern business/industrial complex offering time-critical, high-value enterprises

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*The ZAEZ Smartphone Park. Approximately 1.35 billion smartphones were produced in the ZAEZ last year, including 900 million by Foxconn*

this description. Rather, the 415 square kilometre aerotropolis area that now constitutes the Zhengzhou Airport Economy Zone (ZAEZ) consisted primarily of a modest, domestically focused airport with scatterings of small, impoverished villages tied to subsistence agriculture.

Today, CGO is a Tier 1 international airport and global air logistics hub. It is among Asia's fastest-growing airports, driving a surrounding 21st-century manufacturing powerhouse and export dynamo as well as a modern Aerotropolis that was envisioned by China's State Council when it formally established the ZAEZ in March 2013 as a national strategy. I feel fortunate to have been associated with the ZAEZ since its establishment as its Chief Advisor to witness first-hand its (and CGO's) remarkable growth over the past eight years, key components of which this article highlights.

#### **CGO's aeronautical engine**

CGO now offers 194 passenger aircraft

routes (including 27 international), along with 51 cargo aircraft routes, 41 international – the latter connecting the airport and ZAEZ to 16 of the world's 20 top air cargo markets. Its aviation infrastructure consists of one 3,600m 4-F runway and one 3,400m 4-F runway, two passenger terminals with 133 aircraft stands, and seven cargo terminals covering over 140,000 sqm. This gives CGO a current passenger capacity of 40 million annually and cargo capacity exceeding 700,000 tonnes. Passenger Terminal 2, which opened in 2016, has a multimodal ground transport centre directly underneath it for intercity trains, subways, bus, and taxis.

During seven of the past eight years, CGO was China's fastest-growing airport in percent increases of cargo volume and among its leaders in percent growth of passenger volumes. In Covid-impacted 2020, the airport handled 21.4 million passengers (down from 29.4 million in 2019) and 640,000 metric tonnes of cargo (up from 522,000 tonnes in 2019). Data through

October 2021 suggest that CGO's cargo will increase at least another 15% in 2021, with international cargo representing 77% of shipments. CGO currently ranks sixth in cargo volume among China's 200+ civil airports and 38th worldwide.

#### **Air Silk Road**

Fueling its cargo growth has been ZAEZ's attraction of many additional smartphone assemblers besides Foxconn along with other aviation-oriented industries such as biomedicine, cross-border e-commerce, food perishables, and suppliers of aircraft and ICT components. Moreover, in a June 2017 meeting with Luxembourg Prime Minister Xavier Bettel, China's President Xi Jinping initiated an 'Air Silk Road' dual cargo hub strategy, with CGO serving as the hub for the Asia-Pacific region and Luxembourg for Europe and the Americas. In 2020 alone, Luxembourg's Cargolux Airline, which is 35% owned by the Henan Civil Aviation Development & Investment Co, transported 128,500



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*As chief advisor to the ZAEZ, Kasarda has witnessed first-hand its – and CGO’s – remarkable growth over the past eight years*

tonnes of cargo to and from CGO, making Cargolux the most significant freighter airline connecting China with Europe and the rest of the world.

**Diverse cargo terminals**

The seven terminals handling CGO’s cargo are diverse. One is dedicated to international express cargo and mail and a second to general overseas cargo. Others include a dedicated airside cold chain cargo terminal and one for pharmaceuticals and medicines that possesses GDP (Good Distribution Practice) certification meeting the most stringent World Health Organization standards for safety, security, and handling of pharmaceutical and medical products. Terminals focusing primarily on various types of domestic cargo round out the seven.

With CGO’s cargo volumes growing so rapidly, plans are to develop a new cargo area by 2030 which will raise capacity to 2 million tonnes annually. This includes constructing the fourth-largest China Post air-mail handling center and distribution port

after Beijing, Shanghai and Guangzhou. SF Express (China’s major integrator) has also signed a strategic cooperative agreement to develop a dedicated express cargo facility and to explore air-rail cargo synergies between this facility and the new ZAEZ high-speed rail station – one of the largest in China – that opened approximately 6 km southeast of CGO in late 2021.

**Cargo expansion plans**

Plans are to construct third and fourth runways and a third passenger terminal as demand warrants. CGO’s cargo terminals will also be substantially expanded, bringing ultimate cargo capacity to 5 million tonnes annually.

To speed cargo throughput, CGO is fully digitalising under its e-freight programme. PDAs are used throughout the entire goods handling process to optimise efficiencies and minimise transfer time and cost. Freight forwarders and 3PLs utilise ‘single window’ electronic documentation platforms, as well. The outcome is that CGO offers Customs clearance times

at least five times faster than the national average for both imports and exports. For time-critical goods and temperature-sensitive products, CGO has established a fast-track (green) channel allowing pre-clearance of advance electronic declarations, along with rapid cargo inspection and release upon arrival.

**Comprehensive Bonded Zone**

To further accelerate international shipments while reducing taxes and bureaucratic costs, CGO has one of China’s busiest and best performing comprehensive bonded zones. This 5.1 sq km bonded zone, which spills into the ZAEZ, functions essentially as a Free Trade Zone for taxation/bureaucratic minimisation and ease of cross-border financial transactions, where accounts can be settled in any foreign currency.

The immense Foxconn iPhone complex is situated in this Comprehensive Bonded Zone, from which nearly two-thirds of all new iPhones shipped around the world originate. The zone’s imports and exports, dominated by smartphones and their components, reached ¥410 billion (US\$64.2 billion) in 2020, a year-on-year increase of 18.5%, accounting for over 60% of the value of all Henan Province trade. The zone, operating 24/7, is consistently ranked in China’s top three comprehensive bonded zones in annual trade value.

Air transported food and medical products constitute two of its fastest-growing cargo sectors. Reinforcing the bonded zone, CGO contains three significant ports handling food perishables – fresh fruits, chilled aquatic product imports, and live aquatic imports – that serve all central China. In addition, there is a large port for medical goods imports and exports as well as one for international mail transit. Two further food ports – live animals and fresh meat – are located, respectively, in the north and south portions of the ZAEZ.

**Rapid e-commerce growth**

Other major activities in the comprehensive bonded zone include cross-border e-commerce, commodities display, international aircraft financing and leasing, kitting, supply-chain sequencing, and

value-added logistics such as labeling, packaging and testing. Its cross-border e-commerce sector processed 139 million orders in 2020, constituting a total value of ¥11.4 billion (US\$1.8 billion), a 62% year-to-year increase. In 2020, 84 cross-border e-commerce companies newly registered in the bonded zone, bringing its total to 804.

CGO and the Comprehensive Bonded Zone have leveraged considerable aviation-oriented business and industrial development throughout the 415 sq km aerotropolis area. This includes more than 300 major investments by firms in the past five years and over 1,000 smaller ventures

The greatest growth has been in ZAEZ's ICT sectors. At least 200 smart electronics enterprises have complemented Foxconn's presence cumulatively, producing nearly a half million mobile phones a day generating an output value exceeding ¥320 billion (US\$50 billion) in 2020. Approximately 1.35 billion smart phones were produced in the ZAEZ that year, including 900 million of them by Foxconn.



Cargolux transported 128,500 tonnes of cargo to and from CGO in 2020

**Smartphone value chain**

Recent years have seen the ZAEZ attract the entire smartphone value chain including the manufacturing of chips, modules, panels, and liquid crystal displays. The southern portion of the ZAEZ (rather

than the Comprehensive Bonded Zone at its core) has been where most of the new smart electronics enterprises have been locating. The largest concentration is in the Smart Terminal (Smartphone) Industrial Park with a floor area of 1.2 million



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*The ZAEZ hosts a rapidly expanding biomedicine sector in one of several sector-specific industrial parks*

sqm. This park has five zones: Zone A primarily for mobile phone manufacturing; Zones B and C for research and design of smartphone products and software; Zones D and E for optical displays including panels, modules, silicon substrates, and liquid crystal displays.

ICT value chain investment is reinforced at the Optical Display Industrial Park covering an area of 342,400 sqm. Along with a range of optoelectronics, firms in the park produce smart terminals, tablets, and personal computers. In addition, Wafer Works (Zhengzhou), the world's sixth largest producer of silicon wafers, began operations in the ZAEZ in 2018. Phase 1 with ¥1.2 billion (US\$188 million) investment is producing 200mm wafers. The enterprise is currently ramping up to produce 300mm silicon wafers. And, in mid-2021, the 239,333 sqm Beidou Industrial Park began manufacturing smart terminal products such as

handsets, tablets, and mobile GIS platforms. Along with manufacturing, the Beidou Industrial Park does smart electronics testing and after-sales support.

The ZAEZ also hosts a rapidly expanding biomedicine sector. Primary here is the ¥10 billion (US\$1.6 billion) Zhengzhou Biomedical Industrial Park, which houses firms engaged in biotech and life sciences innovation and entrepreneurship as well as biopharmaceutical production. With major investment by the Henan provincial government, the park has a planned area of 1.3 sq km. Phase 1, with ¥2.5 billion (US\$391 million) already invested in facilities with a floor area of 506,000 sqm, has companies involved with modern Chinese medicines and medical equipment as well as in exploring new ways that traditional Chinese medicines can be applied to treat a variety of contemporary diseases.

### **New-generation vehicles**

Intelligent Connect Vehicles (ICV) and New Energy Vehicles (NEV) are among the most recent sectors developing in the ZAEZ. Focus is on production of new energy batteries, on-board electronics, and intelligent driving devices.

In addition to high-end manufacturing, the ZAEZ offers a plethora of aviation, business, and urban support services. The first aviation training centre in central China was put into operation in June 2020 in the ZAEZ's southern portion. The 50,000 sqm facility is set up to eventually train 2,000 pilots and 3,000 air traffic controllers annually.

The Zhengzhou New International Convention and Exhibition Center (ZNICEC), one of the largest in China, is scheduled to commence operation in late 2022. Constructed 2 km from ZAEZ's high-speed rail station at a cost of ¥10

billion (US\$1.6 billion), the ZNICEC covers 1.6 sq km with a total exhibition area of 625,333 sqm. The complex will serve as a magnet for companies throughout China and the world to come together to display new and innovative products. An entire MICE industry services support ecosystem is evolving around the ZNICEC including hotels for attendees.

**New urban districts**

Two urban districts are under construction in the southern and eastern portions of the ZAEZ. One is the Shuanghe Lake Sci-Tech City around an attractive man-made lake. Here, office campuses are being developed for high-tech R&D and advanced business services. The urban district will also contain quality residential areas, shopping, hospitals, and international schools to attract talent as well as a public park and cultural zone. A second urban district is being planned near the ZAEZ's new high-speed rail station that will contain the full complement of urban

and commercial services.

To capitalize on high-speed freight trains that will be operational in China in the coming years, a high-speed rail logistics park is likewise being planned near the high-speed rail station. This logistics park will specialise in the distribution of time-sensitive smaller parcels including B2C e-commerce shipments. Plans include linking the high-speed rail logistics park to CGO's cargo area to foster air cargo-high-speed freight rail synergies.

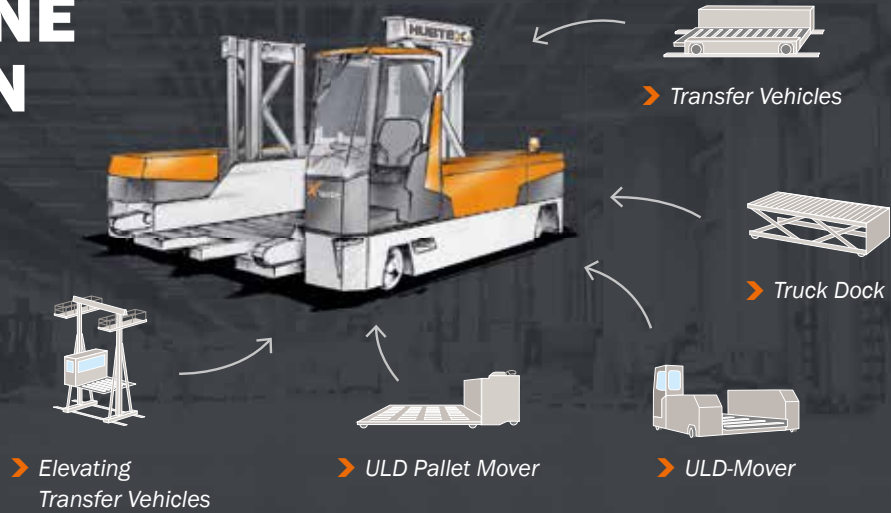
What makes the ZAEZ an exemplary aerotropolis is the way its planners and administrators have successfully integrated aviation, surface transportation, logistics, and urban objectives to create speed, agility, connectivity, and livability. Achievement of these four aerotropolis objectives is why many – including China's People's Daily – refer to the ZAEZ as "China's Aerotropolis".

*Dr. John D. Kasarda is president of the Aerotropolis Institute China and a faculty member at the University of North Carolina's Kenan-Flagler Business School (USA) ■*



Dr. John D. Kasarda

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# Pharmaceuticals hit warp speed

Pharma shippers want to see a continuation of the increased openness and collaborative spirit that Covid has brought about in the pharma logistics supply chain, reports Megan Ramsay from this year's Airfreight Pharma digital conference

**C**ovid-19 has further underlined air freight's importance in ensuring the timely delivery of often urgent and life-saving healthcare products around the world. And this year's Airfreight Pharma digital conference, 'Essential Transport for an Essential Industry', opened with a discussion on the main challenges pharmaceutical companies face when shipping their temperature-sensitive products – in general and during the pandemic.

Julian Wann, associate director procurement, global freight and logistics,

at pharmaceutical company AstraZeneca, said that although the last 18 months or so have been "tumultuous", the pandemic has brought shippers and their logistics partners closer together.

"Throughout Covid, we have maintained supply and service and continued to distribute to and access all the markets we needed to," Wann said. "The pandemic has highlighted the relevance of working with people for a longer period of time, and enabled us to work more closely together and to be particularly open and honest about challenges."

Airlines have been among those pulling out all the stops to satisfy the

requirements of pharma shippers during this difficult time.

Julian Sutch, pharma global sales at Emirates SkyCargo, says following the initial grounding of aircraft, the carrier was very quick to reintroduce capacity to serve key sectors that desperately needed it – predominantly, pharma, PPE and fresh produce. This was by no means easy. It required new routes, landing rights, constant communication with customers and the management of crews who were subject to travel restrictions and quarantine rules.

"It was something we've never faced before, but people came to the table very

quickly, got together and made it happen,” Sutch said.

### Good communication enables flexibility

Effective communication throughout the supply chain, and a deep understanding of it from end to end, enables flexibility in the face of unforeseeable challenges, Wann noted. He said that the degree of visibility and communication both between AstraZeneca and its supply chain partners and within the company itself – particularly in terms of making sure each individual understands not only their own role, but that of the rest of the supply chain too – is something that has come to the fore during Covid and will continue to be a focus for AstraZeneca.

Wann stressed that AstraZeneca has high expectations of its transport suppliers “whichever mode we ship, because the expectation on us to maintain our products is exceedingly high.”

Procurement decisions in terms of logistics are based on those expectations.



Julian Sutch

With the integrity of pharma shipments potentially at risk at every handover between manufacturer and consignee – particularly at airports – SOPs and an awareness of the value of each item to the patient it will treat are essential.

### More consistency needed

Wann called for handovers on the ground to be simplified so as to reduce the risk of temperature excursions, and stressed the need for airport pharma facilities to enable greater standardisation of processes.

Certainly, pharma air freight capabilities vary around the world. Airports like Miami, Brussels and Singapore have created pharma communities where the airport, airlines, forwarders and handlers come together – while in Africa only two airports “really know how to handle pharma”, Sutch said.

### Reliability over speed

Wann pointed out that while speed is important, reliability is even more so, particularly in light of this pandemic. “Things take longer now as the availability of capacity doesn’t necessarily match demand,” he explained. “It’s not great having to extend the supply chain, but as long as it’s consistent and we know we can rely upon it... we can build that

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into our planning processes.”

Another significant threat to the pharma business and the patients it serves is the production of counterfeit products based on stolen genuine items. Supply chain security is a top priority for pharma shippers.

“From a transportation and procurement perspective, we have to be extremely diligent when selecting suppliers and locations,” Wann went on. “Ordinarily you’d go and visit a location... [The challenge now is that] a lot of this is being done virtually, which means a reliance on partners and on people in the markets to assess risk on our behalf.”

**Adapting during the pandemic**

Another pharmaceutical company represented at Airfreight Pharma was Sanofi. Walter Heider, head of distribution platform Frankfurt, told a session on Adapting during the pandemic that the key to maintaining high quality during Covid was the ability to be agile and flexible.

“With the breakdown of so many supply chains we normally used, we had to adapt to scenarios we are not used to. Pharma is

not typically quick in adapting to situations, so this was one of our main learnings,” he said. Plus: “We had to meet patients’ needs, so we had to join forces a lot more.”

Sanofi uses a mix of ocean and air freight, with the split being 90/10. During Covid, the company’s use of airfreight went up 20%. “There was no other way”, Heider said.

**Stable sea freight**

“The quality and stability of the supply chain is better in sea than air. It takes longer, but it’s much more stable. There tends to be less damage, and the quality of the product is better at the point of delivery. You also have the ‘ecoprint’: sea freight’s CO2 emissions are much better versus air freight.

“Plus, air freight is expensive. The cost is much higher per pallet. Of course, sometimes you need to be quick and there is no other way than air freight – but if there’s a risk that the product won’t be useable on arrival, it’s very tricky.

“Whatever we ship is on qualified routes with qualified partners, with standard shipping instructions and

quality agreements,” Heider went on, “and yet we have identified partners (or partners of partners) who are not working up to these levels.”

There is a need for a higher level of dedication and enthusiasm throughout the pharma supply chain, he said, in order to fill these gaps.

Heider also called for more capacity as well as greater flexibility from carriers to enable shippers to meet unplanned peak demands for their products. “It’s a chicken-and-egg situation,” he said, acknowledging that carriers need accurate forecasts of demand from shippers in order to put the necessary capacity in place for them.

**Stepping up**

Alongside the immediate practical challenges of the pandemic and the evolution of the air freight industry in response, regulatory requirements are becoming stricter. Airlines are stepping up, as Abdullah Bahadır Büyükkaymaz, special cargo product manager for Turkish Cargo and Tom Sohorab, manager for cargo solutions strategy and business development



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# Case study: Collaboration, transparency and information sharing ‘critical for success’



Another session at Airfreight Pharma comprised a case study of the transport from Milan to Chicago of a drug requiring deep-frozen temperature maintenance.

Chiara Venuti, business development director and strategic account manager at SkyCell, outlined: “The customer was a pharma company headquartered in Italy, which produces a compassionate drug for a rare disease. For rare diseases, you’re not talking about mass production; if something goes wrong, the drug has to be produced again, so there’s no room for mistakes in the supply chain.”

Miguel Rodríguez, senior manager for climate control products at Qatar Airways, noted that collaboration, transparency and information sharing were put in place from the very beginning and are “critical for success” in this type of project.

“What happens before and after is as important as what happens while a shipment is under our care,” he said.

“You need to keep working with the forwarder, container supplier, consignee and authorities to make sure the product is delivered as expected.”

Venuti confirmed that there were “lots of tripartite calls” to ensure all parties understood the product, as well as risk analysis to understand and mitigate potential problems. Elements to consider included ground handling capabilities and facilities, weather conditions, duration of flight, and temperature settings in the aircraft.

According to Fabrizio Iacobacci, head of pharma business development at Italian handler BCUBE air cargo, risk is opportunity.

### Extra gap analysis

“You have to make an extra gap analysis,” he explained. “Every time you do that, every negative occurrence you experience in your operational life improves the level of your backup capacity. The more you do this, the more you can be confident of solving risk. We made an extra gap analysis for this

project, such as a backup of extra dry ice, and the logistics of that.”

The Italian-made drug has a critical point of  $-20^{\circ}\text{C}$ , so the decision was taken to deploy SkyCell’s 1500 DF deep frozen container, which uses dry ice (the drug can withstand extreme negative temperatures).

The container was placed in BCUBE’s  $-20^{\circ}\text{C}$  facility and re-iced prior to the flight. Iacobacci said that the deep-frozen container’s requirement for dry ice is quite low – only 100kg.

“That’s not a massive amount, and it’s compatible with other shipments we carry as well,” he said. “Thanks to Covid-19 vaccines, dry ice limits have substantially increased, so today we can carry a lot more of it in our bellies and freighters than before the pandemic. This is one of the positive outcomes of the crisis.”

As the drug is for a rare disease, the US FDA automatically put a hold on it in order to do some checks on arrival in Chicago, Venuti said. The shipment was placed in the consignee’s facility, however, which kept it below  $-20^{\circ}\text{C}$  until the FDA released it. ■

at Air Canada Cargo explained.

Air Canada and Turkish faced the same challenges other as other airlines when Covid struck: staff reductions, flight reductions, downgraded and grounded aircraft, plus customers struggling to book cargo into much narrower lanes. Airlines had to figure out how to prioritise and handle cargo under these constraints without allowing service quality to suffer.

Büyükkaymaz recalled: “Everyone was asking how they were supposed to move vaccines, medicines and medical supplies with such limited capacity. We converted some passenger aircraft to ‘freighters’ and added a couple of lanes to our routes as well.”

Noting that Turkish Cargo is IATA CEIV Pharma certified, Büyükkaymaz said: “We work by IATA guidelines so during the pandemic crisis we have been working closely with the World Health Organization as well. There were some additional temperature requirements and changes to dry ice limits.





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*Bahadır Büyükkaymaz,  
Turkish Cargo*

**Clarity on regulations needed**

“In the coming months or years, medical devices and equipment may have temperature requirements as well (15-25°C), which is good – as long as we’re ready for the requirements. We’re not afraid of any regulations. As long as we understand each other and build something collaboratively, it’s good.”

That collaboration extends to working with the authorities, too. Sohorab said Air Canada’s senior director for cargo transformation, Janet Wallace, had discussions with the Canadian government regarding the airline’s role in supporting the influx of vaccines into Canada.

“This was part of understanding the new regulations that are going to come in regarding the transportation of vaccines and pharmaceuticals,” he said. “If they are changing, we don’t want to be the last to know from the shipper telling the freight forwarder who then tells us. We want to know direct from the government, and we want to let the government know that they can have confidence that we are CEIV certified and have guidance from IATA as well.”

**Transparency is honesty**

Sohorab continued: “Pharma companies are bringing transparency to the forefront because they need custody records. Transparency is honesty and that’s what we want to build.

“There are privacy issues and other components we need to get over to put this in place. IATA’s ONE Record [which aims to cover the entire transportation chain, from shipper to consignee, with a single record view of each shipment] is heading in the right direction.”

**Teamwork across cold chain**

Transporting pharmaceutical products by air demands a rigorous logistical approach on the ground, too, of course. Handling facilities and equipment are important – but so are harmonised handling procedures and above all, strong cooperation among cold chain partners.

A case in point is Sotrovimab, a breakthrough monoclonal antibody (MAB) treatment for Covid-19, which – thanks to the collaboration of the entire supply chain – reached the first-ever patient within hours of plane wheels touching ground at Abu

Dhabi International Airport.

Jeff Kemprecos, director for communications, government affairs and market access at GSK Gulf, said: “When the pandemic broke out, we committed to a range of activities, primarily focusing on vaccine capabilities in partnership with other players in the industry. In March, [we developed] Sotrovimab – a therapeutic drug, separate from and parallel to vaccines.

“Vaccines were coming on stream from December to March but in limited quantities. They had not reached a lot of the population, so the idea that we might have a therapeutic was exciting.”

Sotrovimab is administered via a drip. The infusion takes 30-40 minutes and symptoms begin to ease as early as the day following treatment.

US Food and Drug Administration (FDA) approval of the drug took a few months; within hours of that, the UAE issued emergency use authorisation and “everything went to warp speed to distribute it”, Kemprecos said. “We thought we had a six-to-eight-week window for delivery, but the authorities in Dubai wanted six to eight days.

“Ahead of the first shipments, as we thought about how to compress timelines, early in June we held daily calls with Etihad, the Department of Health and GSK people from all over, to share vital information,” he went on. “As the supply situation matured and stabilised, we moved to weekly calls. They’re an essential touch point because if the government expects a spike, GSK can work with Etihad to adjust supply accordingly.”

Hassan F Hassan, head of customer service, logistics, warehouse and distribution at GSK Gulf, added: “The teamwork behind making this possible is something I’ve seen for the first time in my career. There were people from production, quality, freight forwarder, airline, scientific office, commercial, agent, importer, government officials and sub-bodies, all working together for the same cause. It was phenomenal.

“Before Covid, a new product launch [from initial registration to distribution] would take about six months, minimum.



Walter Heider,  
Sanofi

We are talking about weeks here – and we did it.”

**Customs pre-clearance**

Customs facilitated pre-clearance of the shipments so that the cut-off time could be halved, and unloading was done in minutes rather than hours.

Regarding the question of whether cool chain storage facilities are as necessary now as they once were, given both the speed of the pharma supply chain and advances in the packaging that protects shipments from the elements, Fabrice Panza, manager for global cool chain solutions at Etihad Cargo, said: “In the case of Sotrovimab, we really wanted to shorten the cut-off time, and an active container was the best solution to avoid the need for storage – but we would have needed a pharma facility in case of any delay as part of our contingency plan.

“We managed to operate cross docking so effectively the product didn’t go

through a warehouse – it went direct from the aircraft parking lot to the truck. This would not have been possible if we had not anticipated and cleared the documentation in advance. Certain other products would require long hours or even days before being Customs cleared (this can depend on the country, too).”

Cost is another consideration. An active container is a premium product, and if a pharma item has a lower value or urgency and can withstand a few hours in an airport, then a ‘normal’ supply chain may be the better option. “In those cases you need advanced infrastructure, advanced monitoring and trained personnel. This still applies to... 70-80% of the pharma flow,” Panza said.

At the time of the conference, Sotrovimab had treated around 23,000 patients in the UAE, Bahrain, Kuwait, Oman and Qatar, with Abu Dhabi serving as a hub for distribution up and down the Gulf. There had not been a single quality incident in transit.



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During the pandemic there have been some additional temperature requirements and changes to dry ice limits

**Lessons learnt**

Conference speakers agree that lessons have been learnt through the pandemic that will stand the air freight industry in good stead in the future. Most notably, there is an increased willingness to share information in order to benefit the entire supply chain and ultimately, in the case of pharma, patients.

Forwarders know that shippers are talking directly with carriers and they appreciate the value of such discussions, Wann said. “We might find something out that can lead us to put something in place that helps everybody,” he notes. “After all, we’re looking at the sustainability of airlines to be able to move product.”

**Collaborative spirit**

Wann called for a continuation of the increased openness and collaborative spirit that Covid appears to have brought about in the pharma supply chain, for the benefit of patients.

“We want to get it right every time so that the expectations of the people relying on our products are fulfilled every time,” he said.

Kemreco agreed. “As a pharma company, we overcame a lot of rigidities in terms of information sharing and got a lot more flexible in terms of sharing data,” he said. “There’s a big learning in there – not only for pandemics, but for accelerating the delivery of cutting-edge vaccines and medicines to patients that need it anywhere in the world, any time.” ■

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# Facing air freight's sustainability challenge

Jochen Thewes, chairman and CEO of freight forwarding and logistics giant DB Schenker, is a committed enthusiast for more-sustainable logistics and believes the sector will make significant steps this decade in handling intercontinental supply chains in a far more sustainable way, he tells Roger Hailey

**A**s the implications of climate change and the urgency of tackling it have risen rapidly up political and business agendas in recent years and months, air freight operators and their customers – along with the wider logistics and supply chain sector – are now accelerating their efforts to make their businesses and supply chains more sustainable, despite the many challenges.

For a sector like air freight that is so reliant on aviation fuel, the business is to some extent currently limited in what it can do by the technologies and fuels available. But nevertheless, certain leading shippers and logistics companies are trying to push things forward as fast as possible and persuade their suppliers to do so too.

For example, several airlines are now employing sustainable aviation fuel (SAF) in collaboration with their freight forwarder partners, and DB Schenker is one of those leading freight forwarders

offering shippers the chance to be greener.

Jochen Thewes, chief executive of DB Schenker, is a committed enthusiast for more-sustainable logistics across all modes. “Our goal is to become sustainability leader and climate-neutral by 2040,” he stresses.

## Reality check

But he is a realist too, aware of the challenges. These include a ten-year ramp-up phase until SAF is widely available at scale to airlines, while the present-day challenge is that shippers

often come to the negotiation table with good green intentions but then quail at the cost of implementing them.

So, what are the choices for shippers who want a sustainable supply chain here and now? “The first thing to say is that shippers should use as much ocean freight as you can because it is the most climate-friendly way, at least for intercontinental transport, that we have now to move freight between continents,” Thewes advises. “Try, as much as you are able, to ship by ocean.”

Of course, Thewes knows that ocean freight is not a realistic option for all types of cargo or shippers. And he also agrees that air freight supply chains can still be made greener, when each link is optimised.

“There is not enough SAF available right now and we simply cannot switch everything to this alternative fuel, but there are a lot more available possibilities which can be fed into the system which will help you and help us to make air freight more sustainable,” he highlights.

“  
*There is not enough  
SAF available right now  
and we simply cannot  
switch everything to this*

”

**Jochen Thewes**

One of these is the weekly Frankfurt-Shanghai-Frankfurt Boeing 777 freighter service operated by DB Schenker which offers shippers the choice to buy SAF for the flight. Currently there is still has some availability for companies willing to pay a premium for this carbon-neutral air freight capacity.

“Our Frankfurt flight is full, and we’ve decided that we will extend it throughout the entire winter schedule until the end of March,” says Thewes. “The flight is not entirely booked out with customers paying for sustainable fuel. For now, we buy and pay more than our customers demand, making it a truly CO<sub>2</sub>-neutral

flight. But there should be enough cargo to fill a Boeing 777F flying once a week from Central Europe into Shanghai with cargo from customers that are willing to pay the extra for the SAF.”

But freight forwarders and airlines have more opportunities today to offer SAF or carbon offsetting opportunities to shipper customers, many of whom have boardroom pressure to operate greener logistics but put cost before sustainability.

“We are clearly seeing a lot of companies

who want to reduce their carbon footprint, but when it comes to sitting down with us and discussing the solutions, we all know that SAF is significantly more expensive than fossil aviation fuel,” notes Thewes.

### Talk versus action

One major freight forwarder recently acknowledged that out of 20 face-to-face discussions with customers about greener air freight and SAF, just one of those will take the final decision to pay extra for the



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*Ocean shipping is currently the most climate-friendly way to move freight between continents*

privilege. DB Schenker recognises that ratio; but not all is lost.

“Quite a few customers shy away to make the final step in the solution but they will try cooperating with us to see what other flights can be put in place and where we can feed in SAF in order to reduce the carbon footprint,” he explains.

And sustainability has to become a key topic in the conversations that freight forwarders have with their shipper customers, says Thewes, adding: “If we go back a couple of years, the majority of the conversations were normally around price and transit time. Whatever the mode, those were the two main topics discussed.” The advent of the pandemic and severe disruption to air and ocean freight changed the air freight discussions towards “access to capacity, reliability, visibility and getting things moving”.

The discussions, says Thewes, now need to make sustainability an “integral” part of the conversations with customers and logistics partners such as airlines.

“Nokia is an excellent example of that, where we have a business relationship in other transport modes,” he notes. “They

came to us and said that they needed to reduce their carbon footprint and asked us to help.

“The first step was about other choices and alternatives. It is only the first stage, but they signed up for that Frankfurt-Shanghai flight with a regular tonnage per week and they still support that flight.

**Important change**

“Companies are starting to take sustainability seriously and are coming to us for solutions, and while price will always be important, they want to discuss the carbon footprint. I think that is the most important change that we need to see.”

*Companies are starting to take sustainability seriously and are coming to us for solutions*

**Jochen Thewes**

Thewes believes the UN’s recent COP26 climate change conference in Glasgow should make a difference when top executives now discuss sustainability in their supply chains, noting: “I hope that more boardrooms, CEOs and responsible leaders in companies and industries will not wait for political pressure, frameworks, regulation and restrictions in order to make a move towards sustainability.”

**Optimising ground movements**

He adds that the actual flight in any air freight movement is only the airport-to-airport part and that other elements, such as trucking and last-mile delivery, although relatively small components of the overall carbon footprint, are well worth optimising.

Switching from diesel to an electric-powered truck or on rail is one option, but there are broader gains and efficiencies to be achieved.

“We need to see what the last mile looks like, how the road feeder network is organized, and how goods can be consolidated to using the capacity of larger trucks – and where possible rail – as we go to and from the hubs,” Thewes notes.

He says that the logistics ecosystem, including air freight, needs greater collaboration to provide customers with the most efficient and economically viable transport while also reducing the impact on the environment.

**Rethinking supply chains**

Globalisation, fuelled by internet-driven connectivity, saw the creation of ever more complex supply chains as component production centres scattered around the world required just-in-time logistics to make sure inventory levels met consumer demand. The pandemic exposed the risk that such extended supply chains face when bellyhold air freight, for example, disappears almost overnight, halving air cargo capacity at the same time as ocean freight was hit by sudden port closures out of position containers.

Thewes says that cost was the main factor in logistics negotiations as intercontinental

**Thewes:** Sustainability needs to become an integral part of conversations with customers and logistics partners



scale it brings; you also have to consider the environmental impact”.

Thewes continues: “It is not a sustainable way of living going forward; and I agree it is a big task and a big challenge, but I can only hope that events like Glasgow will raise awareness. We cannot continue flying everything around the world, we cannot just produce something and look at the cheapest option of moving goods, we need to strike the right balance where we combine what is economically possible with what is environmentally viable.

“  
***We need to strike the right balance where we combine what is economically possible with what is environmentally viable***  
 ”

**Jochen Thewes**

supply chains were established to meet the demands of globalisation.

“If we look at sustainable supply chains with regards to keeping goods moving, in many instances we see an ‘all the eggs in one basket’ approach, with goods produced entirely in the Far East, moving across the Pacific to the US or the Atlantic

into Europe. That is maybe not the most dependable way, and we need to look at alternatives so we can keep goods moving.”

He says that one topic now up for discussion is around alternative sourcing in other regions of the world and near-shoring, but “you cannot always go bigger and further, looking just at the economic



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“That is the challenge, and it is why we need greater collaboration and cooperation between carriers, shippers, forwarders and regulators to make this happen.”

**E-commerce puzzle**

In the meantime, the pandemic has also accelerated the growth in e-commerce, as consumers purchased goods online because they could not visit many physical shops. The question arises whether e-commerce logistics is as sustainable as it could be.

Thewes recognises the tension between consumers demanding faster delivery of their goods and the industry challenge to fashion sustainable linehaul and last-mile logistics.

“The expectation today in consumer behaviour is for everything, every time, everywhere, being a next-day delivery, and we are now even looking at same-day deliveries with certain products in certain geographies.

“Certainly, it is not the optimal way of transporting goods and optimising load factors in terms of the carbon footprint per unit transport. Is e-commerce a development that is potentially counter-productive to optimal transport flows?

“Yes, it is, and everything that happens in supply chains starts with the expectations and the willingness of the consumer either to pay a higher price for a more sustainable product or maybe accept that the product ordered online is not coming within 24 hours but maybe in 36 hours. If 36 hours, that allows the possibility to better consolidate the linehaul, or use rail transport.”

**Data is key**

Thewes believes that supply chain data is key in helping consumers make more sustainable choices in how their goods are delivered.

“Certainly, that is something where better communication and, potentially, education needs to happen. Data is becoming incredibly important because you can calculate accurately the extra carbon emissions down to the single product and give consumers a choice,” he notes.

“Let’s say that whichever e-commerce



*Thewes: Hopeful about recent advances in fuel technology*

platform you use, there is a choice between 24-hour delivery – which has a calculated carbon footprint – or you can have 36 hours with a reduced footprint. I think many people would think, do I really need it in 24 hours?”

He adds: “Today, we order by default or because we signed up to whatever kind of subscription programme to get everything within 24 hours. But do we really need it? Having that data in front of you, having the choice, the awareness and information could be a trigger to change consumer behaviour.”

**Air freight preferences**

If the data becomes available, shippers could also make similar choices when it comes to flying general cargo, in theory. “Yes, and in theory you have the choice to fly with an airline that has modern and more environmentally friendly aircraft,” Thewes notes. “But given the situation now where air freight capacity is a scarce resource, unfortunately shippers do not have that choice because they have to fly on anything that makes it in the air to get their supply chains moving and their products out to customers.”

Nevertheless, Thewes remains optimistic that changes will happen to make air freight and other modes more environmentally friendly, while providing shippers with the tools to operate greener logistics.

“I believe that what we’re seeing right now, the advances in fuel technology for example, gives me hope and confidence,” he says. “Ten years from now, we will not have solved all problems, but we will have made significant steps in handling intercontinental supply chains in a lot more sustainable way than we do today.” ■

“  
*Ten years from now, we will not have solved all problems, but we will have made significant steps in handling intercontinental supply chains in a more sustainable way than we do today*  
”

**Jochen Thewes**

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## Bring Back Better: ACHL Conference Report

The 13th annual Air Cargo Handling Logistics Conference successfully took place again this year as a digital event, with CAAS providing an in-depth report on the Customer Focus session

The 13th annual Air Cargo Handling Logistics Conference successfully took place again this year as a digital event, with thousands of online views since the event went live in October.

Entertainingly moderated by air freight industry veterans Chris Notter and Stan Wraight, the conference opened with sessions examining the ‘State of the Global

Aviation industry’ and the ‘State of the global air cargo industry’, featuring insights, respectively, from ICAO and WorldACD.

A session on ‘Industry collaboration’ explored what key associations such as IATA, TIACA, AFA and ASA are currently doing to improve the value of air cargo for stakeholders, looking also at questions such as: What have we learned to do differently, better, or faster since the start of the pandemic? How can we build on that? How

can associations help the industry meet the new challenges to be competitive?

‘Up in the air’ examined how airlines have been adapting to the extraordinary changes in cargo demand and capacity restrictions – for example, including widespread use of ‘preighters’ and new charter businesses. Asking what has worked well, and what lessons have been learned, the session concluded by looking at what happens next, and what

Chris Notter



do carriers need now from their suppliers to meet clients rising expectations?

The session on ‘Airport challenges’ discussed how airports have been adapting to meet extraordinary changes in cargo demand patterns and operations.

Further sessions included: Digital and automation developments; E-commerce; Developments in ULDs; Sustainability; Safety & Security; Leadership training; and The importance of proper airport handling equipment.

**Customer Focus: Full Report**

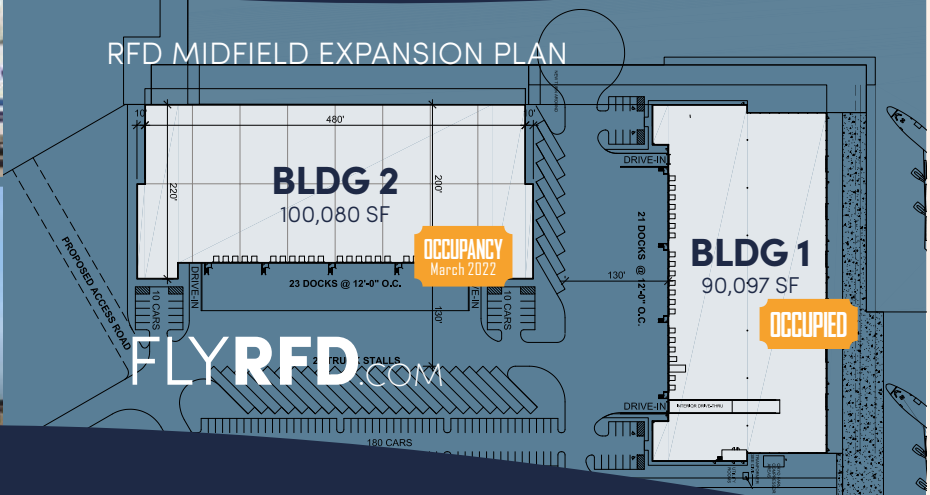
To provide a flavour of the content, CAAS has decided to take a deep-dive approach and provide an in-depth report on one of the key conference sessions from ACHL: Customer Focus.

Featuring senior executives of major freight forwarders, airlines and cargo handling agents, the discussion focused on how forwarders, carriers, airports and GHA are adapting to meet their customers’ changing air cargo needs in a highly volatile and constricted capacity

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Thomas Mack



which in some cases we're unable to deliver exactly what we want to be able to deliver."

**Resource challenge**

One challenge is that the resource pool available "is much smaller than it ever was before", noting: "We are seeing a number of people move away from working in the handling side. There's lots of competition out there for the resources, and being able to attract the right people is challenging.

"And now we've got overstretched and very busy teams that are frustrated that they can't deliver the level of customer service that they want to, at the same time as having to coach and support and train new entrants into the business as well. So, not quite a perfect storm, but certainly a few different challenges."

Thomas Mack, executive vice president for global air freight at DHL Global Forwarding, says the recent staff shortage "is not only on the ground handler side, but also on the forwarder side, on the trucking side, and so on." Reasons for that include other industries increasing their wages, "so that we have more competition today, if we are hiring people – particularly in blue-collar, but also on the white-collar side."

Other reasons include the extraordinary circumstances and volatility of the past 18 months. The initial slump in volumes meant "everybody adjusted their infrastructure. And then we had a dramatic spike in volumes – and that puts a constraint on the infrastructure, that is still of course, with significant shortcomings in capacity."

**Understandable frustration**

He continues: "So, the delays we see – be that on the ground handling side, the carrier side, and also on the forwarding side – are adding up. And if you compare that to the rates that are in the market today, I understand a certain frustration on the customer side.

"Understanding it is one thing; fixing it is another thing. And that will definitely take some time – to improve our infrastructure, improve staffing, and so on. But we are working on it. I think the

environment. For example, with capacity short, expensive, and difficult to guarantee, forwarders and e-commerce shippers have been expanding their own-controlled air freight networks. But what are the implications of these, and other recent changes, operationally and commercially? And what more can the sector do to support them?

Conference chair Chris Notter highlighted that the title of the conference this year is 'Bring Back Better', acknowledging that although this is also an overused term, amid the chaos and misery that Covid-19 has created, "lots of good things have happened. This whole pandemic, and the impact on our business, has stretched us now a lot further than most people knew" (was possible).

One outcome currently is that "now, things are going well", commercially, for many in air cargo: "rates are high; everybody wants space", notes Notter. "But are they (customers) really getting customers service? And what is customer service in the time of crisis?"

**Room for improvement**

Peter Penseel, chief operating officer for air freight at Ceva Logistics, acknowledges that when it comes to communication with customers "there's room for improvement, especially when it comes to negative feedback. Because I also believe that together with your customers, you can find a solution even by telling them a negative story, rather than not telling them anything – because I think it's a joint effort; and yes, capacity sometimes is an issue."

Robert Fordree, executive vice president for cargo at handler Menzies Aviation, acknowledges that the impossibility of delivering good customer service at all times in the current disrupted environment has been having a negative effect on some handling staff, noting: "We've got some outstanding people that have got their own mission to deliver the best possible customer service. And what we're seeing across some of our stations is those people getting really frustrated – because we're seeing congestion in some ports, we're seeing excessive amounts of cargo, for

whole industry is working on that.”

Dennis Lister, VP for cargo commercial development at Emirates Airlines, agrees the sector is still recovering from 2020, when aviation and “the entire supply chain came under a massive attack”.

He continues: “However, I would say talking to customers and partners has allowed us to adapt and evolve and change to this difficult time. Particularly from a carrier or Emirates perspective, it gave us an opportunity to redefine ourselves very quickly.”

From a cargo perspective that meant going from a passenger operation with some freighters to a pure cargo operation. “We learned a lot,” notes Lister. “We made mistakes, but within 100 days (of Emirates’ entire fleet being grounded) we were flying to 100 destinations.

“We still see capacity constrained today. I think it’s about really working with our customers and trying to ensure that customer satisfaction and service remains in place. But it is challenging – specifically now as we get into the peak of this year.”

### **Forwarders’ own air capacity**

Conference moderator Chris Notter observed that more and more freight forwarders have been securing or operating their own freighter capacity, questioning “what are the main reasons you’re doing that”?

Penseel responds: “It’s not that we want to have our own capacity. But we also have commitment to our customers, and when our carriers cannot support (the level of demand), for whatever reason, we needed to make sure that we have our network available for our customers. It’s driven by the market and the commitments we gave to our customers.”

Mack says: “If you lose 40% of your capacity on the passenger side and you maintain the same volumes, then you need to do something and that means you go over to the freighter side. And because you have a significantly higher demand for the freighters, it’s relatively easy to fill that up. And of course, we are in obligation to secure the capacity for our customers. So, we take the whole

*Peter Penseel*



freighter in order to control it and offer our customers solutions.”

### **Value versus volume products**

Notter questioned how the importance of value products and volume products



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has changed due to recent developments and how operators think that's going to pan out now as the pandemic starts to ease off.

Lister notes: "All customers want the best service at the best rate. But there is only a finite amount of capacity. So, if we have a commitment or a BSA with a certain customer, there will come a time when you don't always have sufficient capacity to carry everything. So, there is a process of triage, to some degree, where you have to decide what trade lanes are we going to operate? And working with customers to decide the higher priority (cargo), the stuff that is critical.

"And if it's general cargo, e-commerce, or volume cargo, versus carrying a premium product, that needs to be worked out. But it's not a discussion in isolation within the carrier. There are multiple conversations, multiple parties involved, to decide what takes priority in the aircraft.?"

### Better conversations

Notter asked whether there's a recognition by carriers and the industry as to what the GHA does when it comes to volume and value, and the pricing that can be achieved from that.

Fordree responds: "We're having much more transparent and honest and open conversations than we ever did before, largely as a result of the pandemic. Certainly, with some of our more global customers, we're having very sensible conversations about what can be achieved, what they're looking for, what sort of service we're able to deliver, what sort of timelines we can work on, and that kind of thing.

"We're having the opportunity to talk to them about schedules – that if you're scheduling a freighter, or a passenger freighter, there isn't the same degree of focus on arrival and departure times as there would be a passenger aircraft with passengers on. So, we are seeing flexibility with carriers working with us on optimum flight schedules and reducing peaks of operation as well.

"So, the dialogue and the engagement is significantly better than it has been before, and a very sensible approach from most."

Dennis Lister



### Systemic changes

Notter asks if there is now an opportunity to really change the old patterns of companies protecting their own interests and blaming others for failures in the air logistics chain – to instead focus on what is important to improve the whole air logistics chain.

Fordree responds: "There's always opportunity to do that. And we'd love to. It would be much easier if we were able to sit in a room collectively with representation from each part of the logistics chain and say: 'let's work this out together'. The reality is, it's very challenging to do that."

He offers an example where some change has been possible by focusing on a particular lane – China to the US – where there had been particular challenges due to Covid outbreaks leading to backlogs of cargo in some of the gateways coming out of China. "For example in Dallas and Los Angeles, we are now seeing massive influxes of cargo. We've gone from maybe two or three freighters a week to 10 or 12

freighters. And that's adding huge pressure on the warehouse capacity that we have available to us, pressure on the trucking partners, pressure on forwarders to collect cargo as quickly as possible. And some of the forwarders are saying 'my facility is full; I've got nowhere to collect that and move it to', leading to some of the facilities becoming logjammed.

"And so, working closely with the carriers and the forwarders in Los Angeles, we've tried to streamline that process," Fordree continues. "So, we're doing deliveries on certain days; some forwarders are able to collect from the aircraft even. And that alleviates the pressure that's put on the whole logistics chain.

"Now, that's just one route and two origins and destinations across the whole global logistics chain. We're working closely with the people that we're able to engage with. But there are 1,000s more trade lanes and opportunities out there as well. And we simply can't get to all of those to manage them as effectively as we are with some of the ones that are much

more high profile.”

Fordree concludes: “So, yes, we could do a lot more in working much, much closer together. But at the same time, the complexity associated with that makes it very, very challenging.”

### **Favouring pro-cargo airports**

Notter asks whether forwarders are, therefore, now looking more at pro-cargo airports to alleviate some of these problems.

Mack responds: “Los Angeles is a perfect example. There is very inefficient infrastructure; that airport has not invested in infrastructure for probably the last 20 or 30 years. And the ground handler can only use the infrastructure that is provided by the airport.

“Other airports that are focused on cargo do invest. So yes, we will focus on airports that are investing in infrastructure, geared to cargo, in order to take the pressure off infrastructure that you have, for example, in Los Angeles. Almost out of desperation, we are looking for and using alternatives.

*Robert Fordree*



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“And I honestly don’t think we will switch back once we have it established; we will maintain at these airports. So that is not only a short-term solution, but it will be a longer-term solution where we will use infrastructure that is more geared towards the cargo handling. And that also makes the life easier for a ground handler.”

**Optimising freighter capacity**

Penseel says this is particularly important where forwarders are operating their own freighter flights, as they increasingly now are. In the case of commercial air freight capacity, he says “often freight forwarders are selecting carriers on (the basis of) the contract they have with the ground handler”. But even then, the handling facilities they have available to them – or

the availability of other key factors such as Customs – is often still inadequate.

“And that’s why there is now a separation in our decision making,” he notes. “If we operate our own freighters, we can be flexible to operate to airports we believe can make a turnaround of two and a half to three hours for a big aircraft, rather than to wait 5, 6, 7 hours before he even starts offloading our aircraft. And that is becoming more and more critical, if you operate your own scheduled network, like we are doing now, and a lot of our competitors are – the aircraft need to be in the air for at least 15 hours a day, to make money and to serve the needs of our customers. So yes, the need to make the right decisions when it comes to an airport and handling

facility will be bigger and bigger.”

**Better conversations with airports**

Fordree agrees, adding: “We’re having much better conversations with airports than we’ve ever had before. There’s a number of airports that have woken up to cargo. If we look at the traditional cargo gateways, (it’s a) different situation. But there are lots of airports, particularly in the US, that are making warehouse capacity available. It’s suboptimal at the moment, but they’re certainly making warehouse capacity available to help.”

He continues: “And then longer term, we’re working with a number of developers on newbuilds in effectively a new airport. And I cannot disagree with Tom and Peter: We’re seeing congestion



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in some of the major gateways – cargo handling in general, not just Menzies aviation. But when you have import cargo that is taking longer to be retrieved by the customer than it takes to fly from the origin to the destination, something is wrong in terms of the logistics chain.

“And that’s exactly what we are trying to manage through at the moment, which is why other airports, I think, will have a really great opportunity to pick up the volumes – which I don’t see reducing for some time.”

**Investment payback**

Lister says his experience in Dubai indicates that “investments do pay off”, although sometimes you don’t see those benefits for “a year to two years, maybe even sometimes five years. We’ve made significant investments here in Dubai in various products, whether it’s sea-air or pharma, and we and our customers have seen the benefits.

“We are in this end-to-end supply chain, so you’ve got multiple partners in there. Therefore, you could have different points which can create a breakage or an area of weakness, so I think it’s important that we work together.”

But he highlights a situation where the payback can come much more quickly for a relatively small investment of time or resources, in this case from working with stakeholders at Dubai’s port of Jebel Ali to help streamline the sea-air product.

About a year and a half ago, it was taking up to 48 hours from the time the vessel arrived to the point of getting cargo ready for departure by air. Working with the different stakeholders to find out why it was taking so long, “we managed to get it down from 48 hours to 180 minutes, basically just simplifying a very old process”.

Lister continues: “That simply comes from working with different partners, putting in things like a bonded truck as Emirates – so we can say to our customer, ‘you don’t need to put a truck in anymore; we will create a bonded customs solution corridor between Jebel Ali port and the airport. So, there’s some very practical things we can do to try and create efficiencies. It does require investing time



with people, not just the infrastructure, but also creating solutions.”

He believes those kinds of examples “can be spread across the world in different solutions for different airports with different GHAs. In some cases, you will gain a lot; in some other cases, some airports won’t change for a long time. But there is a need for people to want to work together.”

**Digitalisation’s role**

He says this also leads to the whole topic of how “digitalisation can act as an enabler – finding ways to get data to the customs authorities and those sorts of those entities, to ensure that we can have faster clearances, faster time to customer. Those are the things we need to be thinking about. I don’t think there’s



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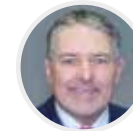
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enough attention on that.”

Lister continues: “We’ve been talking about e-airwaybill for the last 20, 30 years and we’re talking about it today. So, how do we actually get beyond that? I think there’s work to be done on the digital front, not just on the operational and the real practical aspects, so there’s a combination of both of those aspects coming together.”

Notter questions why the air freight sector cannot set a date to switch completely to e-AWBs, after which anyone not complying will be heavily penalised.

Mack agrees this is a good question, but says one reason is “because we have so many parties involved – not only the airline and the ground handler; it is also customs that is involved. It is the regulations you have in every country. If you’re looking at 150 different countries, you’re looking at 150 different (sets of) customs regulations. And let’s say 300-400 forwarders, 120 airlines, so there is a significantly higher complexity (compared with) an integrator doing that

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on his own” and setting up “a special arrangement with customs”.

### Investment throughout the chain

“Another reason is the investment that you need on all ends. And every forwarder, airline and ground handler works with different software. So, the complexity is significantly higher, and that is something that we need to overcome.”

Mack continues: “And that would be one of the wishes that I have in the future, the seamless information flow. And if I use the example from Robert, if you have now 20 freighters or 10 freighters coming in to LA, normally that should not come as a surprise to him. He should have that at least a day in advance from the forwarders, the notification that we are getting ready to send an aircraft. Then as soon as we have the aircraft departed, he should get the final loading manifest.

“So, he should know what is on that aircraft. And he should also know where is it going to. Is it going to stay in LA? is it going to be distributed by truck, and so on. And that is today not happening.

“And that is something definitely that we need to work on. And that is one of the lessons we learned out of the crisis. That is the information that needs to go mandatory, not only to the airline, but also to the ground handler in order to do the staff planning – and then also the infrastructure planning, for the truck, and so on.

### Massive room for improvement

“And there is definitely a massive room for improvement. And that is something where we will focus this year and next year – the seamless information flow and digitalisation of our industry.”

Notter and Penseel both note that the sector could benefit from a single “conductor” to coordinate this and make it happen, although that remains absent.

Fordree highlights that “for every DHL or Ceva there is a ‘mom and pop’ forwarder who’s got one or two employees that have been doing the same thing for many years, earning a good return and don’t want to change. And for every Emirates that is driving digitalisation,

there are a number of other carriers who don’t have cargo representation – they just use GSAs; then there’s “nobody to engage with within that carrier to say, we want to digitise the process”.

Although this process of change has been very slow, he believes it will now “happen over a much shorter period of time – the reason being, we have a number of employees who are reaching the end of their careers who’ve done the same thing for many years very successfully.

### Recruitment factor

“And we’re struggling to attract new people into our business – they’re looking at other industries; they’re looking at other logistics providers; and that’s largely due to the fact that when they come into one of our warehouses, because of some of the customers that we’re looking after, they’re given a pen and a piece of paper, not a mobile phone. And it’s completely an alien concept to them.

“So, if we are not going to be embracing

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Digitalisation and data sharing were among the top priorities highlighted by several speakers

technology and digitalisation, we're not going to be able to attract the people that we need for the industry in the future anyway.

"It is a big challenge. But equally, it is changing, and will continue to change over the coming months and years as well. But for the better."

**Top priorities for change**

Asked to list their top priorities for industry change, Mack highlighted "the seamless information flow between all the parties that are involved, and that goes into the digitalisation of enhancing the way we operate"; the growing importance of the sustainability"; and "to keep people safe and protected".

Penseel highlighted "that we start to share our knowledge to the younger generation" in order to "give them a career path" and encourage people "choosing to be part of our industry in the future". A second priority is to "make sure that we will start to share data as an industry. I believe that data sharing is the key driver in our industry for the future as well."

Lister highlighted the need to "look at what's really come through in the last two years, to start embracing the way we operate today", including productivity improvements from "Zoom calls and using Teams across the network".

Fordree highlighted "flexibility, more

planning, and more understanding of each other's needs"; accelerated development of cargo facilities around the world", including in some cases "that we find immediate solutions, whether they be temporary facilities before the development is completed"; and "looking after our people", including digitalisation, which he says is "about supporting the new generation and accelerating the process".

Fordree concluded: "Looking after our people is the most important element. We are so reliant on really key individuals. And it's not about looking after their wellbeing or their mental health; it's being able to support them to get the job done." ■

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