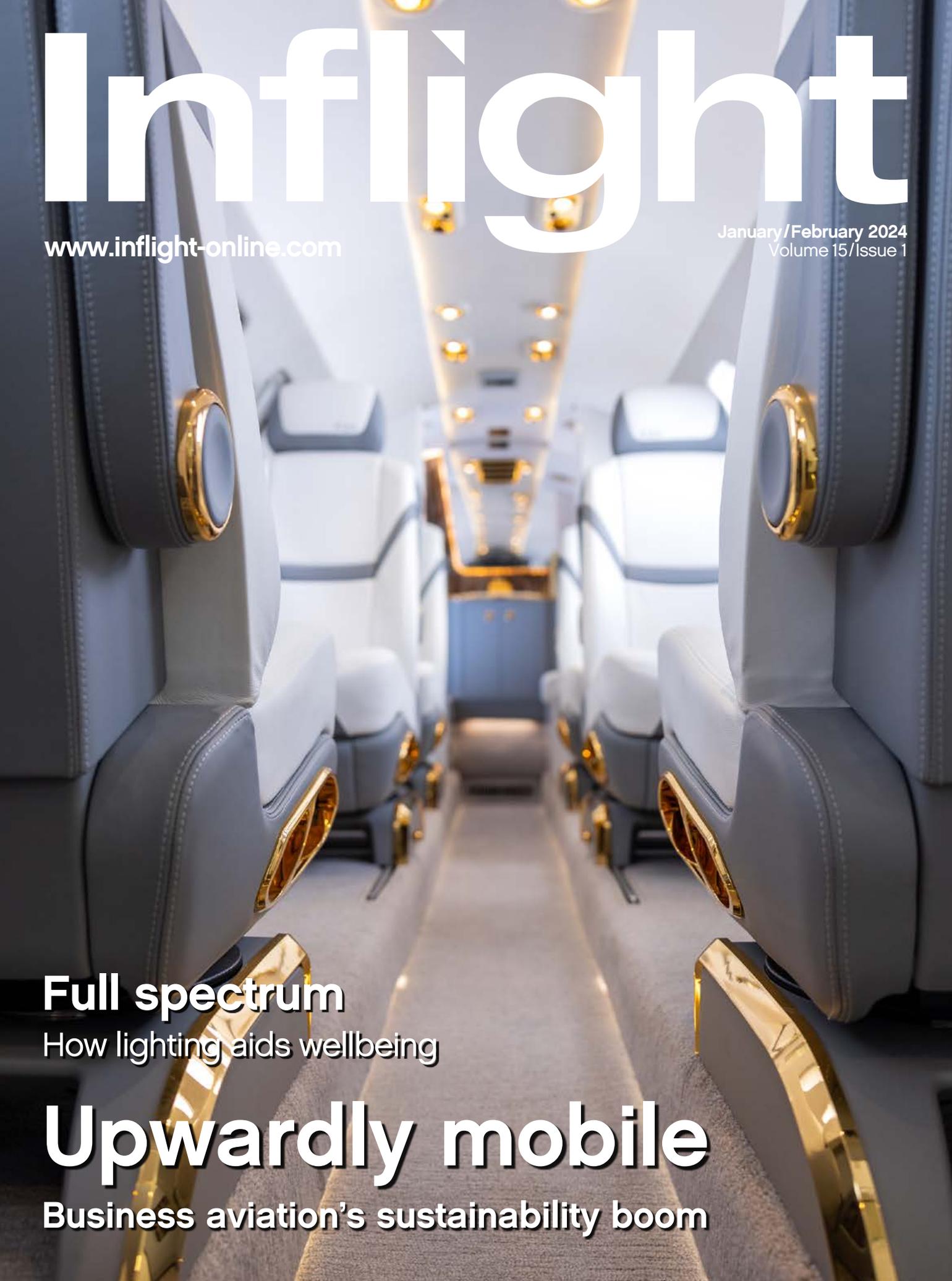


Inflight

A perspective view of a modern airplane cabin aisle. The seats are upholstered in light blue leather with gold-colored circular accents on the headrests and rectangular accents on the seat bases. The aisle is carpeted in a light grey color. The overhead lighting is warm and recessed, creating a bright and clean atmosphere. The cabin extends into the distance, showing a blue door at the end of the aisle.

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Full spectrum

How lighting aids wellbeing

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Business aviation's sustainability boom



Challenges and opportunities: the return of belly capacity has created shifts in the wider cargo supply chain.

The right mix

Keith Mwanalushi examines how airlines, air freight technology providers and cabin modification specialists are responding to the return of belly-hold cargo capacity on passenger aircraft fleets.

Preighters marked a high point in air cargo adaptability during the Covid pandemic, but now belly-capacities are back.

According to Boeing, almost 50 per cent of air cargo worldwide was transported in widebody passenger cargo holds prior to the pandemic, but this capacity virtually disappeared in March 2020 as passenger widebody service was suspended globally.

As a passenger airline with only belly capacity for cargo, American Airlines operated cargo-only flights during the pandemic when passenger travel was at its lowest.

Roger Samways, Vice President for Commercial at American Airlines Cargo, says: “We were able to fill our passenger aircraft with belly cargo and continue to operate a global network, albeit a smaller one, due to

that cargo demand.” Then when passenger demand started to return, American reinstated much of its passenger network with significant support from its cargo business.

“It allowed us to offer customers routes and options on our network well before the passenger demand alone would have made possible,” notes Samways.

In October, American announced an expanded schedule of more than 12,500 round trip widebody flights between November 2023 and March 2024, adding significant belly cargo capacity for its winter flying programme.

“Now, almost four years after the onset of the pandemic, we are operating a strong global network as a passenger airline that is much closer to pre-pandemic size at around

5,500 flights per day,” says Samways.

He adds that all these flights – both narrowbody and widebody aircraft, domestic and international – offer cargo capacity.

“At American, the increase in passenger demand and the expansion of our passenger network only strengthens what we can offer our cargo customers,” he says.

The return of belly capacity has created shifts in the wider cargo supply chain in terms of rates, capacity and demand.

Samways has observed the changes in the market and recognises the opportunities and challenges they present. He says one of the largest and most obvious changes is the variation in supply and demand balance.

“High inflation and rising interest rates have slowed consumer spending and there has also been a shift in spending from products to services,” he notes.

These factors, combined with a modal shift back to ocean freight (due to reduced ocean freight delays and falling ocean freight rates) have reduced demand for air freight at a time when capacity has been growing due to

“At American, the increase in passenger demand and the expansion of our passenger network only strengthens what we can offer our cargo customers.”

Roger Samways,
Vice President for Commercial,
American Airlines Cargo



Image: American Airlines Cargo

carriers redeploying more of their fleets to meet the rising passenger demand.

“However, we are not complaining,” says Samways. “While this dynamic makes the market more competitive for air cargo, the increase in passenger travel is good for the airline industry as a whole and a competitive market only helps to drive innovation and creativity.”

Despite these challenges, Samways reckons the air cargo industry is in a strong position since air cargo still offers the fastest and most reliable solutions for transporting goods around the world and consumer expectations for faster transit times continue to grow.

PROTECTING THE CARGO HOLD

Ireland-based Eirtech Aviation Services develops bespoke solution packages for airlines and aircraft leasing companies globally and Paul Gibson, the company’s Head of Sales, has noticed a spike in demand for cargo bay panel repairs and upgrades in all regions, as belly-hold capacity returns.

“This is whether to replace panels because of damage while loading or unloading resulting from aircraft inspections or a general upgrade and complete refresh of cargo bay areas,” he says.

Eirtech has developed a cover system for the cargo hold that Gibson believes offers a fantastic opportunity to easily convert aircraft like the A320 family, which are equipped with a Cargo Loading System (CLS) for bulk

loading baggage or cargo. Gibson notes that the solution is fitted with no change to the original aircraft configuration and all stanchions’ posts and net securing locations are also still accessible once fitted.

“It’s installed as a minor modification, providing an excellent alternative to a CLS removal, which is a major modification and structural change to the aircraft,” he says.

“Installation or removal of a CLS cover is less than four hours for both forward and aft cargo bay compartments.”

Gibson says the Eirtech solution also caters for aircraft which have an additional centre fuel tank (ACT) fitted. When the pandemic

ended it was expected that the market would balance again between dedicated freighter capacity with the return of belly freight.

However, medium to long-term planned PTF (passenger to freighter) conversions were not significantly affected, according to Cristian Sutter, CEO of Avensis Aviation – a specialist in adaptable PTF conversions.

“This is because dedicated freighters have a specific market segment within air cargo, despite the overlapping of some types of cargo operations between dedicated freighters versus belly freighters,” he says.

Sutter feels there is a need to replace ageing freighter fleets and to support capacity growth demand in the next decades that will keep driving PTF conversion demand. He also observes that temporary PTF conversions that made up for the lack of belly capacity during the pandemic have reduced.

“Some passenger airlines that started a cargo operation during the pandemic using converted aircraft might have returned to belly freighter operations,” says Sutter.

“However, other airlines have grown operations to become mixed belly and dedicated freighter cargo operators.”

For these airlines, Sutter thinks PTF conversions are a quicker and more cost-effective option to enter cargo revenue service to grow their fleet than production freighters. He notes that fully reversible Class E PTF Conversions like Avensis MEDIUS and MEDIUS ELEV provide additional flexibility to manage the capacity requirements and fleet management.

Demand for cargo bay panel repairs and upgrades has increased in the wake of the Covid pandemic. Image: Eirtech Aviation Services





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Cristian Sutter, CEO, Avensis Aviation

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Included in some of the cabin upgrades, Sutter mentions a supernumerary cabin section, an environmental control system upgrade, new smoke detection system, smoke curtain and Easynet system to allow a safer and quicker cargo net installation in the cargo cabin. He says MEDIUS is the only EASA-certified Class E freighter without a main cargo door, and it is fully reversible.

As belly-hold capacity returns to the cargo market, Charles O’Neil, General Manager for Cargo Systems at Collins Aerospace, has seen a sustained larger share of freighter capacity over belly-hold capacity in the Trans-Pacific and Europe-Asia markets, which continue to drive a very strong demand for factory-built freighters from the OEMs and PTF conversions, but also an increasing demand for cargo handling systems.

“The widebody passenger aircraft build rates are ramping back up to expected levels that also drives a high demand for cargo systems,” O’Neil notes.

Collins’ cargo systems offer several upgrade programmes for the B747-400F platform and, as O’Neil explains, these upgrades when implemented reduce weight on the aircraft and offer improvements that the industry needs to push powered cargo systems’ reliability over the older technology installed on this platform.

O’Neil adds: “The B747-400F nose door aircraft is still popular with multiple cargo carriers and we are striving to meet those requirements to ensure its longevity. We also offer a service that we call heavy check walks, and this will usually play out in return to lease scenarios. We also partner with operators and

lessors to help identify cargo system configurations, trouble areas, and where we can offer our improvements to address and make the cargo aircraft more attractive.”

USING INNOVATIVE TECHNOLOGIES

Cargo.one provides a digital booking service for air freight and according to the company’s founder and CEO, Moritz Claussen, they are adding large amounts of new capacity all the time, as airline partners push hard to bring as much capacity as possible into digital sales.

Claussen says that in the past 18 months the company has witnessed a 400 per cent growth in new airline and route combinations becoming available for instant digital booking.

“Air cargo is a highly fluid industry, and we have all seen the dynamic spot rate side of the market becoming increasingly relevant for

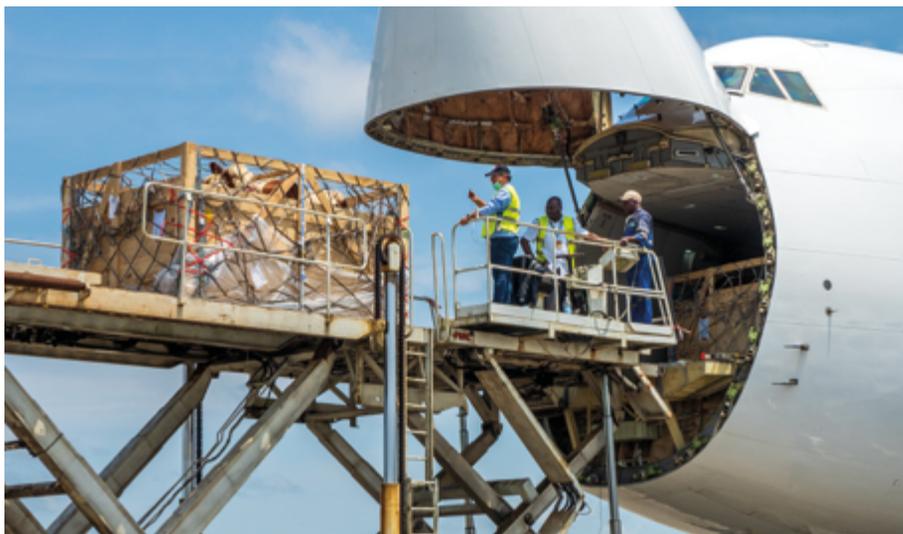
both forwarders and airlines,” he says. “The return of belly capacity has helped to fuel the popularity of digital booking and accelerate airlines’ necessity to distribute more capacity digitally.”

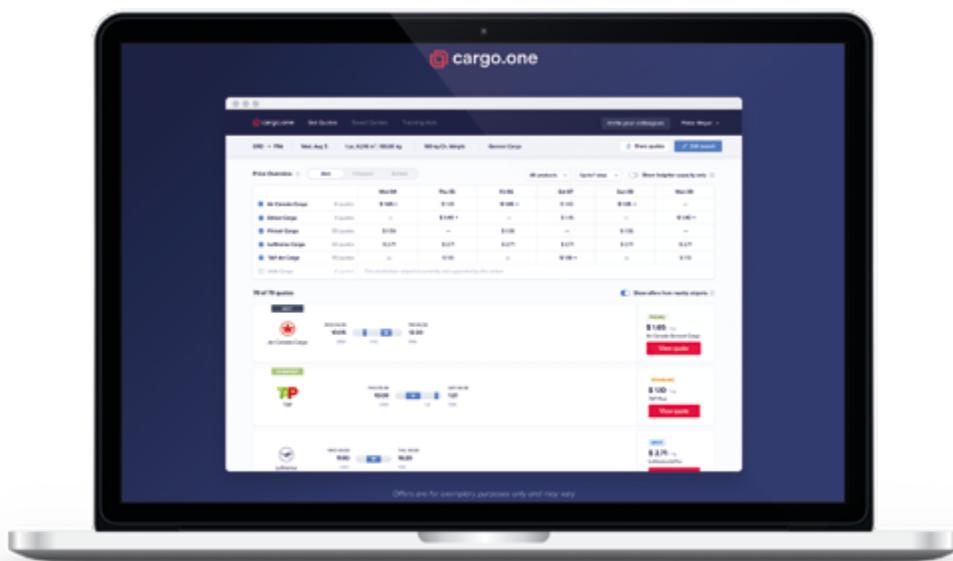
From a platform perspective, in the year to date, cargo.one has seen export searches more than double and this growth has in part been driven by forwarders’ desire to better compare all relevant belly options out there.

Claussen thinks the growth trend for digital is continuing strongly, with adoption accelerating fast past any momentary drops in industry volumes.

“It is fast becoming the norm, not the exception, and the proportion of digital sales will overtake offline sales channels in just a few years’ time,” he says. “Asia is a good example of where we are growing rapidly,

Staying power: the B747-400F nose door aircraft remains popular with multiple cargo carriers.





Cargo.one offers a digital booking service for air freight. Image: cargo.one

“The return of belly capacity has helped to fuel the popularity of digital booking and accelerate airlines’ necessity to distribute more capacity digitally.”

Moritz Claussen, founder and CEO, cargo.one

having expanded our marketplace to serve 43 markets in the region. While Asia was initially slower than Europe and North America in the early days of digital booking, East Asia specifically is rapidly closing learning gaps and is growing apace. Carriers like Eastern Air Logistics are turning to us to accelerate their digital sales growth via our massive global footprint and expertise.”

Back at American Airlines, optimising cargo belly space across huge network of over 5,500 daily flights is no mean feat. In order to support the network, Samways reports that the airline is making tremendous progress along its modernisation journey, leveraging technology to drive the business forward.

In 2019, American Airlines transitioned to a new end-to-end cargo management system that laid the foundation for how the carrier would evolve digitally, as Samways explains.

“This new platform has enabled us to provide increased self-service capabilities to our customers, including new online booking capabilities on our website and partnerships with third-party digital booking platforms.”

The airline is also giving access to customers and partners across the supply chain to connect directly with American’s platform via a custom API gateway, which the airline says improves data integrity and provides enhanced shipment visibility, both to internal teams and customers.

Samways says: “We are making use of new technology in order to drive efficiency, speed up responses to customers and support our team members. For example, we use machine learning and AI to help improve our capacity forecasting process and ensure that booked capacity better reflects the actual characteristics of each individual shipment, as well as predict which shipments may show up over or under booked, or not show up at all.”

American’s revenue management team is also using robotics process automation to help confirm capacity and ad hoc pricing –

leading to faster, more accurate responses to its customers and better outcomes for the business. In addition to technology, the airline is also continuing to evaluate and refine its suite of product offerings.

Looking ahead, shipments for life sciences, pharmaceuticals, perishables and ecommerce shipments were a priority in 2023 and will continue to be so in 2024.

“We also continue to see growth across these three verticals and are committed to meeting our evolving customer needs in this space,” Samways says. ■

Net worth: belly-hold cargo has enjoyed a strong rebound in demand of late. Image: Swissport

