

Outlook 2022 Report

Insights from across the air freight sector

Rethinking Pharma's Modal Shift

Pandemic developments keep air freight's share

Africa Report: Improving Picture

Investments build handling efficiencies and productivity

ACCELERATING CARGO RELEASE

Digital payments streamline import clearances





Editor's NOTES



Will Waters will@evaint.com

Yet another crisis...

ussia's brutal invasion of Ukraine has started another major international crisis, bringing further uncertainty, volatility and human misery to a world just starting to recover from the Covid-19 pandemic.

Alongside the heart-breaking scenes of suffering and destruction, Putin's war and the resulting sanctions against Russia bring a new set of headaches for the air logistics sector, which has so brilliantly adapted and adjusted to the extreme challenges of the pandemic.

The resilience developed in the last two years may prove useful in tackling the fresh waves of capacity losses, changes and volatility, freight rate rises, longer flight times, plus an enormous spike in fuel costs, alongside dramatic changes in trade patterns, freight flows and business relationships. There's set to be more losers than winners, and companies hit include Russian and international carriers and their partners. ABC, for example, is now unable to serve its primary Asia-Europe markets, and may soon struggle to source parts for its aircraft, while some other Russian airlines will see their aircraft leases terminated or have difficulty with international payments. Other unintended consequences include interruptions to supply chains dependent on Russian or Ukrainian products, withdrawal of companies and services from Russia – including freight and logistics - plus price rises in many commodities and products from food to wood.

The changes will see Russia and Russian

businesses more or less excluded from most freight trade with Europe, the US and the democratic western alliance, along with the strengthening of Russia-China trade and relations. And if the conflict escalates or spreads further, then we will face unprecedented, unknown, and unimaginable further consequences.

The Ukraine crisis comes as the air freight sector has been making progress in a number of areas, not least in digitalisation initiatives already delivering productivity improvements and promising further gains – including from the digitalisation of payments (see page 18). And as highlighted on page 12, as more processes and functions are digitalised, integrating modules and systems is becoming ever easier thanks to APIs and the retreat of legacy systems – laying the foundation for new efficiencies through AI.

This year's Outlook report includes some fascinating insights from selected senior leaders within 15 leading air freight organisations, even if the contributions came before the Russian invasion of Ukraine. One contribution reflects on the need for the air freight sector to rethink performance from both an economic and human perspective, giving more attention to factors such as well-being, commitment, and social value (page 61).

Similarly, tragedies like the war in Ukraine and other conflicts and disasters remind us that while business is important and valuable, nothing is as crucial as peace, health and respectful relationships with our neighbours – including those that hold different views.

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Pharma logistics specialists pass Covid tests

Air freight suppliers have risen to meet the demanding conditions of the global vaccine rollout, amid a highly challenging environment that has included capacity and staff shortages and volatility, changing regulations, closures and lockdowns, reports Roger Hailey. Changes along the way have included accelerated technology developments, more one-way leases, expanded use of shipment monitoring and route simulation, and a rethink of some shippers' plans to shift volumes to ocean freight

ore than 9.6 billion doses of Covid-19 vaccines had been administered globally by

January 2022, according to the World Health Organization, with air freight playing a vital role in the challenging temperature-controlled supply chain.

Airlines, airports, ground handlers and freight forwarders have overcome capacity and staff shortages, changing regulations, sudden airspace closures or hub lockdowns to maintain vaccine deliveries since late 2020. And a key



part of the vaccine logistics operation has been the cool chain packaging and specialist container suppliers, whose temperature-controlled units helped limit temperature excursions – thanks in part to a number of changes that have included accelerated technology developments and manufacturing, more flexibility to manage and accommodate one-way leases, and heightened use of shipment monitoring.

But there is more work ahead – particularly in Africa, Western Pacific and the Eastern Mediterranean, where World Health Organisation (WHO) data shows vaccination levels far below those of Europe and the Americas.

One result of the pandemic is that cool chain containers and packaging saw new technologies emerge to handle the extreme temperature range for delivering vaccines, some of which need to be kept at -70°C. Those improvements included significantly extended container battery life, improved insulation, and reduced dry ice requirements for a longer run-time of packaging at required temperatures, or to make more space inside standard size air freight containers for additional vaccine volumes.

There has also been a flexible approach to equipment leasing, with more trade lanes included in one-way leases to "There is a shift towards real-time monitoring, and that demand will definitely grow"

Joachim Kuhn



SkyCell says its data-driven Transport Planner tool has been a 'game-changer' during the pandemic

maximise aircraft bellyhold cargo capacity on fewer long-haul passenger networks.

Shipment monitoring developments

Extensive shipment monitoring, both in the air and on the ground, has also been an important part of the supply chain response at a time when vaccines have been going to new destination hubs where cool rooms and other temperature-controlled infrastructure is limited, both at the airport and for last-mile delivery.

This technology leap will sustain further Covid vaccine deliveries in the year ahead – but also for new gene and cell treatments for cancer and other illnesses which require immediate intercontinental transport at ultra-low temperatures.

SkyCell's Good Distribution Practice (GDP)-compliant hybrid pharma containers have helped limit temperature excursions during the operations, with excursions affecting just 0.1% of vaccine doses it transported by air, says the equipment specialist's head of strategic partnerships, Chiara Venuti. SkyCell's 1500DF container for deep frozen pharma was already in the pipeline pre-Covid but came into its own during the pandemic. It has an independent run time of 120 hours with a reduced 100kg of dry ice and

maintains a steady temperature of -60°C to -80°C, enabling up to 1.75m vials to be transported in a single aircraft.

High demand for negativetemperature pharmaceuticals

"The 1500DF, with the deep-frozen capability, is a fantastic innovative container because the very low amount of dry ice needed makes it particularly friendly on passenger aircraft that have a low dry ice limitation," says Venuti. "Negative-temperature pharmaceuticals were in high demand with the pandemic, and we believe that trend is there to stay. In 2021 we still met our target of less than 0.1% of temperature excursions."

Envirotainer's new Releye RLP battery-powered air freight pharma container came to market in 2021 with a 170-hour run time autonomy for its electric heating and compressor cooling system. Bernt Anderberg, chief technology and supply chain officer at Envirotainer, notes: "When the pandemic hit we had to accelerate some of the activities already in plan and to get them up to speed even more quickly."

The Releye RLP can accommodate three pallets on the same floorspace as two one-pallet solutions, a 50% saving on air freight space and so a more efficient cost

option for pharma shippers, the company highlights. The Releye RLP can also operate in extreme temperatures, between -32°C and +49°C.

The new battery design can last up to a week before requiring a recharge, a run time that compares with a couple of days for similar containers, says Anderberg, adding: "We worked on all the parts of the container, including the insulation to free more space, and better efficiency in the cooling system."

Envirotainer, with a total fleet of just under 7,000 containers and more in production, has already transported one billion Covid vaccines around the world.

Va-Q-tec, which 20 years ago pioneered the use of insulation panels within thermal containers that can maintain temperature ranges between -70°C and +25°C for several days without the need for a battery or dry ice, has also played a major role. Chief executive and founder Dr Joachim Kuhn says: "We are very proud to say that some 40% to 50% of all international corona vaccine shipments are done with our solutions."

One-way shipment growth

Va-Q-tec's insulation technology remains broadly the same within its product range, although there has been greater use of one-way packaging rather than multiuse packaging, since the start of the pandemic, on trade lanes where air cargo capacity was tight due to reduced bellyhold flights. Kuhn notes: "We call it one way rather than single-use packaging because you can use it for a second time, for example for domestic distribution in some countries."

Anderberg says Envirotainer extended the offer of one-way leases on additional trade lanes, which meant that the lessee could leave a container at the destination and resell it or reposition the equipment to where it was needed.

Venuti says SkyCell also saw an increase in one-way shipments at the beginning of the vaccine airlift when smaller consignments were shipped and cost considerations were not an issue. The transport of larger vaccine consignments needed fully laden containers that were



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Envirotainer's Releye RLP air freight pharma container came to market in 2021

more cost efficient and less susceptible to damage and delays at certain airports.

Kuhn says Va-Q-tec's product portfolio was already "perfectly prepared" for Covid vaccine shipments in terms of temperature ranges, packaging sizes and performance, whereas some competitors had to create new pharma solutions. And he says Va-Q-tec was able to quickly ramp-up the production of its insulation packs because it has in-house manufacturing.

"We have a very safe supply of these valuable components for ourselves, which was not the case for many others," Kuhn notes. "We also increased the capacity of our cold chain centres around the world and even added some new centres which will remain."

Real-time monitoring rise

All three companies expect real-time monitoring of pharma shipments to increase, not just with their own sensors to measure temperatures inside and outside the container or packaging, but also by the pharma shippers who have the final responsibility in making sure that no products are subject to temperature excursions.

Anderberg says: "There have to be

monitoring functions to ensure that the customer at any time can see where the containers are, what the temperature is, what is the state of battery charges and all the conditions inside."

SkyCell has its Transport Planner, a data-driven route-planning and shipment risk-management tool described by Venuti as a "game-changer" for its customers during the pandemic. "All of a sudden the supply chain becomes riskier because the airports were congested and there were less personnel on the ground; and in China there was double fumigation before the pallet entered the cargo system, so a lot of delays," Venuti explains.

Extra digitalisation

The extra digitalisation of the vaccine supply chain allowed pharma shippers to have real data to make a proper risk assessment for different trade lanes.

Venuti adds: "The billions of data points recorded are feeding into this simulation tool that is really key when shipping at this moment, and we know it is the big topic now."

Kuhn agrees: "We can offer all our products with datalogger and track and trace. They are real-time solutions or solutions which you read out at the



Bernt Anderberg Envirotainer



Dr Joachim Kuhn Va-Q-tec



Chiara Venuti SkyCell



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destination. There is a shift towards real-time monitoring of the supply chain, which gives you good visibility; and that demand will definitely grow."

Next airlift challenge

One of the next big challenges for the vaccine airlift is its expansion more towards countries and regions with airports lacking sophisticated cool rooms and harder to reach inland connections. So, how will the pharma containers and packaging cope?

SkyCell's Chiara Venuti says: "That has always been a strong point for us when the local infrastructure and ground handler are not completely pharma compliant. That is when Skycell's solid container can play a key role on two fronts.

"Firstly, a solid structure and sealed container protects the cargo from cross contamination if the airports are so small that the cool room has pharma and perishables in the same space. The independent run time technology means we can then make sure that the cargo is protected even if it is not entering the cool room."

Envirotainer emphasises that it has a global support network in place for its containers and that the robust nature of its fleet and new Releye container, with its longer run time, will be of critical importance.

Va-Q-tec's Kuhn says: "We are uniquely prepared because our portfolio

can cope with these problems for five days or longer and all our packaging products have been tested under extreme conditions and worst-case scenarios. That is why we have seen a lot of demand from Third World countries and why many companies came to us and for the higher performance version of our portfolio, to cover those infrastructure problems."

Switch from ocean freight

Ocean freight's high levels of global port congestion, cancelled sailings and rate rises in the last 18 months have caused some pharma shippers switch to air freight for non-vaccine medication, although it is unclear if this is a permanent modal shift.

SkyCell's Venuti says this has changed some shipment patterns, noting: "The logistics world has been impacted by this pandemic and the sea freight market has been affected by port congestion, port closures and delays. Before the pandemic you could expect a weekly shipment into Brazil and suddenly there was maybe one shipment per month. Instead of 10 pallets every week you have one shipment with 40 pallets."

Pre-pandemic, SkyCell says many pharma customers were pushing to increase the proportion of their products moved via sea freight, but ocean freight rate increases and forecasting challenges due to delays have meant the plans some had to move 80% of their products by sea never materialised.

Some pharma products, those with a

longer shelf life, will continue to travel by ocean freight, but the high-value products will stay with air freight as bellyhold capacity returns, believes Envirotainer's Anderberg, who notes: "Of course customers like to ship big volumes which are not so critical by sea, to save money, and a certain portion went by air.

"We have a challenging situation in ocean freight these days, so we don't see a drastic change or shift; but each customer will need to take a decision and find a solution that works for them."

Shifting production

While air freight's modal market share of pharma transport may not be about to change significantly, Va-Q-tec's Kuhn says pharma companies may shift their production focus: "I think that, after Covid, the pharmaceutical industry will somehow relocate their production sites," he notes. "They have realised that there should be more local production as well, in order not to have these massive international interdependencies in supply chains.

"The Europeans will relocate to make pharmaceutical products entirely in the European Union and have another factory entirely in the United States. In that way, there will be some changes in the pharmaceutical industry."

Va-Q-tec has also joined IATA's Strategic Partnerships Programme in a knowledge centre working with other stakeholders to shape the future of temperature-controlled airfreight transport for both pharma and other perishables. Envirotainer, meanwhile, has been a strategic partner with IATA for about 20 years and helped build its Time and Temperature Task Force.

Va-Q-tec intends to help address gaps in the industry's collective knowledge about the performance of thermal packaging in air freight's temperature chain "where people are not deep enough into thermal engineering to understand the real power of something and what is the real performance".

Kuhn adds: "You can test the same container and get different performance levels, which leads you probably to the wrong choice. There are gaps in the industry which we want to fill."



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During the pandemic, as an industry, we went through a lot of challenges – especially the decline in capacity, which created an unprecedented demand for never-imagined medical and pharmaceutical supplies from Asian markets.

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Recently, some governments started easing travel restrictions in the later part of 2021, as Covid-19 vaccination programmes got underway, lifting international passenger volumes in December. But the emergence of the Omicron variant of Covid-19 put the brakes on any recovery.

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The building momentum of digitalisation

More and more air cargo processes and functions are being digitalised, and the integration of modules and systems is becoming ever easier – thanks to the ubiquity of APIs and the inevitable retreat of legacy systems – laying the foundation for new efficiencies through artificial intelligence, reports Ian Putzger

t has been slow coming, but the past two years have brought further significant advances in digitalisation of various aspects of air freight, including within cargo handling operations, bringing extraordinary potential gains through artificial intelligence (AI) much closer to than seemed possible two years ago. And as more and more air cargo processes and functions are digitalised, and the integration of modules and

systems becomes ever easier, an apparently unstoppable momentum is building, as the already achieved gains also make the further potential benefits increasingly apparent.

Hermes Logistics Technology, for example, has started working with the IT University of Copenhagen and Dnata to explore new machine learning models for the handler's cargo business. This follows the implementation at Dnata's Singapore facility of the tech provider's New Generation Ecosystem (Hermes NG) – which aims to streamline workflows, provide greater transparency across the handling process, and improve data sharing for all sections of the supply chain. Hermes NG data can be used with AI and machine learning algorithms to help decision making and optimise business and handling processes.

And CHAMP Cargosystems has been rolling out its CargoSpot Mobile offering in air freight warehouses, reports core

cargo product director Shaz Aslam, adding that CHAMP is getting ready to roll out a new checklist app for special cargoes. He has seen increased investment both from airlines and handlers.

Other technology providers also report heightened interest among handlers in digitisation initiatives. Awery Aviation Software has traditionally dealt with airlines and GSSAs, but over the last 6-12 months it has had more interaction with handlers, says CCO Tristan Koch.

Hermes' CTO Marcus Campbell observes: "We're seeing more and more interest in warehouse automation, automated retrieval systems that are able to interact with our CMS (cargo management system) and actually create the automated movement of cargo within the warehouse."

Proliferation of sensors in warehouses

The proliferation of Bluetooth and IoT sensors in warehouses around the planet is producing a wealth of data and increasing the industry's appetite for visibility.

"IoT is not about trying any more. We

can see real benefits," remarks CHAMP's Aslam. He views the technology as an integral part of the journey toward smart facilities and believes that, before long, all warehouses in an airline's network will be connected with IoT.

"The technology is there. The challenge is the rollout, installing in the facilities," he says. "You deal with several departments. It's more of a collaboration challenge."

Data flowing from widening sources

Data are flowing through the system from a widening pool of sources as more and more information is captured electronically or converted into digital format through automation. The airlines' push for electronic booking means for handlers that the shipment data they receive are increasingly entered by the forwarder at the time of booking, if not by the shipper if the forwarder has automated his own booking process.

"With fast and accurate data, a handler does not have to waste time correcting mistakes from booking," says Koch. "Online booking matters greatly to handlers. The biggest single issue is the quality and timeliness of the information that the carrier sends."

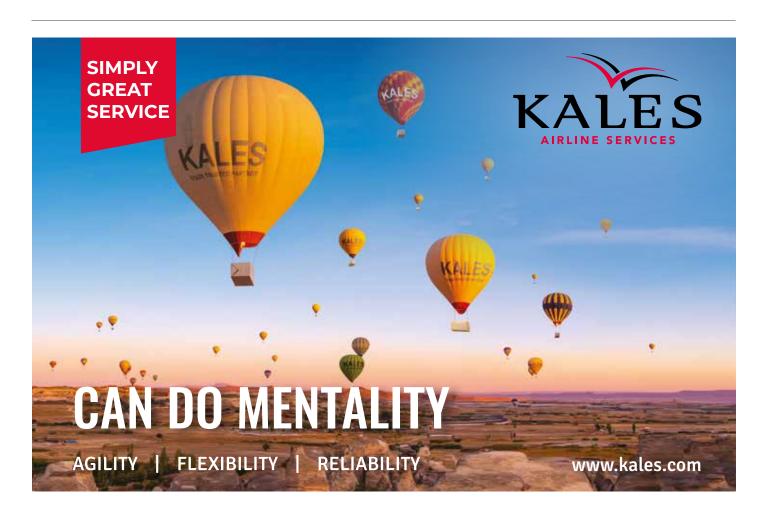
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Online booking matters greatly to handlers. The biggest single issue is the quality and timeliness of the information that the carrier sends

2

Tristan Koch

Cargo handler Menzies Aviation
has been working with KCL, which
provides a software application for paper
digitisation. Whereas there are about 160
pieces of paper for a freighter that had to
be printed, scanned, stamped and signed,
now Menzies scans in one flight pack
and the different stakeholders can log



into the system to access the information at any time. During the first quarter this technology, which involves industrial-grade scanners, will be implemented in Melbourne and Sydney, says Rory Fidler, vice-president for cargo technology.

Automating bookings

Airlines and GSSAs routinely receive e-mail blasts from forwarders looking for quotes for a shipment, which they had to respond to with return messages. Awery offers a solution that automates the process. With a single mouse click the software reads the information in the e-mail and uses it to people a form for booking. If the database of the airline or GSSA harbours pricing parameters for the particular customer, this is automatically accessed.

"The conversion rate is amazing," says Koch. For a Chinese airline that launched flights to Europe, Awery converted 60% of the bookings to automatic processing within weeks, he reports.

Making data cleaner

Fidler stresses the need to make data cleaner, which he calls a huge priority for everybody.

"Data really needs to be clean and as accurate as possible in order to leverage artificial intelligence agrees Campbell. "That's an area where we've been putting a lot of focus in."

As part of a broader logistics puzzle, the data in air cargo do not exist in a vacuum. Shippers' need for end-to-end supply chain visibility entails the requirement for air freight data to be accessible to tools and systems that are not native to this industry. They have to be compatible with shipper systems and providers of multimodal tracking and visibility platforms like FourKites or Tive. Tech provider Kale Logistics Solutions is working with Dnata in Dubai on major upgrades to the handler's platform. Among other elements, this includes plans for the interface with other modes of transport.

"We're looking at things like sea-air, road-air elements, to move data from the port to air," says Kale director Amar More.

Awery has been talking with companies that provide visibility for shippers to add an air freight solution







Tristan Koch

to the mix. This has been a mixed bag, notes Koch. "Some of these activities are automated, some aren't," he reports.

Integrating with BCOs

When it comes to integrating with systems of beneficial cargo owners, there is very little standardisation and, if it exists, very little compliance, notes More.

For the most part, the issue is not an absence of standards, but a lack of adoption, he points out. "There is a UN standards library, but it's not adopted yet," he says.

Usually, interfacing is not a problem on a small scale, but when it comes to connectivity on a global level, standards are necessary, remarks Henk Mulder, head of digital cargo at IATA. The airline body is talking with standard setting bodies from other modes of transport to establish common ground.

"This is not about competition – who offers the best solution – it's about compatibility," he says.

ONE Record progress

During the pandemic IATA completed work on the specifications for ONE Record, the standard for data sharing to create a single record view of a shipment. "Some companies have implemented it and are using it on an operational basis," says Mulder.

"The idea of ONE Record using an API to share data with a common data model is relatively new at an industrial scale," he remarks. "On an individual scale, the most advanced companies have been doing this for a while."

He sees transformative potential in

this, pointing to a hackathon that IATA organised on a weekend. The first use of ONE Record there was traditional, like sending an air waybill, but soon the participants came up with solutions that simply were not possible before, he recalls.

"They can solve problems that they didn't know they had or couldn't do before," he comments "This is not about challenges we can solve with a traditional, legacy approach."

Broader visibility

The deployment of IoT technology in warehouses is not only increasing the use of shipment visibility tools but also the scope, allowing the monitoring of multiple parameters like temperature and humidity levels. This has created a new expectation to have standards for this aspect and a willingness to use them, Mulder notes.

He was impressed by the level of participation in the work on IATA's Interactive Cargo Standard, a set of standards and guidelines for interactivity and devices. Besides identifying a common data model that everybody can use, work on this project involved clarification of legal terms and conditions of the usage of data as it changes hands, and the matter of safety approval processes for devices.

The working group structured a common approval process for tech providers to get the blessing of an airline for the use of its devices. Now IATA is planning to create a global database to show which devices have been approved by which airline.







Rory Fidler

more time. The application of today needs to interact with the outside world, it needs API capability, without the restrictions of legacy systems. The beauty of the app is, you don't really have to learn it - unlike a legacy system, it's intuitive."

The beauty of the app is, you don't really have to learn it – unlike a legacy system, it's intuitive

Shaz Aslam

Mulder expects other parties like customs to join this. "That platform will grow," he predicts.

Integrating with other systems

Standards aside, integration of modules and systems has become much easier, notes Koch. In the development of new solutions, a major priority is to make sure that they can integrate with other

systems, he adds.

Two elements have made this much easier – the ubiquity of APIs and the gradual but inevitable retreat of legacy systems from the scene. According to More, their demise is on the horizon. Migration to a cloud-based platform is a given, he says.

Aslam comments: "Whenever we have to interface with legacy systems, it takes

Technology providers partnering

Increasingly technology providers join forces to offer new solutions to their clientele or open the door to new markets. "We're finding a lot of technology now merging together a bit," says Koch. "We're talking to partners about scanning systems."

Hermes has teamed up with platform provider Nallian to offer truck slot





Menzies plans to introduce a CCS-based truck slot booking system in Australia this year

booking functionality. "We intend to make that a key component in our CMS," says Campbell. The pair are eyeing some other functionalities. "We are looking at payments; we are looking at automation systems," he reveals.

Menzies is working with a cargo community system (CCS) in Los Angeles, where it now gets about 60 truck slot bookings a week. "We have a dedicated dock for people that are using that," says Fidler. "It shaves off time for them." Menzies plans to implement this in Sydney and Melbourne in the second quarter.

CCS e-marketplace extension

Slot bookings are often the first functionality that airport communities embrace, but CCSs offer a whole smorgasbord of functionalities, notes More. Kale recently partnered with Private Sector Foundation Uganda to offer a logistics e-marketplace across the full multimodal logistics ecosystem in the African country.

"On a platform, some participants may

want to sell their services," More says. "In Uganda they said: 'Why don't we build that as a core?' A marketplace was always in our kitty. It was a natural extension of the port and airport CCSs we're providing."

At this point, the evolution of CCSs is about building fully functional platforms, followed by the adoption of standards. Down the road, he envisages the emergence of digital corridors between airports that can provide end-to-end shipment visibility. Among other things, this should reduce inventory in a supply chain, he remarks.

Machine learning potential

To most actors, the biggest future gains that digitisation opens lie in the use of machine learning. Aslam remarks that AI is critical to make goods and autonomous vehicles move in a smart warehouse.

It also helps in risk management, he adds. It can determine which shipments could have risk, and AI-powered apps can scan various social media for information about looming closures of facilities and other disruptions in the supply chain.

Fidler is planning to install technology that uses 3D cameras in combination with algorithms to accurately capture shapes and dimensions of cargo. These data flow to another module which leverages artificial intelligence 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.

Raising pallet utilisation

The system should raise utilisation at the pallet level by three to five percent. "That's a game changer," he says.

AI should also be used in conjunction with internet protocol (IP) cameras to deal with incidents in the warehouse.

Traditionally, this involves security staff going through hours of CCTV camera footage to establish what happened, but this could be taken over by AI. Moreover, the technology could prevent some incidents in the first place, for instance sending an alert when an unauthorised person enters a dangerous goods area, Fidler thinks.

"AI could also be used to check if cargo is properly screened," he adds.

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AI could also be used to check if cargo is properly screened

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Rory Fidler

Intelligent document management

One area where More sees potential is intelligent document management in handling companies. "For example, as air waybills are uploaded, the machine learns if there is a shipment to Turkey and tax information is missing," he says.

While handlers are discovering new possibilities in AI, Mulder notes that this will take some time to unfold. "It is slow coming," he observes, pointing to the large number of actors in supply chains, which makes it challenging to connect all the data. Still, the advance of digitisation has brought this a lot closer to reality than seemed possible two years ago.

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Fast cargo release: Reaping the rewards of digitalising payments

Developments in the solutions available offer stakeholders the opportunity to improve the speed, efficiency, transparency, simplicity, accuracy and costs not just of payments but of cargo release and operations, along and other benefits to the broader air freight digitalisation landscape, reports Will Waters

nitiatives to digitalise air logistics processes have belatedly been moving forward on a number of different fronts, with various developments accelerating during the past two years in response to changes including

greater remote working, attempts to minimise physical contact points, rapid growth in e-commerce logistics, along with maturing technology and its levels of acceptance.

This includes progress in the digitalisation of payments and

reconciliations across the freight transport sector, with digital payment specialist PayCargo reporting a 250% increase in 2021 alone in the value of freight-related payments it processed. And on the air freight side, there has been improvements in the solutions



PayCargo, launched in July 2020, with 186 payers using this integrated solution within that first month, including major customers such as CH Robinson, Ceva, DHL, DB Schenker, FedEx, K+N, UPS, Agility, DSV, and Flexport.

Market was ready

PayCargo's COO Juan Dieppa says that experience demonstrated that "the market was really ready for this".

Under paper-based payment models, a freight forwarder working with the airline would get a notice of an inbound shipment that needs to pay import service

fees. While some customers may have a credit facility with an airline, those that do not would have to confirm internally that they needed to pay this, request that a cheque (check) is written, which then needs to be rushed across to the airline in order for the cargo to be released.

With a standard online payment portal, that forwarder would go into the portal system, approve the payment, and a notice goes out to the carrier that this payment has been approved.

Faster release

"From the forwarder's side, they know

available that offer the wider air freight market the opportunity to improve the speed, efficiency, transparency, simplicity, accuracy and cost of payments, along with other benefits to the broader air freight digitalisation landscape.

One example has evolved from a partnership between Delta Cargo and PayCargo that began in 2019. Delta recognised the benefits of the solutions available at that time via payment portal models – for example to improve the efficiencies and costs involved in payments and speed up the release of cargo - but wanted a more integrated experience that removed the still considerable manual intervention required. For example, a payment processed and approved via the online portal triggered an email to the airline's operations team - but that still required individuals in facilities to log onto the system or to a central email box.

The first part of the integrated service, developed between Delta Cargo and





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they can immediately pick up the cargo if it's same-day release, or the next day; there's this certainty," Dieppa notes. "Plus, they have immediate visibility across their (global) network."

And with an integrated solution, the forwarder only needs to enter the air waybill (AWB) number through an API to pull the details of the transaction. As soon as that payment is approved, it now – through the API – also reflects directly into the airline's operational system.

"So, the person working in the shed does not have to look into multiple systems or look for an email," says Dieppa. "It really speeds up the whole process, takes away a lot of manual interventions, and also makes sure that the data and the payment quality is much higher, because you're taking away all these human elements."

Eliminating cheques

Another problem this solved was the elimination of paper cheques entirely from the process, which were the most popular payment method to clear freight on the US inbound side. Delta says the paper payment system meant freight was sitting around, it was delaying customers from picking up their freight, and it wasn't the best customer experience.

Moving to a real-time digital payment solution was "a win-win" that really solved a problem on the import payment side. And about five months after implementation of the digital solution, Delta eliminated paper-based methods used to pay the import and storage fees for US inbound shipments.

Driving sustainability

Dieppa highlights that there are also environmental improvements. Under a paper-based system, if a truck driver arrives to collect cargo but finds the payment amount was incorrect for some reason, that truck driver then had to leave the location to figure out the problem, and the delivery is not picked up. Dieppa says that by making payment processes "a lot quicker, simpler and more transparent", wasted truck driver time and vehicle emissions are significantly cut, "helping companies to drive sustainability".



Benefits for Delta include improved customer experience, cashflow and revenue integrity, plus faster transit times



Faster clearance of cargo helps prevent freight building up in handling warehouses

Delta highlights that those old types of payment errors can also cause issues to snowball, because if the cheque is wrong and you don't resolve that immediately or same day, storage starts to accrue for the freight sitting in the warehouse, and the amount continues to change on a daily basis. In contrast, the airline no longer has those types of issues now with the digital solution. Other benefits include

an improved customer experience and improved cashflow, with the carrier receiving payment much more rapidly, plus "improved revenue integrity" and faster transit times.

Guaranteed payment

Another potential advantage to a carrier comes if the payment intermediary guarantees the money to the vendor immediately or the next day, before they have actually received the money, offering payers various different options – including credit via a third-party or affiliated credit provider.

Dieppa says Delta's "strategic approach" has enabled the development of a solution that is now potentially available more widely to the market. Delta, meanwhile, sees a number of advantages of being a pioneer in the development of this solution, with benefits including first-mover advantage from an improved customer experience – both internal and external customers. Two major future opportunity areas include seeing this

continue to grow from a fee utilisation perspective with customers and enabling small and medium-sized customers to do business with the carrier more easily.

Charging for late return of ULDs

But one unexpected additional user case also emerged during the pandemic during a period of intense cargo congestion that caused containers to become a huge issue for the industry. "People were holding on to them, using them as storage modules, and they ended up all over the place," notes Dieppa.

Delta, like other carriers, already had agreements in place with customers that can take equipment off airport premises that there would be a charge for delayed returns. Linking a digital payment system with a carrier's ability to digitally track its ULD enabled that process to charge for late equipment returns to be more seamless, to enable the payment of those fees if they do get incurred.

Marketplace interest

Dieppa says this ULD solution was also an industry first, noting: "And we've now got a lot of interest out of the marketplace. So, there are many different opportunities like this.

"We've already implemented this with another carrier, and there are others wanting the solution," Dieppa notes. "We've got the big ULD providers who are leasing out the ULDs looking at this and speaking to us at a global level. Plus, there are associations that are very interested in seeing how can we bring this efficiency for all of their members. And it's spilling over into the ocean side a bit, too."

Unexpected benefits

Both agree that as the partnership continues to grow, more use cases will continue to reveal themselves.

Dieppa notes: "One of the things that's changed for us is who we consider to be a vendor and who we consider to be a payer. When PayCargo started, the division of clients was very clear. Your payers were the beneficial cargo owners, the brokers,





as well as the freight forwarders. The vendors on the maritime side were the ports and the ocean carriers. Then we brought on air, where you have the same group of payers, and your vendors were the ground handlers and the airlines.

Clients become vendor and payer

"With Covid, all those lines got grey and muddy", because people were stuck at home and couldn't process payments how they had previously. For example, a major forwarder that was paying Delta via PayCargo needed a new way to process payments it was receiving from other coloading forwarders.

"And airlines that were previously only a vendor wanting to make payments to trucking companies" – at the same time simplifying all the different invoicing processes from multiple trucking companies into "one process, one payment, one big reconciliation for them; and it becomes very cost efficient," says Dieppa.

"So, every single stakeholder I now consider a potential customer as both a vendor and a payer. And this becomes very interesting, because if you are typically a payer in our system, our model is that we charge a fee per transaction to the payers; vendors don't pay anything.

"If a payer now becomes a vendor also in our system, where they had costs for those transactions taking place, now they're getting it free as a vendor; so, the cost of doing business becomes really efficient."

Forwarders pushing the initiative

Dieppa says some are surprised that forwarders would be willing to pay a fee per transaction. "But it's the forwarders that invariably push hard to use the system, because within the old processes, it was really expensive – not only the cheque, but the whole process; all the time and all the people and the poor customer service and up-and-down-the-line issues that you have.

"And they're getting better customer service; they are getting their cargo released really quickly. And they've got transparency: a lot of the time, head offices had to wait for the end of the month to get visibility in what's taking place. They can see immediately what's happening, at the station level, what's being paid."

And the system also allows companies to put controls in place, such as "who can create a transaction; who can approve it; what amounts can they pay", explains Dieppa.

The multiple potential benefits mean

digital payment can become more of a critical piece of a company's business – especially if it is multimodal, so the customer has a standard process across all modes, Dieppa observes.

Opportunity to innovate

And he believes these kinds of digital payment solutions and the lessons learned during their development offer an opportunity to accelerate other aspects of air freight digitalisation.

"There are challenges, if you look at the broader industry and transformation," he notes. "Trust is a big issue; we are still in an environment where a lot of people do not want to share data. And we're getting to a place now where it's critical that data is shared a lot more transparently for all stakeholders across the value chain.

"It's that Amazon experience that you have as an individual; those sorts of things need to be taking place within our industry. Right now, certain stakeholders doing certain portions of the process can have visibility, but then it gets cut off and the next group cannot see. So, having seamless access to data; and you need trust, obviously, for that."

Cost of sharing data

But Dieppa says it's also crucial that this data can be shared "at a cost that makes sense. Right now, it's really expensive for each data element to be sent from an airline to a forwarder. There are only two or three parties out there that control it and they charge significant fees. And



Other benefits include better facility usage, driver and v bring sustainability improvem

for the forwarders, it's even worse. So, finding solutions that can help address this is critical."

Associations like IATA, which is working on the ONE Record standard for data sharing, have an important role to play in this area.

Dieppa also believes that the high profile and priority that air freight has achieved during the pandemic means "there's an opportunity to drive transformation within the air cargo industry – and I think it's going to close within the next year to 18 months. My fear is that once business gets back to normal, which we all want, cargo is not going to have that priority it has today."

Dieppa stresses that what's essential to encourage change and implementation is "developing solutions that benefit not just the vendor, but that there is the same significant value for the payer. It has to be adding value to both sides."

He concludes: "And the other thing is to make it cost effective to adopt and use. That's part of the success – blowing that barrier to entry."

Conclusion: Wider digitalisation improvements

What's apparent from this case study of a digital payment partnership is that, like many examples within digitalisation more broadly – within logistics and across the business and consumer world – there are often positive unforeseen consequences that only become apparent after a digitalisation initiative or partnership is



ehicle utilisation, which in turn

implemented. In this case, one example is the ULD tracking and payment tie-in that was not anticipated when either the individual ULD tracking or the payment digitalisation initiatives were, respectively, initiated. With Bluetooth-based ULD tracking increasingly being implemented by carriers and major cargo handlers, that's a potential further gain for other players in the market.

And just as payment digitalisation may be principally initiated to streamline or rationalise payment processes, or speed up cargo releases and transit times, or improve transparency and costs, there are other potential or knock-on benefits, including better customer service, moreefficient facility usage, and improved driver and vehicle utilisation, which in turn bring sustainability benefits.

One of the barriers to digitalisation in the past within air freight has sometimes been a reluctance among some freight forwarders to participate, especially if that participation comes at a cost. And so, the apparent eagerness among forwarders to implement this aspect of air freight digitalisation is a positive sign that seems likely to stimulate its further spread across the market and its multiple stakeholders, with the consequent benefits – foreseen and unforeseen.





Beyond the obvious challenges presented by Covid-19, long-term issues of inadequate cargo handling space and infrastructure persist within the region, although various operators and some national governments are investing to improve handling efficiencies and productivity, reports Stuart Todd

frica's air cargo market, like those in other geographies, has spent most of the past couple of years navigating through extreme turbulence caused by Covid-19, with the limited and fluctuating air capacity affecting the efficient movement of cargo to, from and within the region and leading to particular challenges for certain key trade lanes, commodity verticals, and the stakeholders involved in those markets.

While demand and capacity has recovered significantly since 2020, the

volatility in capacity and traffic levels has led to cargo handling resource challenges – although the region has broadly escaped major congestion headaches like those experienced in some other parts of the world. Nevertheless, long-term issues of inadequate cargo handling space and infrastructure persist, although various operators are investing to improve handling efficiencies and productivity.

Pandemic impact

Sanjeev Gadhia, founder and CEO of Nairobi-based all-cargo airline Astral Aviation, says the pandemic's impact on the aviation sector in Africa was felt particularly by the perishables trade, which had much-restricted capacity in 2020 and 2021 arising out of a limited resumption of passenger flights to and from Europe.

"Perishables such as cut flowers and vegetables bound for Europe have seen the highest air freight rates in their history, although there is hope for the rates to stabilise by the second quarter (of 2022)," he notes. "The inbound sector from China to Africa has been affected due to lack of direct or indirect capacity – hence the rates are at historical highs, which has affected e-commerce and mobile phones shipments



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WFS has continued investing in its Johannesburg (pictured) and Cape Town operations, including the opening of GDP-certified pharma facilities

bound for Africa."

Like in other regions, Gadhia says
African airlines "made significant
attempts to improve capacity by converting
passenger aircraft into 'preighters', which
made a difference in key routes into
Europe and the Middle East."

Astral opened up its own capacity for the transport of PPE and medical equipment from early 2020, giving it priority over scheduled flights as demand for such shipments from China to Africa reached very high levels. And in 2021, its scheduled flights "had fully normalised, with a 70% increase in frequencies to and within Africa compared to prior to the pandemic, while operating new routes on the B767F to Middle East and Asia".

Astral is currently operating six weekly round trips between Nairobi and Johannesburg using B767 and B727 aircraft, mainly carrying express freight for major customer DHL. It is also operating flights between Nairobi and Hong Kong via Dubai and also from Nairobi to Liège (Belgium) and Doncaster Sheffield (UK), along with an extensive

network of intra-Africa flights. But that is set to expand further this year, when the airline takes delivery of three B757FS and one B767-300F.

Yield-driven decisions

Lufthansa Cargo, which serves 31 airports in 25 countries across the continent, says that with air cargo capacity negatively affected by the reduction of passenger flights, the global crunch of freighter capacity has moved some maindeck space to the routes with the highest yield levels. Frank Beilner, VP for Middle East and Africa, observes: "Obviously, where uplift opportunities are reduced in frequency and geographic spread, some cargo needs to be moved further than before to the next available point of uplift," potentially reducing operational efficiency.

"However, where the perceived commercial added value of the air cargo service has been big enough in the eyes of the customer, tailor-made and highly efficient solutions have been available at most times in the past two years."

Extended footprint

Kuehne + Nagel's SVP for Middle East and Africa, Daniel Randig, highlights that "air cargo flows in Africa rely heavily on scheduled passenger flights, so the moment the borders closed and people could not travel anymore because of Covid, the impact was immediate and significant."

Nevertheless, at the beginning of 2022, the forwarding group extended its footprint in Africa to 18 countries and announced plans for further expansion during the first quarter of 2022. Its offices are managed and supported by a 'control tower' in Durban, South Africa.

"The main challenge for our region is the high dependency on perishables on the outbound," Randig notes. "The price elasticity of products like cell phones and fashionwear is very different to that for flowers or fruit and vegetables. With scarce capacity in the world but a strong rebound in demand, airlines are positioning their freighters in markets that accept a much higher rate."

Cargo handling perspective

Menzies Aviation's head of cargo for

Africa, Colin Baldwin, says that while passenger flights in the Africa region have been severely affected by Covid-19, the movement of air cargo has continued.

"Initially slow to start at the beginning of the pandemic, but similar to most other regions throughout the world, the majority of carriers used their passenger fleets in cargo-only mode which boosted cargo volumes as the main cabins were utilised, often with seats removed. In certain countries where airports were no longer used, this enabled cargo to move by road to hub stations and thereafter flown to final destinations."

Exports and imports

Astral's Gadhia says exports of cut flowers, fruit and vegetables "have performed very well and have reached pre-Covid levels, due to the high demand from Europe and Middle East.

"Demand for imports into Africa had been impacted in 2020 due to the shutdowns imposed in various countries, with South Africa taking the biggest



Despite resilient demand, NAS estimates there was still a decline of around 11% in export volumes in 2021, due to reduced capacity and high air freight rates



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knock. In 2021, air imports did resume to an extent but have never reached pre-Covid levels as African countries continued to struggle with the economic slowdown as a result of the pandemic."

Beilner confirms that global demand for major African export commodities – mainly in the perishables sector – has not fallen significantly due to Covid. "Wherever capacity is available, these markets are performing well," he notes, but adds: "If an African perishable exporter is dependent on very specific onforwarding by air beyond the European hubs, things might become tricky due to the significantly reduced frequencies of intra-European passenger networks."

Nouamane Zahouani, general manager for Uganda and Kenya at regional African handler NAS Siginon Aviation Services – formed last October when National Aviation Services (NAS) acquired a 51% stake in Kenya's Siginon Aviation – confirms that the outbound market "continues to be resilient in spite of the current capacity and high freight cost challenges", but estimates there was still a decline of around 11% in export volumes in 2021 compared to 2020, "due to reduced capacity and high air freight rates".

Beilner says demand for imports into Africa by air has been "robust" during Covid. "Given that it is usually the more critical needs of a country that are served by air imports, this sector has, if anything, grown."

Zahouani says imports "initially dropped but picked up from September 2020 onwards and have been stable because of partially flying in Covid-19 related shipments. There was an increase of 15% in imports volumes at JKIA, NBO in 2021, compared to 2020."

South Africa challenges

Menzies Aviation's principal cargo operations in Africa are based in South Africa, and Baldwin says these have been largely unaffected by the reduction in flown capacity that has impacted the uplift of perishable products throughout the wider region. "Flower growers and perishable product shippers have had to be creative in utilising all available



Nouamane Zahouani NAS



Daniel Randig K+N



Malcolm Tonkin WFS



Sanjeev Gadhia Astral Aviation



Frank Beilner Lufthansa Cargo



Colin Baldwin Menzies

transportation methods including air, road and sea," he notes.

"The South African perishable market for our customers has remained relatively buoyant as perishables are one of the largest export products flown by air. However, the reduced capacity into the dominant Kenyan perishable market was severely affected by approximately 500 tonnes per week in 2020. This has been somewhat reduced with the airlines turning their passenger aircraft into preighters.

"While there has been a limited reduction in the demand for imports into the region, there has been a reduction in available flown capacity, despite the utilisation of empty passenger aircraft for full cargo loads. Similar to most regions around the world, this has led to signficant peaks and troughs of activity that has been challenging to resource, particularly where there are the high Covid infection rates. For Menzies Aviation, we have experienced an upswing in cargo volumes from 2020 into 2021 with an overall increase of almost 30% across the region – with import cargo remaining above 65% of all cargo flown."

Little airport congestion

But unlike some major airports in Europe and the US, the Africa region has not experienced much airport congestion during the pandemic, mainly due to the drop in aircraft movements.

"The pressure on cargo ground handling infrastructure was initially experienced in Q2/Q3 2020 when there was an influx of PPE into South Africa, but this eased during 2021 and has not been a concern since," said World Flight Services' (WFS) managing director for South Africa, Malcolm Tonkin.

"We've continued to invest in our WFS operations in Johannesburg and Cape Town, including the opening of GDP-certified pharma facilities."

Astral's Gadhia confirms there have been "no signs of congestion or constraints around cargo handling at major African airports as most of the service providers are able to manage very well due to the decline in the number of flights during the pandemic."

However, where there have been difficulties on ground is in the road freight sector, which has been affected by border-controls for Covid-19 testing for drivers, resulting in long delays along various corridors.

"Efforts to harmonise Covid entry and exit requirements at borders are being hampered with countries taking different positions on transit requirements," he notes.

Cargo handling challenges

As to the current state of air cargo handling in Africa, Gadhia describes service levels at the "top 10 primary airports in Africa" as "satisfactory. However, in certain airports there are limited facilities for handling and storage of cargo, which results in delays.

"More needs to be done once Covid-19 recedes, and some of the suggestions relate to encouraging private sector participation in upgrading the infrastructure or building new smart terminals – especially in e-commerce and cool chain – which can accommodate all types of cargo on the airside."

He also highlights "the high cost of ground services and taxes, which arises due to lack of competition as the facilities are managed by the national carrier or a state-owned organisation.

"We need a combination of 'smart' infrastructure, especially in e-commerce and cool chain, while encouraging foreign investments and PPPs to support the role of the private sector in developing African airports."

Covid-19 vaccine handling

Last October, Astral signed a pharma



interline agreement with Etihad Airways and Kenya Airways, to expand Etihad's pharma reach in Africa, and provide reliable and cost-effective air freight solutions across the continent. "The agreement enables strict compliance between our respective ground handlers to ensure conformity to the cool chain, and will allow the smooth transfer and consolidation of vaccines at our Nairobi hub," Gadhia explains.

"The roll-out of Covid-19 vaccines in 2021 was far below the projected supply due to the export restrictions imposed by the government of India, since the majority of the vaccines committed by COVAX for the AMC countries originated from India. In 2022, we expect a larger volume of vaccines to be moved to Africa in comparison to 2021, which will enable a greater reliance on air cargo to and within Africa."

Enhancing technology

Baldwin says Menzies Aviation's future investment in Africa will be based on enhanced technology to minimise the physical handling of cargo, as well as automated dimming and weighing machines, self-service kiosks for customers and multiple innovation technologies being trialled throughout our network. "We are also working to secure additional warehouse capacity for both cargo handling and our wholesale forwarding business, AMI," he notes.

"In South Africa, the main issue to be resolved is the availability of suitable on-airport warehouse capacity. In the wider region, we will continue to seek business development opportunities to support our growth plans, with a key focus on perishable product handling and associated infrastructure to support this."

Variance in standards

Lufthansa Cargo's Beilner says there is "a huge variance" in the standard of handling services to be found in African countries ranging from "global state-ofthe-art, all the way to 'very challenging'."

Kuehne + Nagel's Randig notes: "We have some countries where the national government has invested in infrastructure

and, with open and constant dialogue with the private sector, has been modernising not only the facilities but the processes, moving towards digitisation, which brings transparency and speed.

"But in many places, we still see airports and airlines with obsolete infrastructure and equipment, heavy overheads and complex structures. The bureaucracy in countries – for example, many still require piles of physical documentation – also needs to improve more quickly. An efficient supply chain directly impacts the whole population, attracts investments from the private sector and generates local business."

Nouamane Zahouani of NAS says that due to the pandemic, a number of airport improvement projects were put on hold, and some non-essential but important training programmes were also stopped to manage costs - leaving some organisations needing to catch up, for example via online training programmes. And although airport congestion is not currently a major challenge in Africa, Zahouani says various countries within the region have embarked on significant infrastructure development in anticipation of increased demand in the near future - including for distribution of Covid-related items, and with the reopening of economies in various markets.

In the meantime, cargo handlers have been continuing to upgrade their own operations.

Tonkin says since the onset of the pandemic, WFS' South Africa unit has invested in additional facilities, equipment and people in Johannesburg, adding 3,600 sqm of warehousing to its footprint in September 2020. "We have also introduced and invested in a number of Operational Excellence and Continuous Improvement projects, and invested in our ability to meet the strict handling requirements of our customers transporting pharmaceutical products.

"One of the main challenges which needs to be addressed, particularly in Johannesburg, is the need for more modern cargo handling facilities. It is a subject which has been recognised by the airport authority and one which was due to be addressed prior to the pandemic."



Carrier case study: IAG Cargo

AG Cargo offers capacity on over 40 flights a week to and from Africa, flying directly to Accra, Lagos, Abuja, Cairo, Nairobi, Cape Town, Johannesburg and Mauritius from London-Heathrow and Dakar from Madrid, facilitating the trade of fresh produce exports and electronics and automotive parts into the region, says regional commercial manager for Europe and Africa, Freddie Overton.

Adapting since the start of the pandemic has meant incorporating new solutions such as cargo-only flying and a specialist charter service for customers, as well as adapting passenger aircraft into preighters.

"We expanded our operation into Africa with a new route to Dakar from Madrid in October 2021, running five times a week utilising an Iberia Airbus A330 and A350 with an approximate capacity of 20 and 30 tonnes per flight," Overton notes. "This service responds to the increasing demand of goods such as electronics and pharmaceuticals into west Africa, and perishables such as fresh fish, fruit and flowers out of the region." And in January, its flights to Cape Town increased to two B777-200 flights per day.

Access to dedicated on-the-ground handling teams "are a vital part of the process" of air cargo playing "a critical role in keeping global supply chains open" and "has allowed IAG Cargo to continue to service the (Africa) region throughout the pandemic", he notes.



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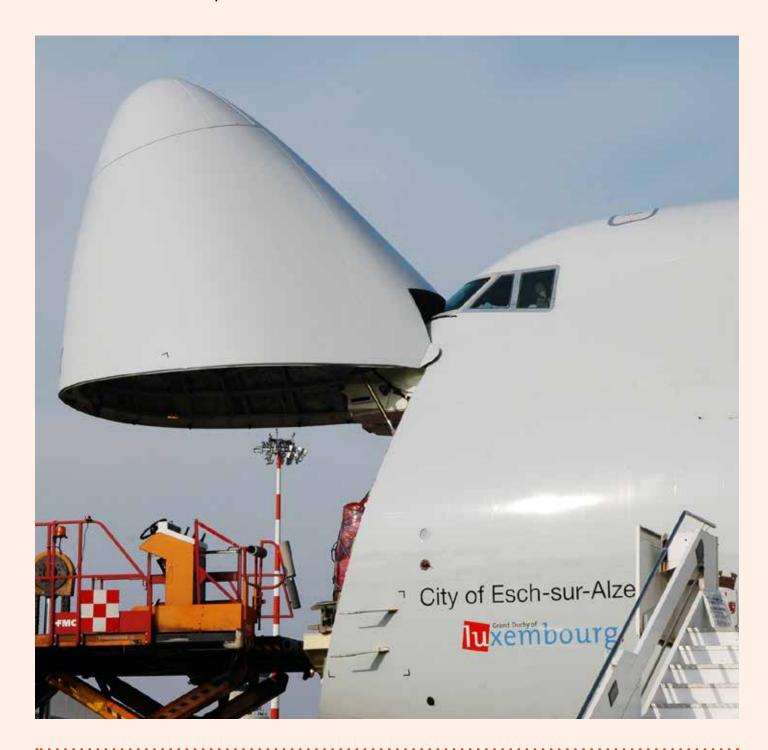
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Outlook 2022 Report: Introduction

s in previous years,
CAAS asked a
small number of
selected people
and organisations
involved in the
international air freight sector to
contribute to the 'Outlook 2022' report,
reflecting on the experiences of another

extraordinary year in 2021 and sharing some of their expectations for 2022.

In a slight change to previous versions of the Outlook report, this year some of the contributors responded to a set of specific questions – for example, about what they have been doing to improve air freight operational efficiency, processes and communications, and what they plan to do this year – while others took a more freeform, narrative approach. The result is a rich variety of analyses and reflections that I think you will find an interesting and worthwhile read. As ever, we are grateful for their thoughtful contributions.

Please note that all of these contributions and analyses were generated before Russia's invasion of Ukraine. ■

Air freight's clear mission

Kuehne + Nagel's global head of air logistics operations,
Thomas Puglisi, believes moreavailable and more-accurate information and a culture of proactive communication can help the sector predict potential bottlenecks and solve problems before they amass



There has been a realisation within the air cargo industry for some time that things could be done better, more efficiently, and with greater accuracy. This was amplified during the pandemic. It is why we began our eTouch initiative several years ago and why we believe even more that the digitalisation of the touchpoints in the air cargo supply chain is the only way to achieve an efficient model. Less 'manual work' allows our experts and those of our partners to focus on servicing the business, talking to our customers, and ensuring we have time to be proactive and creative in our work.

eTouch focuses on addressing the key touchpoints and handovers between all parties in a digital manner. These touchpoints range from digital booking channels for our customers to digital document production, to real-time pickup



and proof-of-delivery data management, and the ability to access air carrier capacity on a host-to-host basis. The less manual work needed to manage information, the fewer resources needed to chase and correct information, then collectively, the more efficient we become.

How can you and other stakeholders in the air freight supply chain work more effectively this year to improve visibility and streamline cargo operational processes – for example, to minimise the congestion, delays and volatility experienced last year at certain cargo handling stations and airports?

There is not one magical elixir that can solve the problems of congestion, delays and uncertainty. But what we can prescribe is a regimen comprised of several steps to help us get better.

A core part of the 'get well' regimen is addressing information accuracy and timeliness. We struggle in this context as an industry – for some time, and more-so of late, for various reasons. When information is inaccurate, late, or missing, we are then caught off guard and unprepared. When we are unprepared, problems begin to build.

It is still difficult to comprehend, with the technology and communication

tools available to us today, why we still must manually chase information, cargo disposition, cargo location, completeness, and so on; why information is still managed in different formats, with different definitions of completeness or timeliness, and with a different understanding of the actual content. There have been valiant efforts to reconcile some of these problems via IATA initiatives, CiQ and so on. However, without discipline, with rules of engagement that are still too interpretative, we are not progressing. We must fix this pattern and find a common path forward.

But this alone is not the single cure. Much work needs to be done to collectively understand what it means to be proactive. This is a cultural aspect as much as a technical one. We are too reactive in how we communicate. We wait too long to indicate, alert, raise a flag about problems or deviations to what was expected, and we are even worse at advising what is being done to reconcile the problem in a timely manner.

It is important that we take a few simple steps to avoid what we experienced in the past year plus. Better, available, and more accurate information. A culture of proactivity in how we communicate, how we predict potential bottlenecks, and how we solve problems before the problems

amass to a point where they are unsolvable.

But despite the challenges that our teams and our partners faced, we executed in an environment that was constantly changing, constantly evolving and constantly frustrating.

How can we better incentivise stakeholders in the air freight supply chain to support these aims?

If the past two years have taught us anything, it is the importance of what we do to the well-being of people. Without our ability to do what we do, society as a whole would have been in a much different, and likely not as steady, place as we are today. Our aim should be to continue to prove our importance and our place in that model. It is not a given. Our role to support that well-being is one that is earned.

The incentive then becomes clear, because it is the same for all participants – air carrier, logistics intermediary, haulier, handling agent, or industry ASP. If we fail, then we are not contributing to that well-being. If we fail, society will look to other avenues that are less prone to fail for contribution.

What role will new and emerging technology play?

Technology is an enabler. It enables processes. A sound process enabled by sound



Thomas Puglisi, KN



technology is a critical component to success. But we must not be lured by the shiny object alone. The groundwork must be done to ensure the soundness of the processes. Technology then allows us to begin the work of execution and of optimisation.

This is why, for example, the use of technology such as APIs works when there is a process that they support which makes sense. We have first-hand experience of this. As part of our eTouch program, having deployed APIs with our carrier partners to enable Host 2 Host interactions centred around engagement across many links in the chain, we evidenced that the harder work was not the technical connectivity but rather the understanding and alignment of the processes, what was expected, and how the expectation would sometimes require a different thought 'process'.

Look no further than sensor technology. Sensors these days can read temperature, humidity, shock, light exposure and a myriad of other pieces of information. The technology is wonderful and readily available; however, the processes that make the technology as effective as it can be are not where they need to be in a homogeneous way. Real-time GPS location trackers are similarly positioned, where the technology is waiting in many cases for the process to catch up. Our focus then must be to identify the role

that the processes combined with the technology will play. And clearly, that role must be to address some of the maladies we have identified still exist.

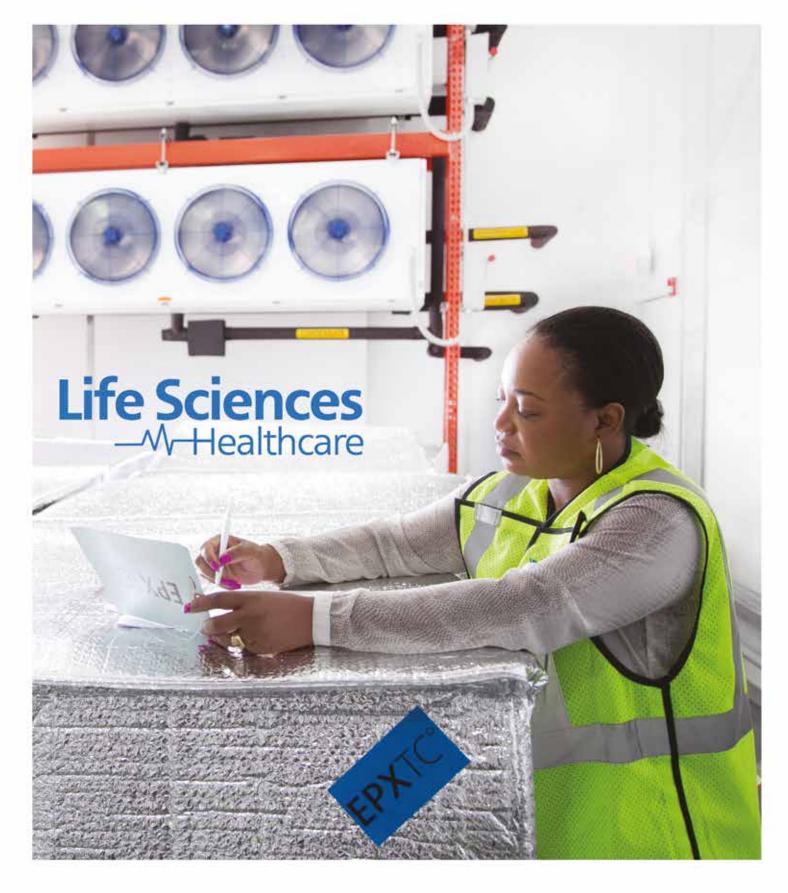
Other expectations for air freight in 2022

We see a steadily increasing demand for environmentally friendly air logistics services. As offsetting is considered not the first choice any longer, customers are asking for solutions that allow them to reduce or avoid their emissions.

Clean, renewable fuels are currently the most effective measure to achieve true decarbonisation in our industry. We have developed multiple solutions to support like customers with their sustainability goals. For instance, an innovative Sea-Air service, Sustainable Aviation Fuel (SAF) options, lighter pallets, or combustible, thinner wrapping foils to cover cargo on pallets.

Customers can avoid carbon emissions of their shipments globally with bio SAF and power-to-liquid or synthetic SAF solutions. Synthetic SAF is considered to be the long-term solution for aviation as it can be produced without availability limits, avoiding biomass supply limitations, and can reduce emissions by up to 100%.

Close collaboration with all industry stakeholders plays a vital role in the attainment of the goals towards a low-carbon business model.



Cargo you can count on.

When it comes to supporting the critical goods that keep the world healthy, we've got it down to a science. Our dedicated Life Sciences product suite showcases the varying shipping and handling products and priorities we offer to meet the unique care requirements of every critical shipment. The life of the shipments you book with us matters, just like the lives they impact. Learn more about our Life Sciences product suite, as well as our CEIV-certified stations and capabilities at aacargo.com.





Further expanding the charter network

Mads Ravn

DSV's own-controlled capacity, focused on freighter-friendly airports, has developed significantly in the last 18 months and has been 'a gamechanger, under these extraordinary and uncertain market conditions', says Mads Ravn, DSV vice president and head of the DSV Air Charter Network

Additions to DSV's charter network last year included its Globetrotter round-the-world service

SV's air freight services have been developed quite significantly in the last 1.5 years to support and accommodate the demand from our customers.

We have expanded our own controlled charter network with a focus on alternative or freighter friendly airports to the extent possible. This has offered our clients more flexibility, some relief on recovery times and added capacity to key markets where capacity continue to be a constraint. We will continue down this path this year and add new routes including our latest dedicated 747F from Singapore to Los Angeles and an additional two rotations to and from Hong Kong.

We have continued to build on our relatively unique setup with core air freight hubs in smaller and lesscongested airports across all major regions. It has been a gamechanger for the service and solutions we have been able to deliver to our customers under these extraordinary and uncertain market conditions. Adding to this, DSV's focus on a dedicated, swift and agile ground handling setup has been key for us. In many instances, it has substantially reduced the transition time from unloading the airplane to loading the cargo on trucks, trains etc.

Expectations for 2022

We see another strong year ahead for air freight with demand outpacing capacity all year. The delays on ocean freight will result in continued conversions to air freight of commodities that normally would not fly. With passenger belly capacity continuing to be pushed out, we do not anticipate much relief this year – especially not on the major air lanes to and from strategic hubs in Asia. It will again be a year that will rely on all freighter capacity available, with recovery closely tied to the amount of Covid-19 incidents and derived restrictions. We do believe that carriers and forwarders alike will have to seek alternatives to the bottlenecks in many of our major airports that are beyond capacity, which again favours DSV's setup with hubs in minor airports.





Work in progress

Sam Mendenhall

year include identifying operational challenges at the source and learning how to implement proactive preventative measures to mitigate issues – and evaluating how to replicate the good days – says its vice president for operations Sam Mendenhall

What have you been doing to improve air freight operational efficiency and communications, and what will you do this year?

The pandemic has provided many businesses and industries a natural opportunity for self-evaluation. Having joined the American Airlines Cargo team during the pandemic, I quickly recognised an opportunity for increased coordination across our sales, revenue management, and operations teams – especially as the environment was constantly changing.

Our aim this year is to make sure we identify operational challenges at the source and learn how to implement proactive

preventative measures to mitigate issues. Similarly, we are also looking at the days when our operation runs smoothly and measuring what happens on a good day – not just learning from the challenges but learning from the wins and evaluating how we can replicate those days.

While this remains a constant work in

progress, we are focused on improving communication between our teams, tracking metrics that are upstream of departure and arrival, and overall getting the basics of the operation correct so we can deliver on our promise to our customers consistently.

How can you and other stakeholders in the air freight supply chain work more effectively this year to improve visibility and streamline cargo operational processes – to minimise some of the congestion, delays and volatility experienced last year at certain cargo handling stations and airports?

Many challenges, such as capacity shortages, infrastructure challenges at airports, and staffing constraints are still prevalent for the air cargo industry. As an industry, we need to find ways to partner with our stakeholders where we can to mitigate these challenges.

There is also a big opportunity to streamline and standardise country restrictions for crew and passengers, so we can operate more efficiently as a supply chain. Consistency is an important part of a streamlined operational process, and that includes consistency in flight schedules – particularly for passenger airlines. A stable schedule allows for sourcing of the right equipment as well as staffing. We've seen our industry react creatively to the challenges the pandemic has created, and if we stay creative and adaptable, we can continue to tackle whatever the future may hold.

How can we better incentivise stakeholders in the air freight supply chain to support these aims?

At American, we are focused on the safety and wellbeing of our team members and vendor partners. We have worked with our partners in various locations to provide retention and hiring incentives, but overall, we are focused on ensuring that team members feel appreciated, supported, and cared for. "We've also reintroduced performance-based awards for our cargo teams to make sure great work is recognised and celebrated."

What role will new and emerging technology play?

Technology will certainly continue to transform the industry through modernisation. Things like real-time data, seamless connectivity, transparency in pricing and capacity are critical factors for moving the industry forward. At American, we're also focused on technology that creates access to a broader range of customers and makes it easier for them to do business with us, wherever they are. Technology will also be a big enabler for the industry in terms of the ability to standardise less-complex business efforts so that team members are free to focus on solutions for unique challenges.





Martin Drew

Partner power: Building the benefits of collaboration

Industry alliances and collaborations were a true success story during the pandemic and will continue to drive the industry forward and produce even greater success in 2022, says Martin Drew, senior vice president for sales and cargo at Etihad Aviation Group

fter almost two years of pivoting and pirouetting to overcome various pandemic- induced logistical hurdles, the cargo and logistics arm of Abu Dhabi's Etihad Aviation Group is now stimulating growth through its expanding partner network and enhanced digital and specialised premium product delivery. We believe this year's winning combo will be superior digital assets to heighten efficiencies, performance, and market intelligence, supported by a razor-sharp focus on delivering positive experiences and building long-term client and partner relationships.

Etihad Cargo is committed to extending its portfolio of third-party partnerships after sharing in the success of Abu Dhabi's multi-partnership Hope Consortium. The carrier plays a leading role in this first-of-its-kind complete supply chain that combines health, port, airline, airport, and freight forwarding partners to aid global vaccine distribution. Industry alliances were a true success story during the pandemic. These collaborations, whether through effective outsourcing or alliances, will continue to drive the industry forward and produce even greater success throughout 2022.

As the pandemic took hold, the carrier reached out to industry-wide stakeholders to fulfil commitments and address the worldwide capacity shortage that was hampering international supply flows. The biggest challenge was navigating the stringent border control measures implemented worldwide; in response to the immediacy of the challenge, Etihad Cargo enhanced its monitoring and cooperation with various authorities.

Measures were rapidly adapted to address required roster changes and shift patterns to protect pilots, crew, riding engineers, loadmasters, and ground staff – all while maintaining strict occupational health and safety measures in line with the World Health Organisation, the UAE Ministry of Health, UAE GCAA and Abu Dhabi Department of Health guidelines, to safeguard frontline operational employee wellbeing.

Etihad reconfigured five aircraft for cargo in-cabin loading, supported customers, as well as UAE Government aid programmes, and collaborated with UNICEF on pharma and aid initiatives, utilising its pharmaceutical expertise and global connectivity. Its Hope Consortium contribution highlighted how supply chain resilience comes from having the right mix of partners, products, and solutions – particularly in addressing the cold-chain complexities of vaccine supply – as well as tight alignment on shared values and complementary capabilities.

As the first Middle East carrier to earn IATA's Centre of Excellence for Independent Validators certification in pharmaceutical logistics, Etihad takes the transportation of pharmaceuticals extremely seriously. It expanded its pharma reach into Africa with a Service Legal Agreement with Astral Aviation and Kenya Airways to provide reliable and cost-effective airfreight solutions across the continent. The SLA ensures Etihad Cargo partners are fully compliant with latest GDP and IATA Pharma regulations and standards, and guarantees processes are standardised, and performed to the highest quality.

We also acquired UAE General Civil Aviation Authority approval to expand dry ice carrying capabilities across our Boeing Dreamliner and Boeing 777 fleet, which has supported the carrier's ability to handle vaccines including Pfizer, Moderna, and Sputnik, all of which need to be stored between -70°C to -18°C. Etihad reported an average of 50% year-on-year rise in pharma shipments under its specialised PharmaLife product during 2021.

The carrier has now maximised its fleet utilisation and is operating 10 Boeing 777 – five of which are dedicated freighters – for cargo-only flights. We recorded a 20% tonnage uplift in mid-2021 – when compared to pre-COVID – and have resumed 90% of Etihad Cargo destinations.

Digital first

Over the past year, the carrier has been laser-focused on boosting its digital presence and capabilities with investment in a series of initiatives and transformation programmes, and there will be no let-up in its digital journey. The aims are to drive innovation to improve own efficiencies and provide cost-saving transparency and customer convenience.

A core project was migration of the carrier's front-end systems migration, which enabled it to centralise processes through a state-of-the-art Cargo Control Centre that tracks, monitors, and reports in real-time on all customer shipments. It also worked with leading third-parties to introduce additional booking platforms to support its own direct booking functions through a revamped website and the Etihad Cargo mobile app. Its new-look website now includes quicker booking processes, streamlined flows,

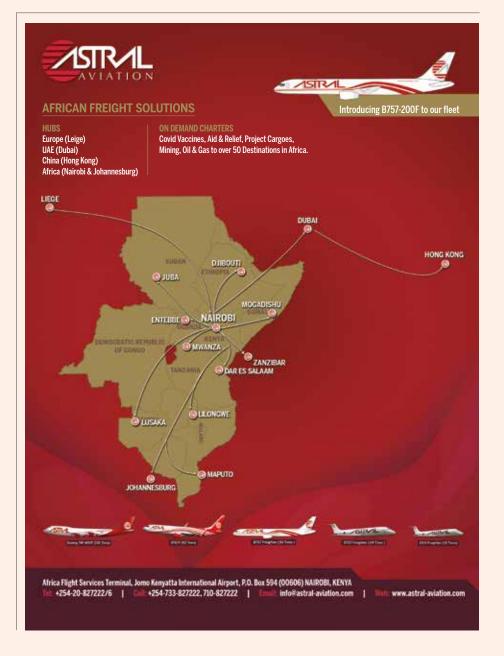
and a personalised dashboard for targeted recommendations and dynamic pricing. It received more than 1,500 bookings from 600 users during its first week, while users of the new portal have increased 70% on its previous site.

Following customer feedback, the site also now incorporates a dynamic map of the carrier's global network and details the capabilities of its outstation teams. New features such as requesting shipping quotes, booking ad-hoc prices that have been negotiated offline, and booking shipments based on arrival timelines have been introduced. Meanwhile customers can also now create and manage booking templates based on

previous purchases.

Additionally, the carrier has increased electronic air waybill penetration and says it continues to explore further programs with IATA.

Currently, Etihad is working through a proof-of-concept of SpeedCargo's artificial intelligence products to verify its ability to boost cargo capacity on flights. It's only the second aviation company to leverage SpeedCargo's Cargo Eye dimensioning system, and among only a few global carriers to trial the AI-powered Cargo Mind software solution, which delivers optimal cargo space planning and nearinstant utilisation in full adherence to regulations and business constraints.



Enhancing premium product delivery

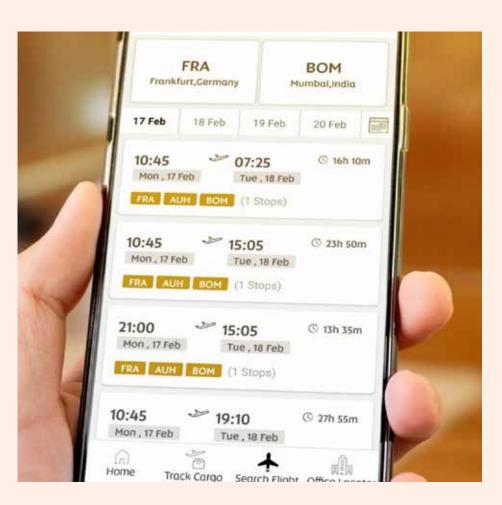
To create positive experiences and build long-term relationships, Etihad has significantly enhanced delivery of its eight premium products with the appointment of a highly focused managerial team, each specialising in a service category. Operating across the carrier's global network and spanning Africa, America, Asia, Australia, Europe, and the Middle East, Etihad Cargo also added four new appointees to take up the challenge of managing delivery of the company's meticulously designed premium products, which each address the specific needs of vertical sectors.

The carrier's premium cool-chain products include its award-winning PharmaLife, which leverages investment in specially designed, temperaturecontrolled equipment and assets to ship pharmaceuticals swiftly while complying to the highest industry standards. It also includes FreshForward, which simplifies the movement of fresh fruit, vegetables, dairy, fish, meat, and flowers, as well as LiveAnimals and SkyStables, the specialist products for the speedy and safe transportation of animals and horses respectively. Etihad Cargo is the only Middle East airline to hold IATA's CEIV Live Animals, CEIV Fresh, and CEIV Pharma certifications.

Other premium products whose delivery will be in heightened focus include FlightValet, which simplifies and speeds up the door-to-door global transportation of high-value vehicles, FlyCulture, the tailored service for the secure and discreet transportation of rare and valuable art works and musical instruments, and SafeGuard, the dedicated secure transportation service for valuable cargo. Lastly, AirMail simplifies the global dispatch of letters and packages for registered businesses.

Opportunity rising

I remain circumspect about the unbelievable challenges the pandemic has thrown up for the air cargo industry, but I also remain optimistic about the route ahead. Unexpectedly, it has presented us with an opportunity to entirely reposition



the sector from a necessary eco-system supplier into a highly responsible and innovative economic and social driver.

Global capacity constraints have directly impacted yields, but there are signs of recovery. There will still be challenges across the global supply chain, and carriers like ourselves are working directly with customers and partners to provide required airlift support where it's most needed to address capacity shortages and minimise impact on overall trade flows.

Outlook uncertain

Overall, we can say that the outlook for 2022 for the air cargo market is further growth, but we cannot say it will go back to normal. Passenger loads should increase; however, many airlines have reduced in size and capacity as a result of COVID, and sadly some have gone out of business, so there's a lot of belly capacity that was there pre-pandemic that's not going to be reactivated, affecting supply.

Etihad Cargo will relentlessly monitor demand and look to anticipate shifting trends, but we believe cargo-only flights will remain in operation until at least 2023. Perishables and pharmaceuticals will continue to be at the core of global logistic supply chains, while e-commerce, which picked up pace during the pandemic, will also continue to grow, placing an urgent requirement on logistics stakeholders to adapt.

The airline is also looking to expand its fleet this year with more 787s scheduled for delivery and five A350s due in service at the beginning of the summer schedule. In addition, by the start of Q2 we will launch Etihad Cargo Pharma hub – a dedicated PharmaLife operations centre facilitating pharma shipments. The industry will continue to be under scrutiny for its carbon footprint counter measures and we will proudly continue to pursue sustainability initiatives across eAWB penetration, as well as the study of sustainable fuels.



From tailor-made solutions to cutting-edge facilities, we enable our partners to establish a foothold in the region to get them on the runway to success!

Abu Dhabi Airports Free Zone (ADAFZ) encompasses a network of three zones distributed across the Emirate. We operate free zones supported by world-class infrastructure at Abu Dhabi International Airport, Al Ain International Airport and Al Bateen Executive Airport, providing our partners privilege of global connectivity and strategically located to support swift access to local markets.

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An answer to the industry's challenges

Despite historic arguments about who benefits from new tech and therefore who should pay for it, the reality is that we all benefit from stronger, digital supply chains, as well as greater efficiency in warehouses and on the ramp, says Hactl chief executive Wilson Kwong

Improvement initiatives

COVID taught us some valuable lessons about the need for business resilience. Our first priority was to enable our admin staff to continue working from home, so we upgraded our WAN resources and issued notepads to all staff. We upgraded bandwidth, servers and security. We also revised all processes to eliminate paper, and to facilitate management authority without personal contact or physical

signature. Training was transferred to online.

Recent moves such as the introduction of paperless, personal-device-driven ramp and aircraft loading processes, have been very helpful in making us more efficient and responsive to customers. This has been important since the COVID crisis has caused an increase in freighter operations, an increase in ad hoc flights, and the need to respond to late bookings

and amendments to manifests.

Very recently, we have launched our new, multi-million-dollar iHCC (Integrated Hactl Control Centre), which centralises all management processes and monitoring for our entire operation from truck arrival through to aircraft departure. Graphic displays show the location of every ULD, and AI-based technology enables us to predict and respond to workflows, and manage unexpected peak workloads. The iHCC also acts as a command centre which will enable better response to any future crises.

Streamlining processes and throughput

Hactl has continued with its constant drive for greater efficiency, and we feel we are now ahead of the game. It's very clear to us that the elimination of paper and its replacement with digital systems and information flows is the answer to most of the industry's challenges: this is especially the case with the growing e-commerce boom, where end-customers demand instant tracking info, and e-tailers want to know about stock levels and locations. We may be well ahead of ocean freight in terms of speed and reliability, but this is no reason for complacency.

Incentivising stakeholders

We have had historic arguments about who benefits from new tech and therefore who should pay for it, but the reality is that we all benefit from stronger, digital supply chains, as well as greater efficiency in warehouses and on the ramp. Those who resist investment and change will gradually lose their competitive edge.

Having said that, it would be good for the industry if the generally better profitability of air cargo, led by more realistic freight rates, could be shared around the industry, to encourage greater investment. That's particularly necessary in ground handling, where what we do has a vital impact on the quality of services provided by airlines.

Emerging technology

Apart from the obvious gains in efficiency, service quality and reduced costs, new tech – specifically robotics – will help the industry to overcome the constant challenge of recruitment. It will also help us to mitigate the impact of any future pandemic or ongoing restrictions in the present one.

Expectations for 2022

With the gradual recovery of the global economy, the growth in e-commerce, and the ongoing woes of the ocean sector, everything looks positive for air cargo



Wilson Kwong

at present – and that's likely to continue into 2023 at least. Freighters are already playing a much more important role in our industry, as is cargo as a whole. We will see many more freighters joining the global fleet – both newbuilds and P2F conversions – and this again looks set to remain the case for some time to come.

Cargo has been the poor cousin of aviation for many years, but we have

hopefully now achieved better recognition of our huge importance to the global economy. And I hope that equates to more newcomers viewing our industry as a career and joining it, as well as better financial rewards for those companies and individuals who are already involved. In the very negative overall scenario of 2020 and 2021, this could be the positive legacy for 2022 and beyond.



Exploring artificial intelligence

Dirk Goovaerts, global cargo chair and head of Middle East & Africa at Swissport International, expects Swissport's recent partnership with logistics technology provider Speedcargo to help improve overall logistics efficiency and increase cargo capacity in warehouses and on flights



Dirk Goovaerts

What have you been doing to improve air freight operational efficiency and communications, and what will you do this year?

Our mission is to create a process that is fully transparent and ultra-efficient, for our customers to be able to track the supply chain and streamline their activities. Swissport already has number of successful initiatives, such as cargo self-service kiosks that reduce handto-hand interaction - and so lessen the risk of virus transmission - while also digitalising formerly paper-based processes in order to speed the flow of documentation through the supply chain. Developed with customer and partners such as truckers and forwarders in mind, they are already in use in seven global locations, such as BSL, LGG, FRA, and the kiosks will be implemented at more airports soon with MAN, VIE, JNB next in line.

Bluetooth ULD tracking

We are also utilising Bluetooth ULD tracking in 33 air cargo facilities across the globe. This state-of-the-art technology with geolocation of ULDs enables real-time tracking and inventory control, allowing efficient and effective

distribution planning.

Our partnership with Speedcargo aims to advance Artificial Intelligence (AI) technologies such as Cargo Eye & Mind in supporting our drive to digitalise the overall logistics, including cargo capacity both in warehouses and on flights, and again – improving our operational results.

Finally, it is worth mentioning that Swissport invested in a new generation of mobile devices and an app that allows employees to record every step of the warehousing process, such as acceptance, build-up, check-in of goods and delivery. With these process steps supported with real-time visibility, customers can keep track of their shipment status. By the end of 2022 we expect 76 stations and its staff to be equipped with those devices.

How can you and other stakeholders in the air freight supply chain work more effectively this year to improve visibility and streamline cargo operational processes – to minimise some of the congestion, delays and volatility experienced last year at certain cargo handling stations and airports?

Swissport is a keen supporter of airport

cargo communities, which brings real value to freight communities. Connecting Swissport systems with the airport community systems leverages benefits not only for Swissport but the entire community, by pushing each stakeholder to meet and exceed industry standards.

Examples include linking our self-service kiosks with slot and door management in airports such as BRU, LGG, FRA, AMS, JNB, using digitalised solutions to simplify some of the processes and to create multidisciplinary coordination.

How can we better incentivise stakeholders in the air freight supply chain to support these aims?

The digitalisation of the aviation industry and consequently sharing the data across airport communities holds many benefits. We firmly believe that this is the way forward for our industry, and thus the challenge lies mainly in convincing all players in the supply chain to align and join the community.

Of course, this at first requires the investment in digitalisation, change management and shared vision, albeit the benefits are countless. Shared data will lead to new ways of organising, planning



Trilogy Achieved First in the Middle East























and executing the projects – more efficient and effective solutions will be applied in scrutinized areas.

Cooperation and transparency are the values we actively promote.

What role will new and emerging technology play?

Swissport has recently signed a proof-of-concept agreement with Speedcargo, a leading provider of logistics technology. Its artificial intelligence (AI) based solutions, Cargo Eye and Cargo Mind, will support our digitalisation drive, help improve overall logistics efficiency and increase cargo capacity in warehouses and on flights. We expect to further optimise cargo loads on

our customers' flights and ULD containers by 5%, representing a significant increase in revenue for both the airline and the handler.

The application of advanced AI technologies allows us to stay in the lead of cargo services providers by constantly reviewing our technologies, services and their execution. The complexity of the aviation industry requires complex solutions tailored to the specific needs of customers, and digitalisation is essential to answer the market's requirements.

Other expectations for air freight in 2022

We are forecasting that air cargo will experience the steady annual growth by of

4-5% in the coming years.

The belly capacity that has been removed due to the Covid pandemic related collapse in flying passenger numbers, will start to incline in 2022, as we see the number of passenger flights increasing and airports re-opening. The ecommerce volumes are likely to continue their ongoing steep upward curve. I am confident that we will see a gradual increase of demand for rail-air and sea-air multimodal solutions.

Finally, throughout the year we will be delivering our comprehensive cargo strategy. Swissport has ambitious growth plans, both organic and through acquisitions.

A new level

Dnata's plans this year include launching a next-generation e-commerce platform that takes its existing community platform to a new level, offering a highly integrated trading platform and significant new benefits, says Guillaume Crozier, senior vice president for UAE Cargo at Dnata

n 2021 we saw demand return quickly wherever pandemic-related flight restrictions were eased. Demonstrating the agility and capability of our teams, we were able to respond quickly to customer needs with high-quality services. With global cargo capacity constrained due to pandemic-related restrictions, shippers and freight forwarders have been increasingly opting to transport cargo through Dubai, a major global hub with strong infrastructure and global connectivity to ensure their goods reach customers on time. There has been a massive growth in import general cargo volumes, including fashion accessories, electronics and fast-moving consumer goods. Among the various categories of cargo, mail and courier have shown steady increases as compared to pre-pandemic volumes, indicating a rising trend with e-commerce



Guillaume Crozier

shipments. Sea-air solutions are increasingly sought after at Dubai, given Dubai's strengths as a logistics gateway to markets in the Middle East, Europe, Asia, Africa and beyond. Reflecting the strength of the markets for e-commerce and health products, we expect continued robust demand for our cargo services in 2022.

Digital transformation continues

This year we will continue our digital transformation journey to provide the best possible services to our customers through advanced solutions. We'll launch a next-generation e-commerce platform which will take CALOGI, our existing community platform, to a new level. In addition to offering a highly integrated, cost-effective trading platform, it will deliver a number of significant benefits for air cargo supply chain stakeholders, including general sales agents, airlines, ground handlers, forwarders, road feeder services and third-party logistics providers. It will

allow stakeholders to conduct business with their customers and interact with authorities on one platform, sharing information and settling payments using their Calogi credit account. Customers will be able to integrate the platform into existing workflows through APIs and take advantage of all innovative functions while using their own system. The platform will also help customers simplify existing processes, without investing in multiple systems. Furthermore, it will enhance sustainability by promoting paperless and cashless trade through collaboration and automation.

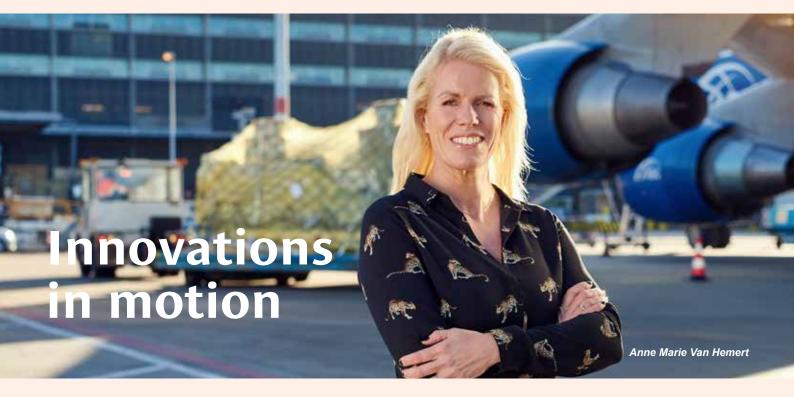
'OneCargo' development

We look forward to digitising our largest operation in the UAE by the beginning of 2023 by launching our state-of-the-art 'OneCargo' Terminal Operator Solution developed by IBS. We expect the tool to steer our processes and people to deliver the service even more efficiently, consistently ensuring compliance and the

highest level of quality and safety. Having successfully implemented the phase one version of the system in Iraq, we plan to launch OneCargo at many additional stations across our global cargo network.

We will also launch autonomous drones in our warehouses at Dubai International (DXB) and Dubai World Central (DWC) airports to digitise acceptance and warehouse inventory processes by monitoring shipments with 99.8% accuracy. Our partner's innovative software enables the drones to map the environment, collect inventory data, count cases, measure temperature, and read barcodes using only their cameras, without the need for any additional active infrastructure. The drones are paired to a tablet device providing live inventory data. The collected data can be viewed directly on the tablet or the web, via a user-friendly application. The drones can operate at temperatures as low as -10 Celsius degrees, enabling us to take advantage of the technology in our state-ofthe-art cool chain facilities, too.





Digital pre-notification has become the new standard for all ground handlers at Amsterdam Airport Schiphol, with 'automated nomination' set to roll out this year – where import shipments will automatically be assigned to the correct forwarder before they physically arrive at Schiphol, says Anne Marie van Hemert, head of aviation business development

hat have you been doing to improve air freight operational efficiency and communications, and what will

you do this year?

Last year, the cargo team moved into a newly established Aviation Business Development Division, putting all airline and cargo commercial and operational business in a single department and introducing new faces. This year, Luc Scheidel has joined the team as Manager Cargo Network, and he will also act as programme manager for the Smart Cargo Mainport Program (SCMP). He comes from Cargonaut and is very familiar with and experienced in cargo community and airfreight logistics and data. Together with the Cargo Community and David van der Meer, they will put innovations in motion that will enforce smart solutions

for the landside logistics at Amsterdam Airport Schiphol.

Last year, we accelerated our Smart Cargo Mainport Program, ensuring faster handling of export cargo, resulting in Digital Pre-notification as the new standard for all ground handlers at Schiphol. Going forward, Automated Nomination is going to be the new standard as well. Automated Nomination helps ground handlers plan their operations more efficiently. Import shipments will automatically be assigned to the correct forwarder before they physically arrive at Schiphol. Automating this process decreases throughput times and increases accuracy, as manual errors are substantially reduced. Needless to say, sustainability also remains an important driver for the SCMP and as in integral part of all our digitalized innovations.

Other projects that will gain momentum this year are Milkrun Export, Road Feeder System (RFS) and Digital check-in, Digital Handshake and more initiatives to come. This year will also see the continued modernisation of airport cargo information platform Cargonaut's Port Community System under the flag of Schiphol.

How can you and other stakeholders in the air freight supply chain work more effectively this year to improve visibility and streamline cargo operational processes – to minimise some of the congestion, delays and volatility experienced last year at certain cargo handling stations and airports?

Schiphol has devised a refreshed overall cargo strategy for 2022 to tackle the challenges ahead, including capacity shortage, landside congestion, sustainability, security for valuable cargo, smart Customs policies and digitalisation. We hope to lead change and take concrete steps towards this goal by engaging in stakeholder co-operation to define

minimum standards.

We have been working hard with our stakeholders and partners on the development of the local rule 2, which states that slots that are given back or re-delivered will be used by cargo as a priority. We hope to gain approval from the ministry and ACNL and finalise these negotiations this year.

We also look forward to accelerating efforts within the Cargo Community at Schiphol on our mutual innovative, digital, and sustainable initiatives that will lead to a safer, more reliable and more efficient cargo flow at Amsterdam Airport Schiphol. Together, we want to shape Europe's smartest cargo hub.

What role will new and emerging technology play?

Improving IT is a pre-requisite to achieving Schiphol's common goal to be a competitive and sustainable airport and to ensuring seamless processes that enable a predictable cargo flow. The introduction of Digital Prenotification as the new standard for ground handlers at Schiphol and the planned introduction of Automated Nomination to expedite cargo throughput are just two examples of how Schiphol is embracing the important role of technology in optimising cargo operations.

We believe that embracing emerging technology is key to future-proofing the air cargo industry. Schiphol has been invested in its philosophy for many years, but now, given the impact of the global pandemic on digital adoption, we are optimistic that this view is shared by the whole industry.

Expectations for air freight in 2022:

We expect that, globally, sustainability and data exchange will play a more prominent role as central subjects in all activities that will take place in air cargo. This is almost inevitable and we all have an important role to play in the green change that is to come.

We have also seen over the past years that air freight has an important social role to play when a pandemic is in place. We expect this essential and critical life-saving function will remain for airfreight.



Pierre Dominique Pruemm

A volatile business

Frankfurt Airport's latest efforts to make cargo handling processes more efficient include the launch of the 'FRA-OS' data exchange platform for inbound processes, highlights Pierre Dominique Prümm, executive director of aviation and infrastructure at Fraport

he cargo industry is looking back at another challenging year – characterised by continuously high freight volumes. In Frankfurt, we have never handled as much cargo in a single year as we did in 2021. This new record underscores Frankfurt Airport's role as one of the leading freight hubs in Europe.

However, this high volume also presented a number of challenges to us and the entire cargo community based in Frankfurt. Global logistics chains were disrupted by the effects of the pandemic. At the same time, demand – especially for medical goods and articles from the area of e-commerce – was high. All players involved in air freight

felt the effects of this, not only in Frankfurt but also at many other major European hubs.

The trend towards a very volatile business with marked differences in demand will persist for some time yet. We expect that this will continue to require the greatest possible degree of flexibility from all partners along the supply chain during the first half of 2022 at least. The dynamic start to the new year confirms this assumption.

This makes it all the more important to further intensify our open and transparent exchange within the cargo community. Our common goal is to ensure smooth and reliable freight processes at all times and for all partners. Close cooperation and mutual support are paramount for achieving this goal. This is why we want to further strengthen the cargo community here in Frankfurt.

Furthermore, our approach is to make handling processes more efficient by means of digital solutions. We have already taken our first step in this direction with the launch of the 'FRA-OS' data exchange platform for inbound processes. We will continuously expand this tool during 2022 and onwards to enable its use for other processes beyond the import of goods.

We will also continue to enhance and develop FRA's infrastructure with a focus on sustainability and our customers in mind.

Our measures will include the inauguration of a new truck parking lot at CargoCity South, among other things.

We are taking an optimistic look at the new year ahead. Even if the pandemic continues to cause uncertainties, we remain confident that our lives will further return to normal during 2022 – with more people making plans for their holidays. This will have a positive impact both on passenger traffic and cargo. And Frankfurt Airport will play a significant role in this development.

Supporting a collaborative approach

The air cargo industry is beginning to see the benefits of community collaboration, and Changi Airport plans to introduce further community-based applications to unlock efficiency and productivity gains, and enhance supply chain visibility, says Lim Ching Kiat, managing director for Airhub Development

he Covid-19 pandemic has demonstrated the fragility of the air cargo industry and underscored the importance of digitisation and data-sharing across the air cargo value chain. There will be stronger pressure on air cargo communities to accelerate the industry's digitisation efforts and to share data in order to enhance supply chain visibility and efficiency, thereby building resilience.

We strongly believe in a collaborative approach. Changi Airport introduced a community data-sharing platform - the Changi Air Cargo Community System (ACCS) – an open ecosystem of collaborative and communitybased applications underpinned by an information-sharing platform that aggregates data from all parties involved in the cargo handling process. It optimises operational efficiencies and enables end-to-end digitisation of the air cargo supply chain. This initiative is aligned with Singapore's ambition to become a leading global logistics hub, and a vibrant, smart and quality air hub, supported by operational excellence and innovation.

New use cases for the ACCS

Among the first few use cases of the Changi ACCS is the Truck Dock Slot Booking (TDSB) application, to even out



Lim Ching Kiat

cargo lodgement and collection at our cargo handlers' airfreight terminals in a safe and secure manner, thereby reducing waiting time, optimising resources and providing greater insights to airport landside activities. This will provide greater predictability for forwarders, trucking companies and cargo handlers during this volatile period.

In 2022, efforts on digital transformation through community collaboration will remain a key priority for Changi Airport. We plan to introduce other communitybased applications to further unlock efficiency and productivity gains, as well as enhance supply chain visibility. Building cargo communities and aligning them to a common vision is no easy feat. It is important that stakeholders share this vision within each organisation to transit from legacy processes and relationships and move towards building trust and delivering value. The air cargo industry is beginning to see the benefits of community collaboration in this increasingly

dynamic business environment.

Expectations for 2022

Global air cargo capacity is expected to remain tight in the year ahead due to continued supply chain disruptions and slow recovery of international travel.

On the demand side, we expect air cargo demand to remain fairly strong in 2022.

Based on World Trade Organisation (WTO)'s forecast, world merchandise trade volume is projected to grow by 4.7% year-on-year. In particular, air cargo demand for key cargo verticals such as e-commerce, semiconductors and pharmaceuticals will remain strong.

The recent Regional Comprehensive Economic Partnership (RCEP) involving 15 Asia-Pacific countries including Singapore, entered into force on 1 January 2022. RCEP is the world's largest free trade agreement and is expected to provide a boost to intra-Asia trades and supply chain flows, as well as strengthen Asia as a global manufacturing hub.

Environment sustainability has also become an increasing topic of focus among the global air cargo industry. There will be greater attention placed on minimising carbon footprint across the supply chain. One key area is the development of Sustainable Aviation Fuels (SAF). CAG is partnering the Civil Aviation Authority of Singapore and Singapore Airlines for the SAF trial which will commence in 2022. We also look forward to working closely with additional airline partners to accelerate the use of SAF at Changi Airport. On ground, the TDSB application also supports the community's overall environmental sustainability efforts to reduce carbon emissions by cutting down on truck waiting time at the airfreight terminals.

Changi Airport continues to work closely with our stakeholders to examine how the air cargo industry will take shape in the coming years and examine how our existing and future digital and physical infrastructure can boost our air cargo hub resilience.





Power of the community

Plans to build on the growing success of air cargo community systems include use of Blockchain, Al, Internet of Things, Big Data, and robotic integration, outlines Vineet Malhotra, director of Kale Logistics Solutions

What have you been doing to improve air freight operational efficiency and communications, and what will you do this year?

Our vision is to enable the entire logistics value chain to operate as a unified industry to accelerate global trade. We have been pioneers in introducing cargo community systems (CCS) that are built on the principle of mutual trust, transparency, and end-to-end visibility. These platforms help various players in the logistics value chain from shipper up to consignee to communicate and transact with each other electronically, thereby eliminating paper-based transactions which are prone to delays, errors, and duplication. Synchronising land and air

side operations has been major gap for the industry – CCS ensures stakeholders at both sides are well connected and organised.

Throughput improved by 80%

We have case studies and industry studies which prove that these CCS improve throughput of airports and ports by 80%, bring 100% visibility to trade on cargo movement, and eliminate paperwork/documentation by 90%. We will continue to build on these platforms with new and future technologies like Blockchain, Artificial Intelligence, Internet of Things, Big Data and robotic integration.

We are extending our portfolio with a Logistics e-marketplace, which connects

all supply chain actors in booking door-to-door cargo transportation services, offering competitive pricing and total transparency of the best shipment options across all modes of transport. The system matches companies looking to ship freight using one or more modes of transport with service providers of suitable capacity, digitising the entire shipment process, including rates, schedule, booking, contracting, delivery, invoice, and payment.

How can you and other stakeholders in the air freight supply chain work more effectively this year to improve visibility and streamline cargo operational processes – to minimise



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some of the congestion, delays and volatility experienced last year at certain cargo handling stations and airports?

The last two years have been exceptional for air cargo as the pandemic induced just not uncertainty, staff shortage, and health risks, but also made way for an e-commerce boom with congestions and high dwell times. These times have said loud and clear that the logistics industry needs to stand unified to fight this battle.

As per WHO, the COVID-19 virus stays on paper for 72 hours, so contactless and paperless operations were the requirement of the industry. CCS promoted this with single window systems which were powered by autonomous data exchange, online payments, e-approvals, digital signatures, barcoded gate-pass, digital customs, and e-delivery orders. The stakeholders enjoyed benefits like improved customer satisfaction with better shipment visibility, improved data accuracy by 90%, security and reduced cost.

Truck slot management

One of the most relevant offerings from our CCS is Truck Slot Management. Here, all truck arrivals and departures are managed as per slots to avoid any gate congestion. Truckers experience much lower wait times at the terminal gates and all documentation is pre-done before the truck reaches the terminal. The handler is well equipped with advance shipment information to plan the resources, equipment, and warehouse. The airlines receive an IATA compliant e-AWB. So, all the actors are well synchronised and this ensures the cargo flow is seamless and quick, along with significant cost savings.

Another important offering is the Sea-Air Logistics. Usually 40% of the cargo moves between sea and air. Lack of coordinated systems and processes make cargo movement cumbersome and inefficient. Sea-Air Link will establish seamless cargo movement with advance information sharing and connecting the relevant stakeholders from both the modes of transport.

How can we better incentivise stakeholders in the air freight supply chain to support these aims?

Community adoption is the key for the above objectives to be met. They can be incentivised with free training on the applications, access to affordable technology (cloud-based and SaaS based), and local and national authorities can extend rebates and exemptions to the users as it supports sustainability goals of the airport, region and country. An airport can save 1500 trees annually by adopting paperless transactions.

What role will new and emerging technology play?

The future belongs to technology. New age technologies like Blockchain, AI/ML, IoT, mobile apps, robotics, and big data will shape logistics and cargo movement in the future. Let's look at some of them:

Blockchain: Transparency and data privacy are critical issues for air cargo stakeholders. Right from sharing crucial advanced information safely to securing the information from phishing attacks and data thefts, the need to safeguard data is pretty high. That's the time when Blockchain comes into play. The robust algorithm and encryption mechanism cut down the scope of phishing attacks to zero. Already, several frameworks for the air/maritime stakeholders are in place and assist in cutting down critical issues such as revenue leakage and data theft. Blockchain has seen an upward adoption in use cases like Bill of Landing, Crypto, Certificate of Origin, and Digital Trade Corridors.

Artificial Intelligence: Predictive and cognitive capabilities is the need of the hour for the logistics industry, especially for the transportation companies to identify faster routes to reach the airport/port terminal. Data sets about inventory, supplier performance, demand fluctuations and even conditions along a route, such as weather or customs delays, can be used to plan and/or act in realtime, facilitating decision-making and increasing speed. The ability to apply predictive analytics to the pharmaceutical supply chain offers end-to-end visibility like never before.

IoT and Wearables: In the past few years, wearable gadgets have engulfed the markets pretty well globally. The next trend is creating wearables that enable performing

business functions remotely. 24/7 cargo movement tracking and receiving and sending advanced information are some examples of activities that can be performed with wearables.

Other expectations for air freight in

Sustainability in air cargo is one of the mega trends for this decade. The topics of the environment, sustainability, and carbon footprints are becoming more widely discussed today, making it essential for the air cargo sector to consider these issues when deciding how to handle shipments. Airports and ports around the world will make sustainability a key goal, which will be driven by stringent measures and KPIs. We are already seeing this gaining ground in the maritime sector.

Connected World and the power of data: Stakeholders from the entire supply chain will be connected to each other with technology, both as simple as APIs, mobile apps, and portals and as complex as blockchain integration, hyper ledgers, and robotic integration. Data will be the new oil of the century; it will set the path for industry to grow and innovate. The focus is shifting from documents to data. The infrastructure is there, innovative technology is ready – it's just a matter of moving to data and automating.

SME players raising to power

Small and medium players will raise the service bar for industry with tech adoption. SaaS based models and cloud applications will equip them with tools and techniques to improve customer service, offer innovative services at competitive rates, expand their markets and products, and offer very customised services with local advantage.

Air cargo will be a critical area of resiliency for airlines and airports for the foreseeable future. The air cargo market is being upended by the digitization of supply chains and demand increases from the explosion in e-commerce. The pandemic with its eye-opening experience points to the need to diversify the airline business model to protect against the consequences of similar unforeseen events in the future – Cargo is the best bet.

The open, innovative, collaborative approach

Agility and flexibility are key to 2022 and further recovery, says David Linford, director for global sales and account management at CHAMP

hile the pandemic is still a part of our lives, the vaccine rollout offered

a significant boost to air cargo – both in business and its effects on the wider global economy. 2022 will remain a challenging year due to the uncertainties the emergence of the Omicron variant brought on and other variants may bring in future. But there is also cautious optimism with some countries starting to relax travel restrictions and self-isolation rules, hopefully helping to increase passenger travel and the much-needed belly capacity to meet the demand on key routes.

Like the rest of the world, aviation and air cargo will need to adapt to co-existing with COVID. To accomplish this, agility and flexibility will be key – as will be data and business intelligence. Bottlenecks – whether caused by storage capacity or lack of trained workforce – cannot be fully prevented but minimalized with the right processes, technology and business insights.

Openness, innovation and collaboration

In the past year, CHAMP has adopted the mantra of 'Open. Innovative. Collaborative.' It is our new engagement model in reaching out to all our customers and partners in the supply chain to achieve greater things together.

One example is our partnership

with Air Cargo Belgium to support an innovation platform for the Belgian Air Cargo Community. There, industry stakeholders can pool their ideas and share resources to better improve and increase efficiencies across the market and benefit one of our communities, with hopes for more to come.

APIs and portals will continue to drive efficiencies. In times of staff shortage and where demand outstrips supply, self-service booking portals on carriers' websites – which are connected to their Cargo Management Applications – help streamline the sales process and maximise capacity.

Visibility remains a firm way forward for air cargo in 2022. Through Traxon Premium Tracking and other tracking API services, shippers and forwarders can benefit from automatic real-time alerts regarding the progress of their shipments and address any issues quickly and efficiently.

We have also seen major adoption of our mobile handling application Cargospot Mobile, providing greater flexibility on hardware devices and providing much more functionality and efficiencies to the warehouse operations. We expect this to further accelerate in 2022, revolutionising the handling world.

Market insights service

MarketAnalytics is CHAMP's new market insights service and provides daily market data – supporting the agility required in 2022. MarketAnalytics brings new insights updated daily through easy to interpret Power BI dashboards.

We have seen many countries delay the introduction of advance customs filing, but we expect more countries to launch their programmes in 2022. Brazil may be the first as it gears up to require advance cargo information from Q2. CHAMP's Traxon Global Customs application already provides customs reporting to more than 60 countries and will be ready for Brazil to



Linford David

ensure shipments won't be delayed.

Continuing innovation

In 2021, we led an all-out effort to explore machine learning for our product portfolio. For 2022, we look forward to collaborating with the industry to select the best potential use cases for experimentation. Finally, we continue to explore the potential of voice recognition technologies to enable new ways of interacting with our products.

CHAMP is also involved in Internet of Things (IoT) technologies that enable us to centralise and monitor in real-time cargo data available for pharma shipments, such as from temperature sensors. We also conducted extensive research in employing artificial intelligence to extract the content of documents to enable their digitalisation into our community.

All in all, we believe 2022 will be another major transitioning year out of the pandemic – better than 2021, but still fragile. Technological progress and further digitalisation have given agility and boosts in efficiency for many to make it through the worst of this crisis. We expect demand for such cargo technologies to further increase throughout this year.

Partnership between suppliers

One of the most important areas where tech companies are starting to deliver value is through collaboration with other providers, says Yuval Baruch, CEO of Hermes Logistics Technologies

What have you been doing to improve air freight operational efficiency and communications, and what will you do this year?

As a technology provider, HLT's focus in recent years was on digitalization. Although this is an abused buzzword by now, in HLT's case it is directly linked to a set of efforts aimed at improving efficiency and communication.

Here's what does that means in practical terms:

Software as a Service (SaaS)

Efforts to migrate customers over to Hermes SaaS have been gaining ground and we have been investing in preparations for and the completion of migrating customers to our NG cloud eco-system. This effort should contribute to our customers' focus on running their business rather than running a server farm. This leads to better system performance at a lower cost and resource savings.

Next Generation BI and Datalakes

We have now completed our NG BI & Datalakes version 2 and have started rolling out our state-of-the-art Business Intelligence (BI) solution. The incredible modelling behind NG BI and the simple and friendly way that data turned into events can be analysed will enable our customers to have a better understanding of their business and better decision making that will lead to operational efficiencies

APIs and Collaborations

One of the most important areas where tech companies could deliver value is through collaboration. In the last few



Yuval Baruch

months, we have integrated Hermes 5 with a few solutions, CargoEye from SpeedCargo and Cargonizer from InventGroup to name a couple. In the last quarter of 2021, we have started an integration project for a comprehensive NG Landside Management solution powered by Nallian. These collaborations & API creation and expansion contribute massively to communication between various systems, to data sharing and lead to better performance of our customers but also their partners and the industry.

How can you and other stakeholders in the air freight supply chain work more effectively this year to improve visibility and streamline cargo operational processes – to minimise some of the congestion, delays and volatility experienced last year at certain cargo handling stations and airports?

HLT is a big advocate for best practice processes. One of the best ways an air cargo facility could leverage its processing abilities is by processing cargo in the most efficient way. We are working with our customers, looking at the way they use our technology through health-checks, as well as offering them best-practice process design as part of new implementations.

How can we better incentivise stakeholders in the air freight supply chain to support these aims?

At Hermes we believe that stakeholder buy-in into innovation is critical. Many of the industry players are unwilling to directly invest in innovation. To overcome this hurdle, HLT finds itself developing new solutions and introducing new tools through pilots where the risk to the customer is low and the potential benefit could be high. Once a new solution or service is tried and tested such that the customer sees the benefit, we will agree a roadmap for full deployment.

What role will new and emerging technology play?

New and emerging technology will play a massive role in any change and improvement the industry will experience. It is our belief that through collaboration between tech companies, sharing data, and leveraging data, we can finally benefit from real AI.

We have been involved in a project where we tried to train models for predictive purposes. The understanding that the data modelling was not at the level needed for these models to deliver true value led to the development of NG BI & Datalakes V2. Looking at the reporting capabilities of this solution is the first step towards the required modelling to enable true AI value.

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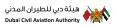
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The Augmented GSA

The air freight sector needs to rethink performance from both an economic and human perspective, giving more attention to factors such as well-being, commitment, and social value, believes Adrien Thominet, executive chairman of ECS Group



Adrien Thominet

hat have you been doing to improve air freight operational efficiency and communications, and what will you do this year?

2021 was marked for ECS Group by the launch of our 'Augmented GSA' strategy. Based on four pillars – commercial, new abilities, technology and sustainability – this strategy is the foundation of our

company for the years to come and aims to fit our customers' needs and optimise their revenues precisely by improving air freight operational efficiency. The technology and new abilities pillars are particularly relevant.

Technology is a strategic point that has become essential for several years and has been reinforced by the pandemic. ECS Group wants to become a leader in this area, to offer new tools that can lead the transformation of our industry: what can be digitalised should not remain manual.

With the Cargo Digital Factory, we already offer various in-house tools such as Quantum, which supports the ad-hoc pricing process; Apollo, a BI and reporting system with real-time full visibility on the results, combining market and performance information; and Pathfinder, our in-house shipment tracking system.

New abilities

The new abilities are single modules that we have created beyond standard GSA services, offering a variety of support



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Better operational visibility is achieved by having access to better operational data, to support decision-making with analytics and to improve operational capabilities. But real-time visibility requires this information to be updated with high frequency.

25

Adrien Thominet

options – a new set of à-la-carte products. These are 10 unique products that we have developed in-house to meet the new demands of our customers and the new realities of the market – whether it's revenue optimisation, accompanying them in their expansion by finding the right talents, or bringing international conveyance solutions to mail and ecommerce operators.

For this year, the idea is simple: develop and strengthen existing tools. To continue to be avant-garde in the transformation of our industry by continuing to be attentive to the needs of our customers and by always improving to meet them.

How can you and other stakeholders in the air freight supply chain work more effectively this year to improve visibility and streamline cargo operational processes – to minimise some of the congestion, delays and volatility experienced last year at certain cargo handling stations and airports?

Better operational visibility is achieved by having access to better operational data, to support decision-making with analytics and to improve operational capabilities. But real-time visibility requires this information to be updated with high frequency.

At the same time, the use of data

reduces volatility by speeding up processing, quoting and booking. E-booking platforms are a great help in this area. Furthermore, ECS Group works in partnership with the online booking platform CargoAi. We have also developed new specific abilities for this purpose such as Quality Stars that help our clients adapt their processes to their outsourcing strategy or Optimum which delivers the necessary Performance Management processes, taking the Revenue Optimization to the next level.

So, technology and data are very important and we need to push further the digitalisation of the supply chain to streamline operations and increase productivity through efficiency gains and streamlined communication. At the same time, this will increase transparency and this is a key factor: more transparency also leads to more trust.

How can we better incentivize stakeholders in the air freight supply chain to support these aims?

We believe co-construction is essential in building a secure business environment for economic development. The catalyst for such co-construction lies in the ability to show stakeholders that these objectives are also in their interests. That by serving them, they are also serving themselves and that the future of our industry, in various fields, lies in the combination of expertise, of different views leading to the emergence of a collective intelligence.

We have recently given proof of this ambition since the CargoDigital Factory joins with Wiremind Cargo to create CargoTech, an independent entity which aims to improve global processes within and for the whole industry.

What role will new and emerging technology play?

Technology has become the keystone of many industries, and ours is no exception. This is why we created the Cargo Digital Factory years ago. Since then, our air cargo industry and technology experts follow three clear principles: harmonise and ensure uniform standards, digitise and automate processes. By automating manual processes, we increased efficiencies. At the same time, we've focused on using the data and systems we had to create new, value-added services for our customers.

Emerging technologies play a vital role in modernising industries, helping to transform profitability, visibility, prediction. The benefits and fields of action are growing daily. Technology is one of the fastest-growing agents in the present world, faster than ever before. Digital transformation was a today is a must have.

Other expectations for air freight in

My expectation, and almost wish, is that the air freight sector understands the need to rethink performance from both an economic and human perspective, by considering more factors as well-being, commitment, and social value.

The ecosystem in which we are evolving must lead us to question the meaning of our actions. To be exclusively in the production of services without being completely attentive to our customers and their aspirations at all levels is a nonstarter. But to do so we must engage in transformation. Our four pillars are for us a way to act consciously, to produce and design in a more reasoned way and finally to redefine the notion of growth to last and give more meaning to our activities.

Covid's double-edged sword

Much needed digitisation and automation will continue to be implemented, but we should not forget the importance of skilled personnel, where the shortage of labour will boost automation even further but will also continue to cause inflation and supply chain disruptions, highlights Sebastiaan Scholte, CEO at Kales Airline Services



Sebastiaan Scholte

obody has a magic crystal ball to look into the future. No one could have predicted this pandemic, nor the capacity shortages and rate increases in the last months. The only certainty we have is that there will be a continuous uncertainty.

Unemployment levels in most developed countries are very low. The Covid crisis has functioned as a double-edged sword. People could spend less on travel, which obviously lead to the belly capacity reduction. But the disposable income is also higher, which resulted in more demand, especially on e-commerce. This 'perfect storm' of reduced capacity and increased demand has caused shipping and air cargo rates to be at record levels. Add to that the labour shortages of drivers and warehouse personnel, and capacity was even more constraint.

Overall energy prices, higher transport costs, and higher wages have increased the inflation levels. Strangely enough interest rates have stayed quite low, but the question is for how long.

In my opinion 2022 will be similar to 2021. There probably will be a lot of volatility and capacity will remain constrained and demand levels will be high. As soon as consumers can spend more money on travel and eating

out, inflation levels will decrease. If inflation will increase further, this could potentially lead to a slowdown.

Licence to print money

Anyone with freighter capacity basically will continue to have a licence to print money. Demand for qualified personnel will continue to be high, further putting pressure on wages. On the positive side, air cargo logistics has become a lot more attractive for younger people to join our industry, since in the last two years it has become obvious that air cargo is so essential for e-commerce and keeping healthcare systems going.

Long-haul business travel will probably continue to be less than pre covid levels, while shorter leisure travel will continue to improve. The question will be if travel remains restricted, how many airlines, who rely on long haul (business) travel, will be able to survive without being bailed out or getting even more debt. This could potentially lead to even further capacity reductions.

Airlines traditionally have the aircraft capacity, but in 2022 the share of freighters operated by e-commerce companies, forwarders and even shipping lines will most likely increase. As some acquisitions have shown, when profits soar of certain companies, there likely will be more consolidation as well.

Much needed digitisation and automation will continue to be implemented, but we should not forget the importance of skilled manpower. The shortage of labour will even further boost automation, but will also continue to cause inflation and supply chain disruptions.

As Darwin said, it is not the strongest but the most adaptable that will survive. Also in 2022, agility will be key. Luckily at Kales Group we are very agile and extremely quick to react to market changes with our lean entrepreneurial organisation structure.

Further outsourcing to GSSAs

Most likely airlines will continue to outsource more to GSSAs, in order to remain flexible with all the changing market conditions and because there still will be pressure from board level to keep (labour) costs down. At Kales group, we basically completely unburden the airline in a very cost-effective and efficient way. Moreover, we truly see our airline customers as partners, where we are also willing to take more commitments on capacity and where we can help our airlines perform better. With state-ofthe-art real time market intelligence combined with digital booking processes, we are sure that 2022 will be good year for our partners and us.



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