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After long merger talks, satellite giants embark on 100-day integration

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## Kerry Reals

Viasat and Inmarsat are “ready to be one family” following the long-awaited completion of the former’s acquisition of its rival, and are working on a 100-day timeline to integrate the two firms into one mammoth-sized satellite communications provider.

Speaking exclusively to *Flight Daily News* on the eve of the show yesterday, Viasat’s chief commercial officer for global mobility, Meherwan Polad (*left*), and Inmarsat president aviation Niels Steenstrup (*right*) said it had been “a long 18 months” between initially announcing the planned transaction and finally sealing the deal on 31 May. “We couldn’t engage

with each other until last Wednesday,” says Steenstrup, meaning that many decisions on how the combined entity will operate are only now being taken.

California-based Viasat and UK-based Inmarsat remained fierce rivals in the in-flight connectivity market while the proposed acquisition was scrutinised by regulators. They are now frantically “working

on a 100-day timeline for integration”, adds Steenstrup.

Updates on Viasat’s leadership team will be provided during that 100-day period, although the company has confirmed that it will continue to be led by Mark Dankberg as chairman and chief executive and Guru Gowrappan as president.

Continued on page 3



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## Diehl and HAECO show innovative asymmetric single-aisle premium cabin configuration

**Pilar Wolfsteller**

Diehl Aviation and HAECO Cabin Solutions are exhibiting a full-size demonstrator of their asymmetric premium cabin configuration for sin-

gle-aisle aircraft – four- or five-abreast - in a full-size demonstrator for the first time at AIX.

The cabin promises greater comfort for passengers, and additional revenue for airlines through seat densification.

“For passengers, this means significantly improved comfort,” the companies say. The new cabin design is effective for either application. Because the seats are staggered, passengers do not sit directly behind each other,

and the seats are enclosed in a fixed rear backrest, so that privacy is maintained.

In addition to the new seats from HAECO, a state-of-the-art cabin lighting system, ECO lightweight partitions and Diehl's enlarged overhead bin complete the cabin concept, says Harald Mehring, the German company's chief customer officer.

The concept is easy to install as a retrofit and provides additional overhead space.

Conversion of existing cabins can be done with a standard modification kit, already certified by the Federal Aviation Administration as well as the European Union Aviation Safety Agency.

In an important nod to sustainability, the kit is designed to re-use “the maximum number of parts from the current cabin”, Diehl says.

At AIX, Diehl Aviation is showing off numerous smart solutions, Mehring says. “From touchless toilets to intelligent galley appliances, the company is focused on developing technologies that can optimise the operations throughout the aircraft,” he adds.

Continued from page 1

In the near term, for existing airline customers it will be “business as usual” with “the same great service” from Viasat's IFC solution and Inmarsat's GX Aviation service, says Steenstrup.

“Over time, they will get something better than either,” he promises. Between them, Viasat and Inmarsat have 19 satellites in space spanning Ka-, S- and L-bands, with 10 more coming on stream.

They have more than 60 airline customers and their systems are installed on more than 3,000 aircraft.

“Our focus is to use all those satellites and all networks,” says Polad, adding that airlines should “watch this space” for further details on solutions, which are expected to be clarified “shortly”.

Viasat's aim is to ensure the process of making aircraft that are already equipped with the two companies' individual

IFC systems compatible with the newly-combined entity's assets is seamless.

“What they have [installed] is going to continue to operate and we're going to do everything to make sure the path to upgrades and combined networks is as simple and seamless as possible,” notes Steenstrup.

He emphasises that Inmarsat's GX distribution partners “shouldn't be worried” by the London-headquartered firm's

takeover by Viasat, which sells its IFC solution directly to airlines, noting that “we're tight with our partners”.

News of the acquisition has been “extremely well-received” by existing airline customers, says Polad. He adds that airlines have “asked multiple times” in the past if the two satellite companies could combine their assets.

All IFC services going forward will be branded as Viasat.



# Ice to see you

Guest Mat Cleaver of Air New Zealand looks like he nose how to have a good time as he samples the products of Milk Made Ice Cream Shop - represented by Gabby Wieboldt - at last night's welcome party that followed the Passenger Experience Conference. The event, held on the eve of AIX and WTCE, gives delegates the opportunity to make new contacts and renew old acquaintances.



Photography: BillyPix

# The 'myth' of seamless travel

**Kerry Reals**

Seamless journeys are a "myth" and airlines should focus on making the seams as smooth as possible rather than seeking to eliminate them, delegates attending yesterday's Passenger Experience Conference were told.

In a keynote speech entitled 'Debunking the Seamless Journey', Eric Bogner, executive creative director at design company Teague, acknowledged that "there will always be seams" along the way when travelling by air. With true seamlessness "unachievable", Bogner's advice to airlines is

**Bogner: Passenger experience must always take centre stage**



to instead concentrate on reducing friction points and ironing out the creases that can lead to negative passenger experiences.

As if to illustrate his point, two members of the audience spoke about the 2h delay to their flight from London Heathrow to Hamburg due to a technical issue with the aircraft, while one of the panellists - George Land, executive director of sales at Hybrid Air Vehicles - pointed to the shorts he was wearing on stage and explained that his baggage had been lost en route to the show.

The passenger experience must always take centre stage, says Bogner, and this extends beyond the aircraft cabin to cover the entire door-to-door journey. Airlines must, therefore, focus on "stitching together" different elements of the travel experience. "Most passengers don't know when the



**Land (centre): Lost luggage**

responsibility of one company ends and another begins," he observes, adding that airlines should take a more holistic approach and look to work in partnership with other modes of transport.

As an example, he points to the potential for airlines to smooth the seam

associated with passengers waiting for baggage after a flight by partnering with car rental companies and arranging for luggage to be sent straight to their hired vehicles. Such an arrangement "could be a new seam of the intermodal journey", says Bogner.

## Safran's Rave move to help accessibility

Safran Passenger Innovations (SPI) has added a dedicated RAVE OS Accessible Mode to make its inflight entertainment (IFE) system more accessible to passengers with vision, auditory, and motor function difficulties. Neurodivergent passengers and those with cognitive disabilities will also find the system easier to use.

SPI says it took a blank sheet approach to this development, collaborating closely with customers, particularly those with existing accessibility programmes. SPI could therefore access

dedicated specialists from industry advocacy groups to assist with the programme.

The RAVE OS Accessible Mode helps each passenger personalise their mode via a series of questions. Options include language selection, a screen reading function for passengers who are blind or have low vision, filtering to show only content with audio descriptions, theme colour selection for passengers with low vision or colour-blindness and text based or image-based navigation to help users with cognitive disabilities to

operate the system with greater ease.

RAVE OS Accessible Mode's menus are large buttons with either large high contrast text or icons, depending on passenger preference. Entertainment guide pages use large icons with high contrast text with large touch areas with minimal steps to launch content. Passengers needing assistance, such as a cabin attendant call, will find settings on every screen in the same prominent location, making their call for assistance or change of menu options more straightforward.

# DEPARTURES

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A B C 5 2 9

A B C 7 1 0

A B C 0 2 1

A B C 4 2 6

DESTINATION

H E A R T

D R E A M S

P A S S I O N

L O Y A L T Y

TIME

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0 8 : 0 0

0 8 : 3 5

0 9 : 1 0



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# Bucher's seven decades of reliability

**Murdo Morrison**

Bucher is famous for its galleys but the Swiss family company, which is celebrating its 70th birthday, is unveiling two other cabin products at AIX – a baby bassinet and a cabin class-divider.

The SkyBassinett has a patented folding mechanism that, according to Bucher, means it can reduce to the size of small handbag – a 50% storage space saving on rival products. The company showed a prototype at last year's show, but this version is market ready, says chief executive Beat Burlet.

Bucher says it has designed the cloth and aluminium class divider to be adjustable for use on

any aircraft. It is available in a range of colours to suit the customer's brand. Burlet says it will be attractive to airlines who want a simple solution to creating a visible border between areas of the cabin.

Also on display on Bucher's stand is the third generation of its ARTICart, a thermally insulated service trolley that does not require active cooling. It also comes in a "half-size" version. Bucher says the design means food and drinks stay at a constant chilled temperature for 20 hours. Two airlines are trialing the product, says Burlet.

Galleys, however, will be part of the stand. Bucher is displaying a galley from its production line, which comes with an OLED monitor on the



How it began: an early Bucher galley

Bucher

back wall that allow airlines to present branding and product advertisements during the flight.

Bucher, based near Zurich, began building galleys for Swissair in the 1950s – founder Heinrich Bucher was a master plumber who had worked for the national carrier before branching out on his own.

Although it has diversified into other areas of the cabin, galleys remain the company's signature product. In December, Bucher announced its latest contract, to supply galleys for German leisure airline Condor's Airbus A330neo fleet.

Bucher established its reputation in the 1950s and 1960s by replacing the heavy wood and steel galleys of the time with lighter aluminium constructions, and says today that it makes its galleys from two-thirds aluminium.

Burlet admits that competition and the sluggish recovery of the widebody sector from the Covid-19 crisis means the galleys market "has

been tough for a while". The company has focused largely on A330 and Boeing 777 galleys. However, Burlet says Bucher has "a good customer base who tend to return".

Like many aerospace suppliers, Bucher is "working at ramping up capacity" after fallow years in 2020 and 2021. It employs 150 at its main factory in Switzerland, as well as 55 in Germany and 30 in the USA, where it also has a small development and component manufacturing operation.

The Alpine nation may not be the cheapest place to manufacture, but Burlet, who is the third generation to run the business, says the country's reputation for quality and the high standard of its engineers and shopfloor workers will always help products to sell.

Bucher's mission "was and still is to make products lighter and more reliable", says Burlet. "Innovation is deeply rooted at Bucher and has contributed significantly to the company's long existence."



The bassinet can fold to the size of a small handbag

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# IMAGINE



# Caynova gets the temperature right

**Bernie Baldwin**

Caynova and Lufthansa Group have launched a heating and cooling system for seats in premium cabins, to give each passenger a tailored temperature environment.

“The idea is individualism, having your individual seat comfort as you like,” says Cesar Uparela (left), chief commercial officer, Caynova, which claims to be the only supplier “with this feature in this

particular market”.

Business and first class passengers usually know about such thermal features from their cars, but on aircraft they miss the level of comfort and customisation. “That’s why we aim to achieve the highest level of well-being to serve our customers – airlines and seat vendors,” Uparela adds.

While heating systems are well understood, cooling comes mainly from the ventilation system, Uparela explains. “We have a small, strategically placed, air moving device

which rotates in a specific direction, so that the air can be pulled out from the seat stack and extract the moisture and warmth that builds when you’ve been sat there for some time. That creates a cooling effect from the passenger standpoint.”

Kai Peters (right), head of customer experience design at Lufthansa Group, says the system is a co-creation, the airline working with Caynova to find the right materials and the right solution. “It’s natural that there is not one temperature that fits



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all,” he says.

The system will feature on all Lufthansa aircraft fitted with the airline’s new Allegris premium cabin.

Although Caynova has developed the system initially for Lufthansa, the technology could be available to other customers, says Uparela.



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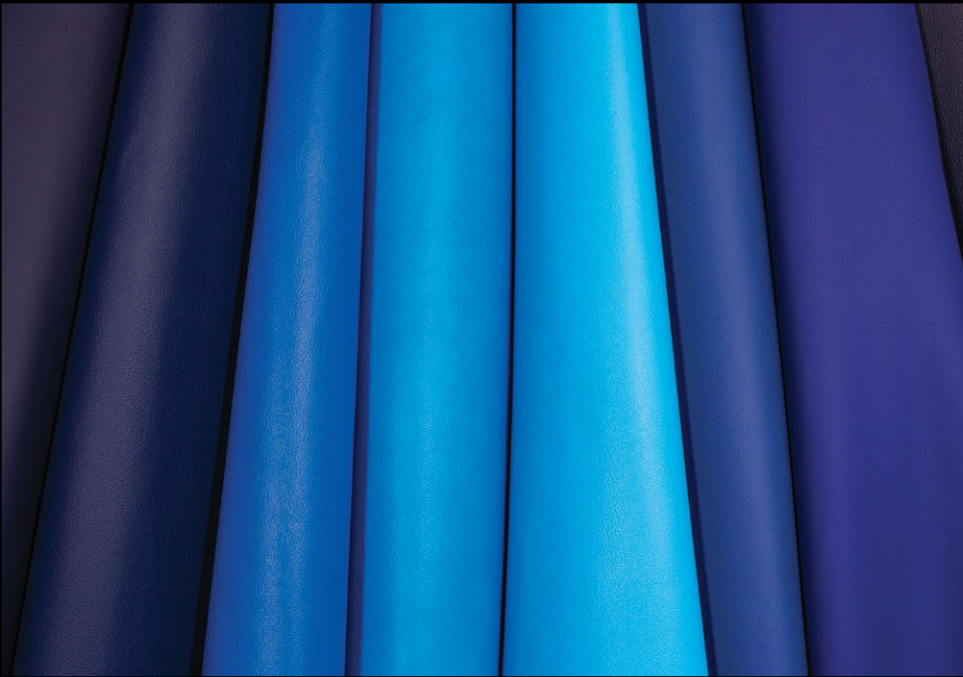
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# Make it count on carbon

Jon Hemmerdinger

The aircraft interiors sector is increasingly conducting complex “lifecycle analyses” of its carbon output as a means of putting numbers behind sustainability – although some of these models can be less than reliable.

That was the message from a session at yesterday’s Passenger Experience Conference.

“Measuring sustainability is complex rather than complicated,” Boeing Commercial Airplanes regional director of cabin marketing Brenna Wynhof (*pictured*) said.

Lifecycle analyses, also called lifecycle assessments, typically involve

manufacturers auditing their own operations and those of their customers and suppliers to measure negative environmental effects posed by products.

The studies aim to evaluate sustainability through a product’s entire life, from production, to use, to disposal. The reports track, for instance, the amount of water and electricity used during production, the source of that electricity, how waste is processed and a product’s potential for being recycled.

The studies allow companies to better understand how they can improve sustainability, says Wynhof. She notes that aerospace manufacturers historically have focused on reducing weight,



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up 12 other environmental performance measures... and then it doesn’t wind up being the true sustainable alternative,” says Wynhof. “You really... need to be looking at the macro lifecycle... from once you manufacturer it, to end-of-life recyclability.”

However, such studies are anything but perfect. Because, for instance, renewable energy availability can wax and wane based on weather, lifecycle assessments must include assumptions.

“You have to build a model – and recognise that all models are wrong, but some are useful – and work on improving your assumptions,” says Chris Brady, chief executive of Unum Aircraft Seating.

which has the benefit of translating into less fuel burned. But that singular aim can have unintended side effects, she says.

“If you focus on weight, you might be screwing



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PL3810 sets a new benchmark, says Recaro

# Recaro means business

**Pilar Wolfsteller**

German seating specialist Recaro has unveiled its new PL3810 premium class seat, and is featuring a new business-class cabin concept at AIX.

In addition, the Schwaebisch Hall-based

firm is showcasing a range of smart technology and sustainability initiatives, with the goal of providing the industry with more durable and environmentally-friendly products.

The PL3810 premium class seat, the company says, “sets the benchmark for premium travel”, with

the “R Horizon” concept featuring a business class seat with integrated smart cabin technology. Visitors can experience both first hand at the show.

“The PL3810 is the result of comprehensive market and observational research, as well as global trends and our extensive experience as a leading supplier in the

premium segment,” it says.

Some of the seat’s amenities include a single-plate table, a wide centre armrest, six-way adjustable headrest as well as a recline with calf-rest. “Privacy wings” add to the seat’s attractions, allowing the passenger to “own their space”. It also offers a weight advantage of 10% over its predecessor.

Recaro’s R Sphere seat, also on display, has been developed with lightweight, recyclable materials including cork, wood, fishing nets and cactus.

The company is also presenting the newest version of its Sprint seat, which it can deliver within eight weeks of order. It’s generated “significant interest, especially with leasing airlines”, Recaro says.

**See Feature P38**

Recaro

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Wood: Aviation needs to defend itself

# Cabin sector must confront carbon challenges

**Jon Hemmerdinger**

The industry's carbon reduction challenge is an "existential issue" that involves making passengers aware of their responsibilities without compromising on freedoms, the Passenger Experience Conference audience heard yesterday.

"It's really about creating

that awareness [with passengers], in a thoughtful and respectful way, while at the same time giving customers choices," said Rick Salanitri, president of Delta Flight Products.

Another speaker urged the aviation industry to remind the world that its carbon footprint is small compared with that of other industries, such as factory farming.

"I think airlines are really bad at defending themselves, because they are not as bad as some other things," says Christopher Wood, a longtime consultant who now runs Flying Disabled, which advocates for aircraft cabins to be more accessible to disabled people. "The aviation industry needs to put someone front and centre

to defend itself."

The interiors sector is aiding the broader airline industry's decarbonisation efforts partly by shaving weight off cabin products and by seeking to make greater use of recyclable materials.

During the session, Raymond Kollau, an analyst with research consultancy TrendWatching, highlighted stark statistics about aviation's carbon footprint.

A return flight from Berlin to London, for instance, spews 0.6t of CO2 per passenger - about three times the carbon saved by recycling in a year, Kollau says. An aircraft flying roundtrip from London to San Francisco, meanwhile, leaves about 5.5t of CO2 in its wake, equal to twice the amount of carbon coming from an average family car over two years, Kollau adds.

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# eVTOL for the people

**Kerry Reals**

**E**lectric vertical take-off and landing (eVTOL) aircraft start-up Joby Aviation is hopeful its in-development air taxis will eventually be used by the masses and not be reserved “just for the elite”.

Speaking on a panel at yesterday’s Passenger Experience Conference, Joby’s design and experience lead, Adam Wells (*pictured*), said that, if successful, air taxis “could dramatically increase the amount of times large numbers of people fly”.

Joby intends to flight

test two eVTOLs at Edwards Air Force Base in California in the first quarter of next year, ahead of planned service entry in 2025. Over time, the start-up plans to make “dozens, then hundreds, then thousands” of eVTOLs, says Wells.

While the air taxis “may start as a premium product”, Wells says he hopes they will “not just [be] for the elite” in the long term.

“Our longer-term ambition is to save time for as many people as possible,” he notes, adding: “Every time I’m stuck at a traffic light, I think this can’t happen soon enough.”

Another start-up aiming to revolutionise the way

people travel is Hybrid Air Vehicles (HAV), which is developing the Airlander 10 hybrid airship.

Addressing the Passenger Experience Conference, HAV executive sales director George Land said that by the end of this decade its 100-seat hybrid-electric air ships with “lower carbon emissions” could be transporting passengers across cities and landscapes in “very large, spacious cabins”.

“Originally, our engineers wanted a small cabin because it’s nice and cheap and it resembles what people experience on aircraft,” recalls Land. While HAV “nearly went

down that route”, he appears glad that air ship passengers will not experience the sometimes cramped conditions associated with aircraft cabins.



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The airframer presented its ideas for the cabin of the mid-2030s ahead of the show, where technology and smart systems will transform the passenger experience and boost sustainability

# Flying into the future

**David Kaminski-Morrow**

**A**irbus has unveiled the central pillars for shaping future aircraft cabin interiors from 2035, focusing on achieving sustainability through smart systems and biomimicry, while not compromising on passenger comfort.

The airframer says its Cabin Vision 2035+ aims to use biomimicry to design lightweight internal structures, and harness traceability to recycle and re-use materials including polymers.

It has proposed new concepts such as pre-ordered catering – either collected by passengers before boarding or, for long flights, stored on board – to offer greater choice to travellers, and reduce food waste, while enabling galley structures and trolleys to be removed from aircraft.

Airbus says decarbonisation and circularity lie at the “heart” of the vision, which it has developed through co-operation with industry



Airbus says circularity and carbon reduction lie at the heart of its vision

representatives including 10 airlines and eight technology firms.

Cabins contribute some 10-20% of aircraft environmental impact, depending on whether the airframe is single-aisle or twin-aisle, says Airbus head of cabin marketing Ingo Wuggetzer, speaking just ahead of AIX.

He says the industry needs sustainable cabin design but points out that passengers also want comfort. Wuggetzer adds that transparency for passengers regarding their individual environmental footprint is important, stating that they can be

sceptical about carbon offsetting in their fares.

“People don’t trust what happens to their money,” he says.

Airbus’s vision is founded on technological cores. Wuggetzer says there needs to be a “paradigm shift” to optimise product decision across their entire lifecycle, and that this requires digitalisation and end-to-end data.

Lightweight interior structures, capitalising on bionic design and biomimicry, could achieve a 40% weight saving on current equivalents and contribute significantly to decarbonisation.

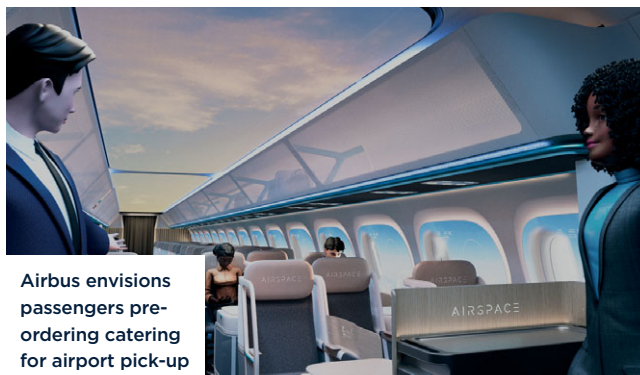
Wuggetzer gives the example that analysis of structures found in a mushroom, and using these to explore a large number of possible versions, can produce lightweight solutions which “no human being would have thought about”.

Circularity in material use is the “hardest to achieve”, says Wuggetzer, but he says that a new sidewall panel concept explored by the airframer uses the waste from A350 carbon production. The panel is 18kg lighter.

Wuggetzer says the cabin vision foresees the use of materials which can be “recycled endlessly”, but acknowledges that the industry “needs to get better at this”.

Lufthansa Group, Air New Zealand, and Delta Air Lines are among the carriers involved in the consultation process, along with established technology firms, such as BMW, and start-up companies.

Airbus plans to give more details during the show this week.



Airbus envisions passengers pre-ordering catering for airport pick-up



New cabin interior concepts would use lightweight structures and remove galleys

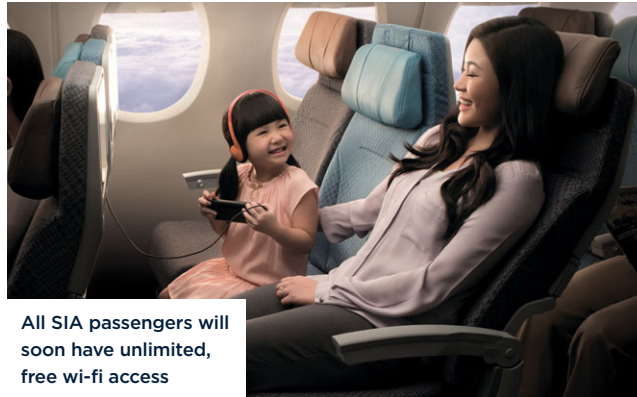
# SIA offers wi-fi for all

**Murdo Morrison**

Singapore Airlines (SIA) has become the latest airline to extend free wi-fi access to all passenger classes. The offering will be available on almost all of the carrier's 136 aircraft, except seven Boeing 737-800NGs from 1 July.

To access the service, passengers must be members of SIA's KrisFlyer programme and input their details at point of booking or check in. Passengers can also sign up for membership during a flight.

Yeoh Phee Teik, senior vice-president customer experience, says the move means almost all the airline's passengers will



All SIA passengers will soon have unlimited, free wi-fi access

be able to stay connected at 36,000ft. Previously, it offered economy and premium economy passengers complimentary three- and two-hour wi-fi surf packages.

"In today's hyper-connected world, high speed in-flight wi-fi

connectivity is one of the most important requirements for our customers," he says. "Giving them access to free unlimited wi-fi is yet another milestone in SIA's continuous effort to offer an exceptional end-to-end travel experience."

## FLIGHT DAILYNEWS

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## Lufthansa Group: World premier for Caynova's HCS

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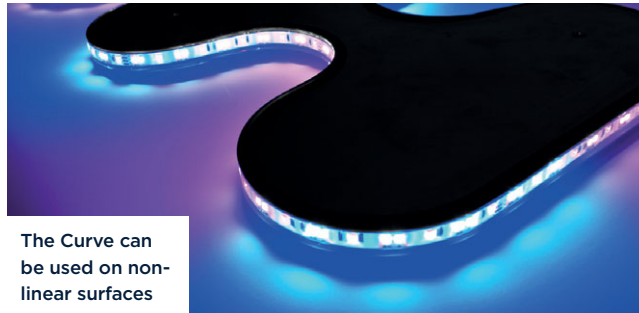
# STG's light touch enhances ambience

Murdo Morrison

After trailing the innovation at last year's show, cabin lighting specialist STG Aerospace is launching its "dynamic lighting" line, The Curve, securing an "OEM application" on a widebody platform.

Customers can use the product to enhance their on-board branding, from a "Northern Lights effect over a bar front to a pulsing light on a footwell", says STG.

The UK company says the product addresses a "trend for more rounded cabin forms", as it bends to fit the geometry of an aircraft's interior. STG says The Curve's 30mm convex



The Curve can be used on non-linear surfaces



STG's LiTeMood system on board Azores Airlines

and 50mm concave bend radius is the tightest on the market.

"The product can build layers of ambience in cabins where fixed, linear lights no longer meet the geometric requirement or aesthetic standard," says Cwmbran-based STG.

It adds that its "small footprint" 6mm x 15mm dimensions means airlines

can use it on a range of monuments and other locations. Just one byte of data is required to launch a light sequence.

Last month, STG announced it was supplying its LiTeMood cabin lighting system to Azores Airlines' for its Airbus A320 family fleet.

The lighting portrays "the unique natural beauty

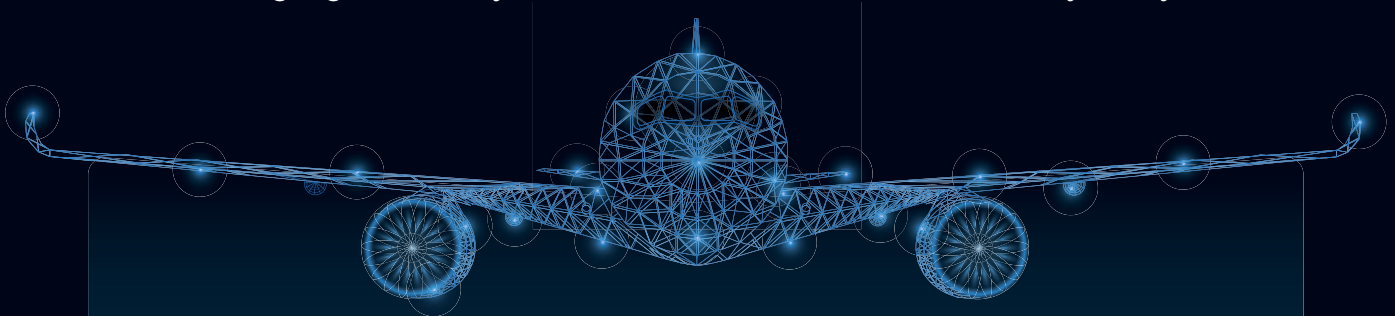
of the Azores islands throughout the cabin with an extensive blue and green palette", says STG.

It says mood-enhancing lighting is "critical to making passengers comfortable on long-haul flights". Azores Airlines connects the islands group with Boston, New York and Toronto as well as Lisbon and Paris, using an A321LR.



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# Collins adds to Elements customers

**Murdo Morrison**

Collins says it has secured at least two more customers – including its first retrofit deal – for its latest Elements business class suite after Starlux and Etihad began flying it on their Airbus A350 and Boeing 787 fleets respectively from early this year.

Launch airline Starlux will have the versatile seat – which adapts into a first class product – on 16 Dreamliners due to deliver through 2027. Twenty Etihad 787s will eventually feature Elements.

Taiwan-based Starlux's aircraft are configured with 26 business class



Taiwanese carrier Starlux is flying the product on A350s

suites, each with a door, 48.5in (1.23m) walls, and an inward-angled “halo” design that Collins says adds to the passenger’s “elevated sense of seclusion”.

Four first class suites in the cabin’s front row come with 60in walls, a wardrobe closet, 32in screen and minibar.

The Raytheon-owned supplier says that, with an industry-wide trend away from first-class, the enhanced front-row product allows airlines to offer an upgraded experience to loyal or VIP business class passengers without creating a separate cabin, or sacrificing seat density.

Elements is a “highly bespoke” evolution of Collins’ decade-old Super Diamond seat, and the design philosophy behind it was “getting more out of the available space” together with enhancing privacy, says vice-president of sales & marketing for Collins’ seating unit Alastair Hamilton.

Starlux’s business cabin also features Secant luminous panels, from Collins’ cabin lighting business. Using micro-LED technology, these allow airlines to project video content and imagery onto surfaces such as internal bulkheads, turning them into “a dynamic illuminated canvas”, says Collins.

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# JETMS's big idea



The new hangar in Kaunas

## Lithuanian MRO wants to break into large commercial cabin market

### Kerry Reals

**A**via Solutions Group (ASG) subsidiary JETMS is expanding into the large commercial aircraft interiors market, in response to what it says is growing demand for high-quality products.

The maintenance and interior solutions provider, which until now has focused largely on business, regional, and specialist aviation, has decided to extend its services to commercial aviation, with a primary focus on aircraft interiors. To support this expansion, JETMS is opening a new 7,000sq m (75,300sq ft) hangar in Kaunas, Lithuania.

JETMS chairman Gegams Hanamirjans says the decision to enter the commercial aviation market is in response to growing demand for high-quality commercial aircraft interior solutions.

"We have brought together a team of commercial aviation experts with over 30 years of total experience, therefore we're entering this market with confidence and industry know-how," says Hanamirjans. "Over the years we managed to gather an incredible team of dedicated professionals with a broad range of expertise in performing aircraft maintenance, interior and exterior modifications, and manufacturing aircraft

cabin components."

JETMS has more than 350 employees.

The new Kaunas facility will enable JETMS to design and produce cabin interior components for both passenger and cargo aircraft, as well as offer engineering modifications, in-house engineering services and customised solutions, says the company. JETMS has been investing in "cutting-edge technologies", including CNC and milling machines, to "guarantee efficiency and high-end results".

JETMS is owned by fast-growing ASG, which recently relocated its headquarters to Dublin from Vilnius. The company, which is also the parent of wet-lease operator

SmartLynx, Avion Express, BBN Airlines, VIP transport provider KlasJet and cargo specialist Magma Aviation, has a fleet of 173 aircraft. The group also provides other aviation services, including maintenance, repair and overhaul, pilot and crew training, ground handling and other interconnected solutions.

ASG also has facilities in Vilnius and at London Biggin Hill, where it bought a hangar formerly occupied by Bombardier before the Canadian manufacturer moved into a larger facility on the site. ASG will share the hangar with Jetex and will use it to house aircraft painting and completions specialist RAS Group, which the company acquired in 2021.

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After emerging as a new name in the sector at last year's show, Unum has finance in place, products on display and is poised to launch production

# Ready to deliver



The company has its supply chain approved

## Murdo Morrison

Following its debut last year, seating's newest name Unum has returned to AIX to unveil a second version of its business class product, as it prepares to step up from development phase to production. The business – which in August will move from a studio in Weybridge, Surrey into a factory near London Gatwick airport – is in the final stages of regulatory approval for its herringbone-configuration Unum One and the latest, forward-facing Unum Two.

In February the start-up – founded three years ago by former Acro boss Chris Brady – secured fresh investment from Origin Capital and the Low Carbon Innovation Fund 2. While he will not disclose the amount, Brady says it is enough to finance Unum through the first stages of manufacturing. Speaking ahead of last year's AIX, Brady admitted he needed £4 million (\$5 million) on top of £1 million already raised to begin production.

Unum's latest launch is based on the same architecture as the 21.5in (546mm)-wide, lie-flat Unum One it unveiled at last year's AIX. However, instead of a diagonal, or outward-facing herringbone layout, Unum Two is based on a staggered, forward-facing configuration, that also gives passengers direct aisle access. Both products use a patented "Scimitar" seat-track recline mechanism, allowing a zero gravity seating position.

With lie-flat seats now ubiquitous on twin-aisle aircraft, Brady says the two products will allow it to cater for the entire market. "Herringbone probably covers 65% of the installed fleet, but staggered, forward-facing is still popular with many airlines," he says. Unum is showing five seats in total at Hamburg. Along with the Unum Two, there are four variants of the Unum One: centre and window seats for widebodies, a version for narrowbodies, and a higher-density design.

Brady is aware that setting up to compete with long established giants of the industry, such as Collins, Recaro, Safran and Airbus-owned Stelia, comes with challenges. However, he believes prospects for the business class market are strong, despite it still being in post-pandemic recovery. "There has been a huge uptick in cabin spend by airlines, and business class yields are at near record levels," he says. "We have a lot of confidence in the long-term future of business class."

He admits that while Unum's seats weigh less than many rival offerings on the market, the design itself is not revolutionary. Instead, Unum plans to position itself as a manufacturer of reliable and comfortable seats that can offer "short lead times and attractive prices". At a time when delays in the delivery of seats has caused OEMs to pause aircraft deliveries, this could be a major advantage, believes Brady.

Not that Unum will be seeking major line-fit orders. Although it has yet to announce a customer, the



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company will focus on the retrofit market and on secondary airlines who may feel overlooked by some of the larger seating manufacturers. He says that producing 50 seats a month “would be a comfortable level for us” over the first 10 years of business. “There are enough airlines who are unhappy with their current vendor to support that,” he says.

Unum has had its share of hurdles during its first three years. Set up by Brady and a handful of former colleagues after a non-compete period with the new Chinese owners of his previous firm Acro ended in 2019, the business had barely got off the ground when Covid-19 hit. Then the UK’s exit from the European Union – after a transition period following the 2016 vote – meant the Civil Aviation Authority took over the regulatory role of the European Union Aviation Safety Agency.

This, says Brady, slowed the process of getting the seats to market. Despite a CAA pledge to be exporter friendly and Unum contacting the agency in October 2021 to explain its aim to certificate a family of business class seats, months went by without a response. After asking for a progress report in November last year, the CAA told Unum in April that it still did not have an exact date for adopting standards that would allow the company to certificate its products in the UK.

In spite of this, Brady is confident that both seats will receive approvals before the end of the year, and, with an audited supply chain now in place, he feels ready to move

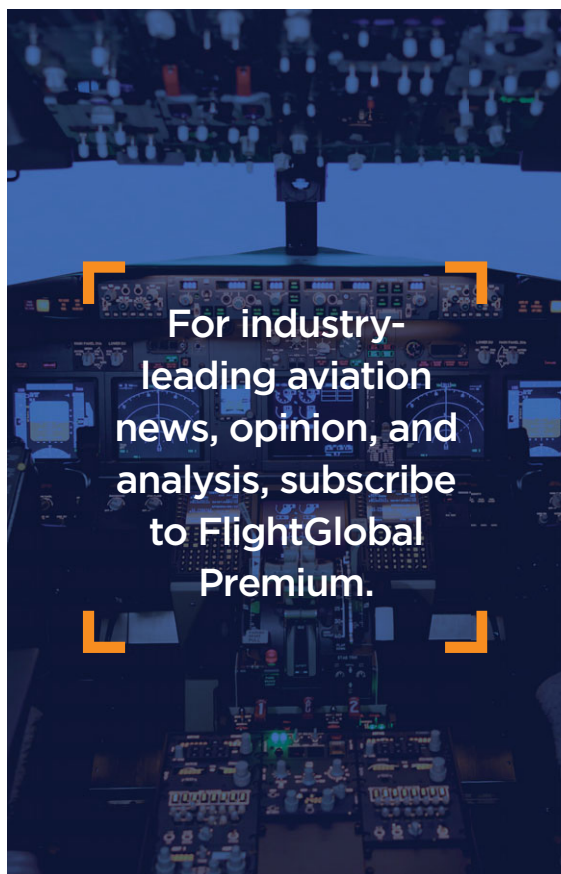


Unum is displaying its seats at this year’s show

Unum

into the 1,400sq m (15,000sq ft) factory on Crawley’s Manor Royal industrial estate, and begin recruiting a larger team. He expects some to be former Acro employees who remained in the area after that company’s new owners relocated the business to Northamptonshire.

While that first customer has still to emerge, Brady expects airlines visiting AIX to show plenty of interest in the Unum seats. While at last year’s AIX the company was still very much in start-up mode, displaying a concept and talking up its ambitions, this time its stand will have “seats you can actually sit in”. Equally importantly, with finance and a factory in place, and approvals pending, the company, says Brady, is now ready to deliver. ▶



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Despite the impact of the pandemic, the German seating manufacturer has continued to make major investments over the past three years, which it says has helped it emerge as a stronger business



Iberia

The CL6720 on one of Iberia's A350s

# Recaro's rebound

## Murdo Morrison

For many aerospace suppliers, the arrival of Covid-19 meant hunkering down, preserving cash, cutting overheads, and simply hoping to survive. For Recaro Aircraft Seating's chief executive and shareholder Mark Hiller it was the perfect time to invest – or at least not backslide on product development and infrastructure commitments in place before spring 2020.

"We were determined to stick with investment plans during the pandemic," says Hiller, who is once again fronting the German company's presence at AIX this week. "We also decided not to reduce headcount in Germany so we could keep the knowhow that we had spent so long building up. Our intention was to emerge strong after the pandemic."

The biggest spending decision was to go ahead with a €50 million (\$53.5 million) test centre opposite its headquarters and main

**Hiller expects Recaro to return to 70% of pre-crisis revenues this year**

production plant in Schwaebisch Hall, near Stuttgart, which opened in September 2021. The building, which houses a crash test facility and a flam lab, allows the privately owned business to carry out more of its product development and evaluation in-house.

Hiller's decision to hold his nerve when others were scaling back appears to have paid off. Recaro's post-pandemic recovery has been impressive. Just

ahead of AIX, the holding group (which also includes rail and gaming seating businesses – automotive and child seating is licensed to other companies) announced a record 55% hike in revenues for 2022 to almost €425 million (\$466 million).

However, that was from a low base. Like every supplier, Recaro's revenues dropped sharply after airlines stopped flying in 2020. This year, Hiller expects the firm to return to 70% of pre-crisis levels, which "is no bad thing" as the industry was at risk of "overheating" in 2019. "We are where we were in 2017, but in a good position to grow," he says. "The Asian recovery, for example, has just started."



Recaro



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Recaro's final assembly line at Schwaebisch Hall

Recaro

▶ The investment in the 19,000sq m (205,000sq ft) test centre places Recaro among an elite group of seat-makers that can do their own testing. Hiller believes it has made the company more reactive because designers can obtain instant feedback rather than having to wait for results from external providers. “There is a greater motivation for engineers to become faster and more flexible,” he says.

In addition to the test centre, Recaro in March inaugurated a new final assembly line at Schwaebisch Hall, a €4 million “lean production” project begun in 2017. The effort pushes Recaro towards two of its objectives, notes Hiller. Environmental initiatives such as paperless documentation and smart lighting have made the company more sustainable, while production efficiencies drive down costs.

While Recaro’s “made in Germany” stamp is part of its brand reputation, the company has a global production footprint, with most of its economy products now assembled in plants in China, Poland and the USA, and composites manufactured at a site in South Africa. Its Chinese and US facilities “mirror” each other, and have their own local supply chains, which helps mitigate risk, suggest Hiller.

As well as the head office, Schwaebisch Hall is the engineering and design hub and where Recaro assembles most of its premium seats. While the company established its reputation in economy, it has been making significant progress in business and premium economy since entering this segment in earnest during the 2010s, even though the pandemic hit the widebody market hardest.

Hiller says he has been pleasantly surprised with the strength of the business class market recovery, suggesting the “outlook is good” for the sector. He believes Recaro can become an even bigger player in business class as in economy, where it is arguably market

leader. However, he admits: “We are humble enough to realise that we have to take it a step at a time.”

Successes of late in the business class market include Recaro’s first Asian customer for its CL6720, Air China, which began flying the “mini suite” in January aboard its Airbus A350s. In March, Spanish flag-carrier Iberia became the first to operate a version of the product with sliding doors, on its fleet of A350s, which are equipped with other Recaro seats. Recaro claims the CL6720 is one of the lightest business-class seats.

However, despite its focus on business class, the rapidly recovering economy segment remains Recaro’s biggest market. Among notable recent wins, Cathay Pacific regional subsidiary HK Express began flying the lightweight SL3710 on its A321neos in March as part of a retrofit deal for more than 4,000 seats.

Last year, Lufthansa group ordered 24,000 CL3710s and CL3810s for new aircraft orders and the retrofit of economy cabins on Lufthansa Boeing 747-8s and Swiss A330-300s. Meanwhile, in May, Recaro’s BL3710 entered service on IndiGo’s A321neo, with the Indian low-cost carrier installing the economy seat on its 75-strong A320neo family fleet.

Recaro – which has a history dating back to 1906, and has been making aircraft seats since 1972 – has been diversifying outside aviation. As well as its niche business specialising in seats for gamers, its newest addition, Polish rail seating company Growag, is a 50-year-old entity that produced 26,000 seats last year.

As AIX begins, expect more product innovation from the company. “We always want to be a step ahead. That’s why we invest close to 10% of our revenues into R&D,” says Hiller. However, it is not just about creating impressive products. On-time delivery and operational efficiency are vital too, he insists, especially with the supply chain under such pressure. “It’s about getting the balance right.” ▶

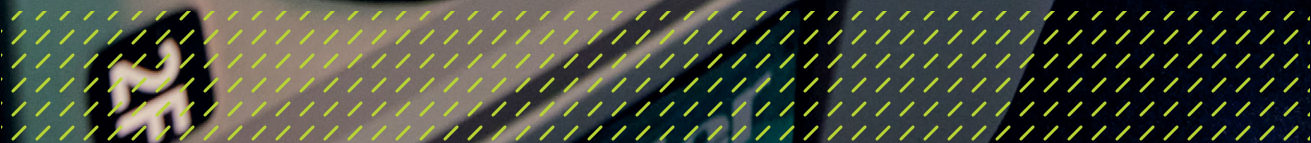




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The German company's chief executive Joerg Schuler is glad to be focusing on growth again. Sustainability, digital innovation and broadening the customer base are among his priorities

# Diehl building back



Diehl Aviation

One emerging sector Diehl is focused on is urban air mobility

## Murdo Morrison

Like many aerospace companies in the post-pandemic era, Diehl Aviation is finding ramping-up as tricky as downsizing was painful. The German cabin equipment supplier is recruiting again as orders return after it laid off a quarter of its almost 6,000 staff in 2021, largely because of a collapse in demand for Airbus twin-aisle aircraft, its core business.

However, new chief executive Joerg Schuler, who took over in November 2022, is delighted that “we are not speaking any more about restructuring, but instead about growth”. The former Airbus veteran is making his AIX debut on the supplier side of the fence, although he knows the event well from his time as head of cabin engineering for the airframer, one of several senior roles he held.

Although he has joined Diehl at a time of expansion, he admits that comes with challenges. “The coronavirus impact was heavy. Our market halved and we were forced to restructure,” he says. “The disease of such a restructuring, of course, is you lose experienced people. We are advertising to try to get people back, but so is everyone else. It is not so easy to restore every competency.”

Under Schuler's predecessor but one, Rainer von Borstel – who retired in 2021 after 11 years at the helm – Diehl Aviation became the largest business in the family run Diehl group.

It followed its 2008 takeover of a former Airbus interiors factory in Laupheim – now Diehl Aviation headquarters – and a galley supplier in Hamburg. Its portfolio spans overhead bins to cabin lighting, galleys, and lavatories.

As part of Nuremberg-based Diehl – whose portfolio ranges from defence products to controls for household appliances – the aircraft interiors arm became a significant tier one player with a customer base skewed significantly towards Airbus. Pre-pandemic, around three-quarters of its revenues came from line-fit contracts from the Toulouse-based manufacturer and its customers.

After the dark months from March 2020 through most



Diehl Aviation

Schuler: We are trying to widen our customer base

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**Diehl's lightweight, compact combined galley/lavatory complex for narrowbodies**

Diehl Aviation

of 2021, that original equipment market is recovering fast, according to Schuler. “Last year we came out of the Covid valley,” he says. “Single-aisle sustained a nice production volume in 2022, and now the widebody market is coming back with China opening. We have a lot of work packages on the A350 especially, so that is very welcome.”

As crises often do, Covid-19 sparked a flurry of innovation in the interiors segment, with much of the focus on enhanced hygiene and measures to prevent the spread of germs. While many of the ideas – such as plastic seat-dividing screens and robotic carts with arms emitting ultraviolet light – are unlikely to survive more relaxed attitudes to human contact – Schuler believes some will.

They include lavatories that reduce the need for touch. Diehl exhibited such a technology, with a toilet lid and seat powered by electric drive and a hands-free flush, at the last pre-pandemic AIX in 2019. The innovation, along with others from Diehl, is an option on Airbus's Airspace cabin concept for the A320neo family, announced in 2017.

Sustainability and digitisation are two other major trends driving new product development, says Schuler. The first is pushing Diehl not only towards coming up with ways to reduce the weight of its equipment but also to source more environmentally friendly materials – such as replacing traditional honeycomb structures with thermoplastic and reusable carbonfibre.

Integrating intelligent devices in its products – a concept known as the connected cabin – gives passengers more control of their immediate environment, from controlling personal lighting to indicating which overhead bins have space available. Airlines can also use them for predictive maintenance.

A long-running corporate ambition that Schuler inherits is increasing Diehl's footprint with other aircraft manufacturers. “We are, of course, trying to widen our customer base. We are already supplying Boeing, Embraer and Gulfstream, but we would like to be more successful on these platforms,” he says.

One potentially emerging market where Diehl has already made inroads is urban air mobility. Last year, Munich-based developer Lilium said it had selected its

fellow German company to collaborate on the cabin design and manufacture interior components for its forthcoming electric vertical take-off and landing (eVTOL) Lilium Jet air taxi. Diehl has also been working with rival start-up Volocopter.

Another aspect of the business Schuler is keen to boost is the aftermarket. He admits Diehl remains a “line-fit-dominated business” with less than 5% of its revenues in 2022 from retrofit. However, he believes that by collaborating with maintenance, repair and overhaul specialists this proportion could rise to a fifth.

This was behind Diehl's tie-up in 2021 with the US-based interiors arm of Hong Kong MRO group HAECO. Under the “project-based partnership” the two companies are “regularly exchanging ideas”, says Schuler. “They are strong in the aftermarket, and they know how to install cabin equipment. That was the biggest attraction for us. It's a nice complementary expertise.”

Last year, Diehl and HAECO announced a trio of products that they are working on for narrowbodies. They were a lightweight, compact combined galley/lavatory complex for the rear of the aircraft that allows airlines to add an additional row of seats; a staggered-seat concept for five-abreast premium-economy seats; and a new, larger overhead bin for the Boeing 737.

In common with almost all aerospace companies, Diehl is confronting a snagged supply chain. “It's a daily fight,” admits Schuler. “There is some recovery but it is not everywhere.” It has meant the company having to “monitor very closely” some of its suppliers, and, while Diehl has avoided major disruptions, “we are often on the edge when it comes to on-time delivery”, he says.

As chief executive, Schuler has two main tasks. One is to ensure Diehl is delivering on innovation in a market where airline and passenger demands are constantly changing. The other is to drive efficiency, hitting production deadlines at a time when supply chains are struggling, and doing it profitably in an era of rising raw material and energy costs.

Schuler sums it up: “We need to be a champion of operational excellence.” ▶

Polly Magraw is director of AIX. She explains what attendees can look forward to at the second post-Covid annual event

# Marketplace to meet

**Q** Last year saw AIX take place in person for the first time in three years because of the pandemic. How does it feel to be back in the annual cycle, and will the event always be held in June going forward, rather than April?

**A** Aircraft Interiors Expo 2022 was a phenomenal event that exceeded all expectations, demonstrating the early momentum for the industry's post-pandemic recovery. We chose a later date in June 2022 to help support this recovery and ensure a successful in-person event. We were delighted to welcome more than 180 airlines, 500 exhibitors, and 12,000 professionals from the cabin interiors industry who were thrilled to be back at the show to source, learn, and network with their peers.

Next year's show will take place from 28-30 May, but we will be returning to our usual April dateline in 2025.

**Q** We've seen a welcome and rapid bounce back in the airline market. How is AIX helping the industry meet the challenges of ramp-up and recovery, and businesses equip for the future?

**A** AIX plays a pivotal role in providing a centralised marketplace for the entire interiors supply chain to come together: it brings airlines, designers, engineers, specifiers, and manufacturers all in one place to collaborate and build the cabins of the future. As such, it is the ideal environment for networking, conducting meetings, building partnerships, and pursuing meaningful conversations to drive the industry forward and continue to aid its recovery.

Meanwhile, the CabinSpace Live seminar programme, dedicated to discussing the cabin of tomorrow and beyond, will once again provide a series of panel discussions led by industry experts and specialists, including lively debates, case studies, and first-time product reveals.

Here, sessions will cover the show's key trends: IFEC, cabin interiors, business jets, sustainability, accessibility, sustainability and more. The winners of the prestigious Crystal Cabin Awards, the top international prize for innovation in the industry, which takes place on the evening of 6 June, will join attendees in the CabinSpace Live theatre to present their innovative designs on stage the following day.

**Q** Sustainability is a key driver across the aviation industry. How is AIX reflecting that, and what other themes do you see as being prevalent this year?

**A** All industries, aviation included, are under pressure to reduce their carbon footprint and we're increasingly seeing exhibitors showcasing their sustainable products and services in response to consumer demands. Sustainability remains a key priority for the show. In fact, it was widely discussed at yesterday's Passenger Experience Conference (PEC) and will be across the three days in the CabinSpace Live theatre. Speakers will look at how the passenger experience community is innovating to reuse, repurpose, and recycle the cabin interior and onboard services.

As for the show itself, we are making changes such as providing lanyards and badge holders made of 100% recycled plastic, while our digital show planning and networking tool, AIX Connect, allows visitor to book meetings with their desired people and companies as well as receive on-site SMS and email reminders, removing the need for printed material. ▶



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Twenty-one entries have made the finals of the industry's most important cabin awards. In a few hours, seven of them will be declared winners. We look at the potentially game-changing innovations in the running

# Crystal class

**Kerry Reals**

Seven finalists will get their hands on one of the most prestigious trophies in the aircraft interiors world during tonight's Crystal Cabin Awards ceremony, which takes place this year at the Hamburg Chamber of Commerce.

Trophies will be handed out to winners in seven categories – one fewer than last year – during a gala dinner inside Germany's oldest chamber of commerce.

A total of 21 finalists will have an opportunity to present their concepts in person to a jury of international aircraft interiors experts as the show kicks off. The winners will be unveiled during a ceremony this evening, attended by the great and the good of the cabin equipment sector.

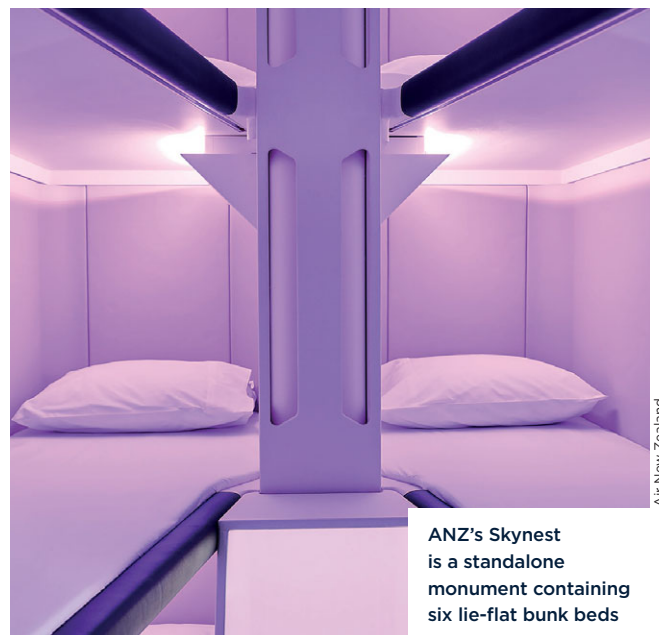
There are seven categories this year, compared with eight in 2022, because the Cabin Systems category has been combined with the Materials and Components category to make a single Cabin Systems, Materials and Components grouping.

The seven categories in this year's Crystal Cabin Awards are: Cabin Concepts; Cabin Systems, Materials and Components; Health and Safety; Passenger Comfort; IFEC and Digital Services; Sustainable Cabin; and University.

This year's finalists have produced a wide variety of products and ideas aimed at improving the experience of flying in the future. Innovations that have caught the jury's attention this year range from bunk beds designed to enable economy-class passengers to get some sleep during ultra-long-haul flights, to an air purifying system that mimics pristine outdoor air inside the cabin, to a wi-fi-connected facemask that enables passengers to make in-flight video calls without disturbing their neighbours.

## Cabin Concepts

In the Cabin Concepts category – where entries must show innovation in using space in novel ways – Air New Zealand's Skynest has made it to the final three. Skynest is a standalone monument containing six lie-flat bunk beds, which can be booked by economy-class passengers in addition to their seat for a period of about four hours.



Air New Zealand

**ANZ's Skynest is a standalone monument containing six lie-flat bunk beds**

Billed by Air New Zealand as "the world's first sleep pods in the sky", the bunks are designed to enable passengers on ultra-long-haul flights to "rest, stretch out and boost their physical and mental wellbeing" for a portion of their journey.

Skynest is up against Diehl Aviation's Crew Rest Compartment for Single Aisle Aircraft, which adds a foldable, flat rest space for crew on long-range narrowbodies. The idea is to use the space between the first passenger seat row and the door area for a stowage module with integrated foldable elements, which convert cabin attendant seats into two full-flat beds. The module can also be used as a medical compartment or an area that could be booked by passengers.

The third contender in this category is Lufthansa Group with its Allegris system of flexible seating options, which enables customers to choose from 14 seat types across four travel classes to suit their personal needs. The aim



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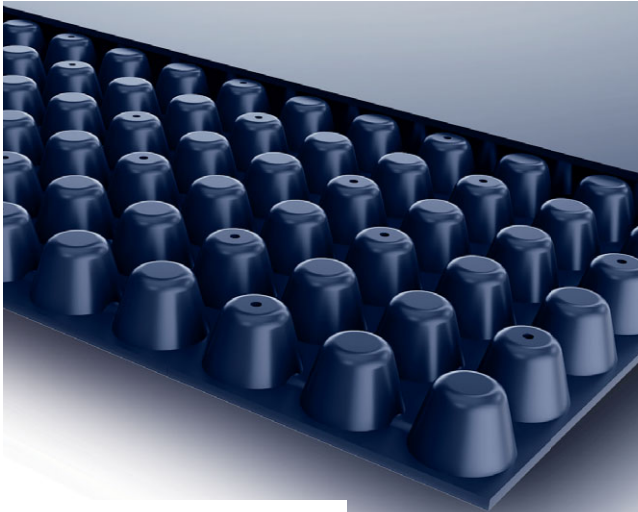
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Collins Aerospace's Q-Tech replaces honeycomb-core panels with acoustic metamaterials

Collins Aerospace

storage space that is 10 times higher than the average IFE server, says Thales. Each blade can be replaced or upgraded depending on an airline's needs.

### Health and Safety

In the Health and Safety category, Collins Aerospace makes another appearance with its Pothos cabin air purifier and deodoriser. The air ioniser solution makes the cabin air quality "mimic and oftentimes exceed pristine, natural outdoor conditions", according to its maker.

"Pothos not only targets cabin spaces where high odour and air recirculation are typically encountered – including lavatories, galleys, gasper air and premium cabins – but can also mitigate volatile organic compounds emitted from engine oil, hydraulic oil, de-icing fluid, fine material particulate, smoke and other malodours," says Collins Aerospace.

Also seeking to improve cabin air quality in this category are CTT Systems with its Humidification Onboard Pure Air system, and Teledyne Controls with its ACES cabin environment monitoring system. The former adds an active carbon filter to existing humidifiers to remove the fumes that enter the cabin during re-fuelling and de-icing on the ground and aircraft bleed air during the flight.

Teledyne's ACES (Aircraft Cabin Environment System), meanwhile, is the first US FAA-certified cabin air quality monitoring solution. By continuously monitoring for potentially harmful contaminants, ACES "enables aircraft operators to verify the health of their cabin environment and determine if and when an air quality event occurs, its scope and severity, and the level of exposure to passengers and crew", says Teledyne.

### IFEC and Digital Services

Duking it out in the IFEC and Digital Services category are: Airbus with its Airspace Link HBCplus flexible satellite-based connectivity solution; AirFi and Iridium with their jointly submitted Low-Earth Orbit (LEO) satellite connectivity system; and Skyted with an

invention that integrates a wi-fi connection into a facemask to dampen the noise of the wearer's speech.

Airbus launched the Airspace Link HBCplus last year. It will be offered as an optional linefit supplier-furnished equipment (SFE) product and also for retrofit on all Airbus programmes, and will initially encompass Ka-band satellite connectivity services. The solution enables airlines to connect to a choice of managed service providers (MSPs) through a new agnostic terminal and radome. Three service providers have been chosen – Safran Passenger Innovations,

Inmarsat and SES – and further

MSPs will be selected when HBCplus extends to offer Ku-band services.

of the system is to allow passengers to "design their own travel experience", says Lufthansa. All seat types will be presented to customers across all sales channels and can be booked at any point from flight reservation to check-in or departure.

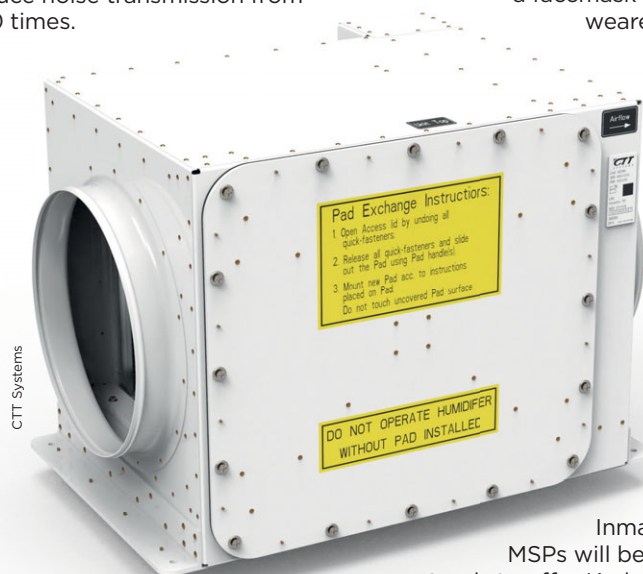
### Cabin Systems, Materials and Components

Competing in the Cabin Systems, Materials and Components category are Collins Aerospace with an acoustic dampening material that reduces noise from the aircraft's engines, J&C Aero with a dual-purpose module that integrates a foldable wheelchair within the crew jump seat, and Thales Avionics with an Onboard Data Centre which uses a system of "blades" to increase storage space on IFE servers.

Collins Aerospace's Q-Tech replaces traditional honeycomb-core panels with highly flexible acoustic metamaterials, which can reduce noise transmission from the engines to the cabin by 10 times.

J&C Aero's Jump Seat Duo can be used both as a flight attendant seat and an aisle wheelchair for passengers with reduced mobility. The conceptual seat can be quickly switched between uses and eliminates the need to carry a separate aisle wheelchair on board.

The third finalist in this category, Thales Avionics, has designed an Onboard Data Centre which revolves around individual blades that share storage and computing capabilities. This results in an aggregated



CTT Systems

CTT's Pure Air system is a finalist in the Health and Safety category

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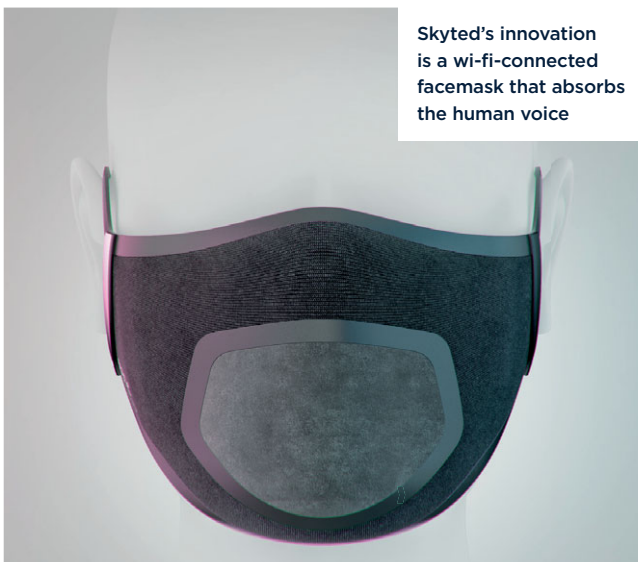
The Collins IntelliSense integrated intelligence system aims to provide insights to improve cabin service and passenger experience



Collins Aerospace

Also competing in the field of satellite-based in-flight connectivity is AirFi in conjunction with Iridium. They have designed a lightweight, non-invasive IFC solution which uses window-mounted antennas to connect with Iridium’s Certus LEO satellite network. AirFi LEO is “the world’s first operational IP-through-the-window IFC solution for the global commercial aviation sector”, says AirFi.

The third contender in the IFEC and Digital Services category is Skyted – a co-operation between PriestmanGoode, Airbus Development, the European Space Agency Accelerator Programme and ONERA. Skyted says it has designed “a travel accessory that will leave you speechless”. It is a wi-fi-connected facemask which absorbs the human voice, enabling passengers to conduct in-flight video calls without disturbing other people or risking confidentiality.



Skyted’s innovation is a wi-fi-connected facemask that absorbs the human voice

Skyted

### Passenger Comfort

Competing for the Passenger Comfort prize are: Adient Aerospace, in co-operation with Boeing EnCore Interiors, with the Ascent Front Row Suite; Airbus with its A350 Airspace Cabin; and Collins Aerospace with its IntelliSense information and intelligence-gathering system.

Adient Aerospace’s entry is a lie-flat business-class seat aimed at the long-range narrowbody aircraft market. The Ascent Front Row Suite features a seat that converts into a bed, along with a companion seat that can either be used by another passenger or as an additional seat when the bed function has been deployed. The suite also features a minibar and library, which share an interconnected space with the galley.

Airbus has made improvements to its Airspace Cabin for the A350, which it says provide more space, choice and flexibility. The new and improved cabin covers a wider cross-section in the revenue passenger areas, with more space at both the front and rear of the aircraft for larger galleys, a flight-crew rest compartment and a new large forward lavatory.

With its IntelliSense integrated intelligence system, Collins Aerospace aims to provide cabin crew with “deep insights” to improve airline operations, cabin service and passenger experience. The system uses an array of cameras, sensors, edge-computed video analytics and deep-learning artificial intelligence to monitor interactions and collect information from objects within the cabin. This data ensures that drinks are refilled sooner, bedding is made faster and faulty equipment is remedied more rapidly.

### Sustainable Cabin

With all eyes firmly focused on what the aviation industry is doing to address its impact on the environment, competition in the Sustainable Cabin category will be fierce. Vying for the top prize are Airbus, which together with Mitsubishi Chemical Group and CTC has developed a BioMat Sidewall Panel that can eliminate the need for



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virgin carbonfibre; Diehl Aviation, which has engineered a cabin lining with integrated vacuum insulation; and Lantal Textiles with its ultra-lightweight Deep Dyed Carpet.

Airbus' entry is a resin made from polyfurfuryl alcohol (Furan), which is produced from by-products of other industries that use biomass, such as the sugar industry. When combined with recycled carbon fibre, the resin can eliminate the need for virgin carbon fibre, while the use of by-products reduces the amount of waste sent to landfill.

Competing against Airbus' new sidewall panel material is Diehl Aviation, which has developed a cabin lining that boasts "extremely high insulation properties at minimal thickness", according to its maker. Applying the vacuum insulation cuts the amount of energy required for thermal cabin comfort and air supply.

The final contender in the Sustainable Cabin category is Lantal Textiles, which has developed digital carpet manufacturing technology that makes ultra-lightweight carpets within days while reducing water and waste in production by 60% and 80%, respectively. Lantal says its digital deep dyeing technology is a world first. While conventional aviation carpets use a slow, energy-intensive yarn dyeing process, the Deep Dyed Carpet can be produced much more efficiently.

### University

The final Crystal Cabin Awards category – University – sees a hat trick of finalists from Delft University of Technology in the Netherlands. All three entries are conceptual lightweight aircraft seats. The first is Team Alba with its Alba Seating Concept, which the designers say is the first human contour-based ultra-lightweight aircraft seat.

Alba is a concept that is "shaped to the human spine, showing the first feasible archetype of a fully netted seating design", says the six-strong team behind it. Weighing in at 7.5kg per passenger, the seat is 17mm thinner than the industry-leading seat and consists of just two aviation-certified, recyclable mono materials, according to its designers.

The Airbus BioMat eliminates the need for virgin carbonfibre



Airbus

Delft compatriots Team Horus will be keeping their fingers crossed that their Horus Lightweight Aircraft Seat has that special something to set it apart from its rivals in the minds of the judges. The Horus seat, designed under the guidance of Embraer, is aimed at the short-haul hydrogen-powered aircraft being developed by the Brazilian airframer. The seat has an estimated weight of 6.1kg and comprises a metal composite frame and a 3D spacer fabric dual-netted backrest. The seat cushion is designed with Octaspring technology by Vanema and is made from a PE foam, which uses 50% less material than conventional PU foam cushions and can be recycled.

The final Delft entry in the University category comes from Thomas Hogeveen and Maartje Ballemans, who have designed a 3D printed cushion that provides support to the human body only where needed. Through this design, "no extra weight is used – only what is necessary", says the team behind it. The TPU cushioning does not need flame retardant coating and can therefore be fully recycled at the end of its life. ▶

**The Crystal Cabin Awards are an initiative of Hamburg Aviation and have been running for 16 years.**



The Alba Seating Concept's designers say it is the first human contour-based ultra-lightweight aircraft seat

Alba

## FLIGHT

## WTCE DAILYNEWS

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# Minding your health

## Murdo Morrison

The aviation industry will learn about a project to raise awareness of mental health in the hospitality sector for the first time today as part of the Taste of Travel programme.

Chefs Adam Simmonds (right) and Matthew Farrell (left) - ambassadors for

the Burnt Chef charity - are cooking up a dish of braised beef with horseradish mash and vegetables at noon.

Food service group AMI is backing Burnt Chef's appearance at WTCE - it offers the traditional English recipe as part of its menu of airline meals, with a proportion of sales going to the charity.

"Supporting Burnt Chef

aligns with AMI's core values," says the company's David Sharp. "This is exciting for us because we want to help."

Kris Hall set up Burnt Chef seven years ago after a bout of mental illness. From a "little organisation in Bournemouth" it has grown to global organisation, with 148 industry ambassadors supporting chefs and other

hospitality professionals as far away as Tokyo, Toronto and Durban, says Hall.

"We want to address the stigma that surrounds mental health, and stops people seeking help," he says. "Eighty-six per cent of hospitality professionals have experienced at least one episode of mental illness so what we are doing comes at the right time."



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How do you increase your impact at WTCE? By clubbing together with two non-competing industry colleagues to buy a bigger stand.

That is what Peter Sekac (centre) of R Glass, Thomas Becker (left) of Damino and Peter Kersten (right) of Ibenä have been doing for the past 10 shows.

The companies are respectively a Slovakian glassware manufacturer, an eastern German supplier of cushions and table coverings, and a blankets manufacturer, also from Germany. Between them, the companies include Brussels Airlines, Luthansa and Swiss among their customers.

“Because we don’t compete, we can share the costs of a larger exhibit and we all help to promote each other’s products,” says Kersten. “We are all friends too, so that makes it easier.”

# Plastic betters

## Murdo Morrison

Drive by airlines to reduce on-board plastic use is behind a range of recyclable and other environmentally friendly consumables from Indian and United Arab Emirates firm Al Salem.

“Customers started thinking about replacing plastics around 2015 and

since then we have been developing our products,” says managing director Jayant Vithaldas Dutia (pictured).

On show on the company’s stand are its new dissolvable and biodegradable hand towels, as well as paper plates and cutlery. There is also a compostable range, made from plant-based material.

Al Salem, which was

founded in 1988 and sells its products under the Double Diamond brand, numbers Emirates, Etihad, Japan Airlines, Qatar Airlines and Singapore Airlines among its customers.

Its portfolio also includes traditional aluminium and plastic products, although Dutia says “We are now very much focusing on sustainability”.





# Power of three



# Pasta glories

If you want genuine pasta, trust a supplier that has been making Italy's signature food for almost a century and a half.

That is the message from Barilla, a Parma-based manufacturer, founded in 1877, that claims to be the world's biggest pasta producer, and has been selling its ready meals and snack products to airlines for slightly less time - it

began in 2019.

On display on its stand are its Bolognese and vegan pasta packs, which it sells to catering suppliers and directly to airlines, according to international key account manager Ece Ozgurel. It also offers snack products under the Wasa brand and cornetti cakes, labelled Mulino Bianco.

Pictured is executive chef Marco Leo.



# Double Dutch

"I don't have one boss," jokes Patrick Den Drijver, sales manager airlines for Beemster. "I have 420."

The reason is that the iconic Dutch cheese brand is a vertically integrated cooperative. That number of farmers in one area of northern Holland raise the cattle, whose milk creates the gouda-type product. Everything from production to distribution is handled in-house, explains Den Drijver.

Beemster is a regular exhibitor at WTCE and supplies airlines including Delta, KLM and Emirates.

The organisation was founded in 1901 and produces 30 million kg of cheese each year.

Sustainability and animal welfare are key to its success, says Den Drijver.

"Our cattle are 100% grass fed and spend 200 days a year outside," he says. Cows sleep on waterbeds and their manure is recycled to provide electricity for buildings.

Den Drijver is pictured (*left*) with colleague Jeroen Verweij.

Polly Magraw, event director of WTCE, outlines what visitors to this year's show can expect

# Appetite for innovation

**Q** What will the highlights of this year's WTCE be? Will visitors see anything new?

**A** Each year, World Travel Catering & Onboard Services Expo (WTCE) strives to match the expectations of our attendees. This means that we need to constantly innovate to bring new ideas to the event that enable airlines to find the latest, on-trend products and services that will set them apart from the competition.

This year, we'll be introducing our new 'Wellbeing Walk-Through' feature where exhibitors, like Elevate Granola, Innocent Drinks and The Humble Co, will display the latest products that can improve a passenger's wellbeing while travelling.

Additionally, the Taste of Travel theatre will host a range of sessions addressing the key industry trends, such as Cuisine Solutions' chef Gerard Bertholon who will lead a thought-provoking demonstration around how plant-based now goes beyond traditional protein preparations.

The What's New Onboard feature will also be a real highlight and will showcase some of the latest product innovations from our exhibitors, including Milk Design, Premium Italia Ghiaccio Facile, NIO Cocktails.

**Q** As the airline market continues its recovery, what are the big trends you are seeing in 2023?

**A** One of the biggest trends continues to be sustainability, with airlines around the world looking for innovative solutions, both in and outside the cabin, that will help support their sustainability strategies and enable them to meet net zero targets. The pressures of adhering to food safety measures and catering for passengers with allergies and intolerances continues to present itself as an important issue, while airlines are adapting their catering options for passengers with cultural requirements, such as the halal market.

**Q** What do you think are the biggest challenges facing the industry?

**A** Legislation and commitments to reducing waste and net zero

are undoubtedly putting increased pressure on airlines and suppliers. With the industry committed to achieving net zero by 2050, the actions that need to be taken cross several touch points and there is plenty to focus on. WTCE will help industry professionals navigate the challenges and identify innovative suppliers that can provide sustainable packaging or unique ways to dispose of cabin waste in a more environmentally friendly way.

**Q** Live interaction, including the Taste of Travel section, is a big part of WTCE. Why do you think this is?

**A** The Taste of Travel programme is always a highlight thanks to the impressive roster of industry experts that take to the stage to discuss and debate the most talked about topics. The live chef demonstrations always draw in the crowds as attendees are presented with the opportunity to see and sample live inflight food preparation for every passenger need, including veganism and halal, as well as those with allergies.

**Q** Why is it important for WTCE to sit alongside AIX? What are the synergies between the two shows and is there much visitor crossover?

**A** By co-locating with AIX, we are providing a unique opportunity for our attendees to explore and further their knowledge of the entire customer journey. Over the three days, passenger experience professionals will benefit from the synergies between the events that enable them to discover innovative inflight entertainment and buy onboard solutions, as well as the latest products from WTCE exhibitors.

Airlines often send large teams to the event, covering both shows, to ensure they see as many of the suppliers and educational sessions that will shape the future of the cabin as possible. This enables their entire team to garner a better understanding of the entire passenger experience industry. We really do provide the ultimate platform to source everything that airline and industry suppliers need inside the cabin. ▶





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Airlines are offloading catering units to focus on flying

# Off the menu

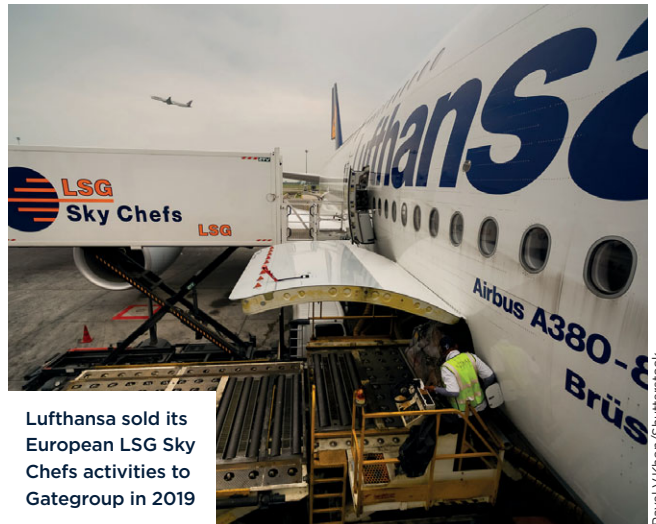
## Kerry Reals

Lufthansa Group's announcement in April that it had agreed to sell its remaining catering business, LSG Group, to private equity firm Aurelius was the latest example of an airline divesting non-core units in order to focus on the bread-and-butter activity of transporting people and cargo.

The LSG Group sale, which is expected to close in the third quarter, followed the 2019 sell-off of Lufthansa's European LSG Sky Chefs activities to Gategroup. The German airline group is also seeking to divest its credit card business and is pursuing a possible partial sale of its maintenance, repair and overhaul business, Lufthansa Technik.

In an interview with FlightGlobal in March, Lufthansa Group chief executive Carsten Spohr said the divestments supported the company's move from an "aviation to an airline group". On announcing the agreement to sell LSG Group in April, Lufthansa chief financial officer Remco Steenbergen said the move "enables us to focus even more on further improving the profitability and capital returns of the Lufthansa Group core business". He added that the group's airlines looked forward to "a continued partnership with LSG Group beyond the sale".

The planned sale comprises all classic catering, onboard retail and food commerce activities, with Europe-based Retail inMotion and USA-based SCIS Air Security Services included in the transaction. Soon-to-be new owner Aurelius says it will "work with the LSG



Lufthansa sold its European LSG Sky Chefs activities to Gategroup in 2019

Pavel V.Khomy/Shutterstock

Group's experienced management team to materialise the growth opportunities that are available to the company".

Lufthansa is not the first major network carrier to sell off its catering business, and it may not be the last. Similar notable transactions in the past include the sale by Swissair in 2002 - prior to its takeover by Lufthansa - of Gate Gourmet to investment firm Texas Pacific Group. Prior to its sale, Gate Gourmet had acquired British Airways' in-flight catering units at London Heathrow in 1997.

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Gategroup bought Air France's Servair in 2017

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Gate Gourmet has since changed ownership again and is part of Gategroup – one of the world's largest onboard catering and retail businesses. Gategroup went on to acquire in-flight catering unit Servair from Air France in 2017.

More recently, United Airlines made the decision in 2021 to outsource its catering operations. The carrier says: "In January 2021, United submitted a request for proposals to consider transitioning our kitchen operations and menu design functions to a third-party supplier. After a

comprehensive six-month review, we moved forward in partnership with three suppliers."

One of those suppliers is Gategroup, which signed a long-term agreement with United in July 2021 to provide food services for the airline at three hubs in the USA. Gategroup will also provide menu design services on a global basis for the airline.

While a clear trend has emerged for airlines to divest their catering businesses, there are notable exceptions. Big name airlines such as Emirates, KLM and Cathay



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Emirates is one of the major airlines that has retained its catering arm

Pacific continue to keep their catering activities in-house. Emirates Flight Catering remains part of the Dubai-based carrier's parent company, Emirates Group, while KLM Catering Services is still a wholly-owned subsidiary of KLM. Likewise, Cathay Pacific Catering Services is a wholly-owned subsidiary of the Hong-Kong-based airline.

The question now is whether other airlines will be tempted to sell off their catering units further down the line, in order to 'stick to their knitting' and focus on their core operations. There is no simple yes or no answer to that question, according to Airline Catering Association (ACA) managing director Fabio Gamba, because there will always be exceptions. However, the number of airlines that do have in-house catering units is dwindling.

"In terms of airlines owning their own onboard catering facilities, I think it's a list that's going to become smaller and smaller," says Gamba. "It's something that I see as resolutely going in that direction but there will be exceptions, at least for the foreseeable future. And we're not talking about small exceptions - we're still talking about a number of major companies. That's why it's so difficult to answer yes or no - it's neither yes nor no."

Prior to the liberalisation of the air transport market, it was "quite normal" for airlines to have their own kitchens, observes Gamba. However, as airlines were gradually freed up to open more and more domestic and international routes, the process of running an in-house catering division became increasingly complicated.

"With the liberalisation of the sector and the multiplication of international routes, this model became

more and more difficult to sustain," says Gamba. "It was becoming clearer to airlines that they would want to focus on their primary business, i.e. to offer a means of transport to passengers from A to B and then from B to C, and that everything else was ancillary, non-core business. As we've seen from the 1990s on, the airlines have had the tendency to outsource everything that was not absolutely core to their business."

As in-flight catering firms have swallowed up airlines' catering divisions and participated in merger and acquisition activity among themselves, a handful of "truly international juggernauts" has emerged, says Gamba.

"From our perspective, that has positive results because then you can really focus on what you're doing and you do not always have to look at your owner and make sure they're happy," he notes. These specialist companies are "more resilient" and are well-equipped to adapt to changing regulations.

"We've seen a lot of developments with regulations with respect to food safety, obviously, but also allergies, cabin waste and what have you," says Gamba. "These came to the fore in the 1990s and afterwards, and you have companies which are better structured to respond to this increased level of legislation and requirements from the authorities."

That being said, he adds, LSG is the "second biggest" in-flight catering provider, despite being part of Lufthansa Group until the sale to Aurelius closes later this year.

"It shows that you can still grow organically while being part of an airline group, so one is not a showstopper to the other," says Gamba. ▶

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