



Finalists selected for Crystal Cabin Awards 2022

Recognising Innovation, Anticipating the Future: Airlines, manufacturers, suppliers and universities among 24 finalists in eight categories

Hamburg, 5 May 2022: It's back to the future! The Crystal Cabin Awards returns in-person as the world's premier event honouring excellence in aircraft cabin design. A jury of 27 aviation industry experts has selected 24 entries for the final round, with the winners to be announced at a special gala dinner on 14 June 2022 at the leading global aviation trade fair, Aircraft Interiors Expo. Eight categories offer a thrilling view on the future of aviation, including new cabin concepts, innovative sustainable technologies, next-generation passenger comfort and pioneering safety features.

Eight Categories, Eight Arenas for Innovation

Cabin Concepts

Every year, the upcoming **Crystal Cabin Awards** are the focus of intense media activity, including reporting outside the industry press. In the Cabin Concepts category, entries must show innovation in designing interior spaces showing novel approaches that use the given space in intriguing ways. In a cooperation with **Finnair, PriestmanGoode and Tangerine, Collins Aerospace** submitted one of the year's most widely discussed entries, AirLounge™. This new business class seat developed for Finnair features seating with a contoured shell design providing passengers more living space and freedom to relax in a variety of sitting or sleeping positions with added privacy. Another entry that provoked wider media interest outside aviation was **Teague** and **NORDAM's** Elevate concept for premium accommodation. Floating furniture is attached to wall braces and combines with inviting materials and contouring to build an organic, homelike space concept that nevertheless allows the same number of seats to be fitted as traditional designs. **i4A's** Smart Space 4 Passengers, on the other hand, focusses on maximising comfort options for the economy class. A hinge mechanism built into the seatback allows the seat in front of a passenger to be opened up to the side, allowing access to the seat for use as a leg rest or stowage area. This allows carriers an additional seat charge option should space be available in front of an occupied seat while offering passengers new ways of adding more comfort to their experience.

Cabin Systems

The inspiringly varied entries in the Cabin Systems category in 2022 show how innovation in the cabin can improve air travel in myriad ways: how it can better address important human needs, improve the integration of media displays and even reduce the environmental impact of the whole aircraft. The possibility of sudden in-flight cabin decompression means that aircraft must carry large reserves of fuel to comply with ETOPS standards. **Caeli Nova** says its new Cordillera emergency oxygen system could save the aviation industry \$500m and 1.2m tonnes of CO₂ annually by opening direct routes over high terrain and increasing the duration that aircraft can fly at high altitudes after a cabin decompression from 22 minutes to over 180 minutes, without any weight or maintenance penalty. Designed by **Airbus Operations GmbH** in cooperation with

Crystal Cabin Award Association
c/o Hamburg Aviation
Wexstrasse 7, D-20355 Hamburg
Tel: +49 40 2270 1928
www.crystal-cabin-award.com



RECARO Aircraft Seating, Flex OLED Kit is a low-weight, wafer-thin HD display that can be placed anywhere in the cabin, including in seatbacks and ceilings for video playback, ambient lighting or to direct passengers through the aircraft. Seeking to end limitations on flying often experienced by passengers travelling in a powered wheelchair, a consortium comprising **Flying Disabled, PriestmanGoode, SWS Certification** and **Sunrise Medical** has designed Air 4 All. The system allows travellers with reduced mobility to slot their wheelchair into a seating space by folding the seat up into the backrest, offering wheelchair users a safe and easy way to travel without being forced to move into a standard cabin seat.

Health and Safety

Safety has always been the prime directive in commercial aircraft design. **Safran Cabin's** Fire Resistant Cargo Container adds an additional layer of protection against fire involving lithium batteries. Thanks to its high-temperature resistant panels and unique door materials, Safran's new device can withstand fire for up to 6 hours, the maximum range an aircraft is permitted to fly from the nearest airport during flight. Meanwhile, the Covid-19 pandemic has shown the vulnerability of aircraft cabins to air-communicable pathogens. Developed in a cooperation between **Pexco Aerospace** and **Teague**, AirShield uses airflow from existing overhead air-vents to create protective air barriers between passengers. Exhaled air is redirected downwards and out of the cabin to the aircraft's filtration units. Hypergamut Light™ by **Collins Aerospace** is a new cabin lighting system attuned to human biology that helps passengers feel more comfortable during and after their flight. Compatible with human circadian rhythms, the system's architecture attenuates blue light in a unique way that helps passengers relax even with the lights on and fall asleep faster on long haul flights. Blue light is added back in prior to arrival to help passengers arrive alert, all without affecting the quality or appearance of the light and reducing feelings of jetlag. The system automatically adapts lighting to adjust to the aircraft's flightpath, time of day, and global positioning.

Passenger Comfort

Premium economy seating is one of the industry's most hotly contested arenas. **ZIM Aircraft Seating's** ZIMprivacy seat manages to increase passenger comfort while also prioritising privacy giving more living space and a heightened sense of personal enclosure. The fixed seat back houses a special recline system offering several different body positions. Its fully mechanical assembly is easier to maintain than comparable electrically powered systems. The accelerating trend to a more personal travel experience is mirrored in Personalized Sound Zone by **Jamco Corporation** and **NTT sonority Inc.** Using loudspeakers built into the headrest, PSZ creates a spherical audio area around the passenger's head where playback is heard by the passenger but is inaudible to others in the cabin. The system achieves this without the need for headphones and audio cables by using wave cancellation to 'build' a sound stage around the passenger. **Collins Aerospace's** SpaceChiller™ offers personal refrigeration for individual passengers or larger parts of the aircraft cabins in a way that was previously not possible using traditional air-cooling technologies. The system provides the luxury of cooled snacks for passengers in a compact device that requires half the power of traditional designs.



IFEC & Digital Services

Digital connectivity is fast becoming a prime concern for passengers who have become used to fast internet access wherever they travel. **Anuvu** and **Southwest Airlines** have designed a new system called Dedicated Space, promising a five-fold increase in available personal bandwidth and a dramatic reduction in latency. Along with faster downloads and uploads, passengers are promised more stable inflight connectivity with the new system. Traditionally, IFE is an area where passengers have come to expect less from in-flight systems than from entertainment equipment in their home. **Thales Avionics** and **Harman** have cooperated to bring end-to-end 4K video quality to aircraft. Optiq is the first QLED IFE display, providing better resolution, colour fidelity and dynamics range, while offering better maintainability for operators. In another product designed to bring an on-ground media experience into the cabin, ACJ Smart Lifi Monitor puts the customer's device centre stage by combining a powerful OLED display with mobile processing power. Developed by **Airbus Corporate Jets** and **Latécoère Interconnection Systems**, the system pairs with customers' personal digital devices which can then be used as a remote control. The Smart Lifi Monitor also offers VOD, live television, moving maps, video conferencing and more, making a wider spectrum of digital services and functions available to aircraft passengers.

Material & Components

The tactile and visual quality of materials and components play a crucial role in passengers' subjective cabin experience. **Thales Avionics** has engineered Pulse, a slim, low-weight power supply unit with dynamic power allocation that lets passengers recharge their device on-wing via USB-A, USB-C or wireless charging. Low power anxiety is one of two major concerns addressed by Smart Lock Door, **Diehl Aviation's** security device for crew handhelds that allows crew to use digital devices behind a screen mounted in a lockable door to keep tablets safe from theft. **Lufthansa Technik's** CabinSHINE maintenance process is designed to make repairing fixtures and furniture up to eight times cheaper and nine times faster than using conventional methods. Offering repair options for a range of cabin surface materials and imitation surfaces, the process helps avoid replacing superficially damaged aircraft furniture by quickly repairing surface blemishes during short overhaul stops.

Sustainable Cabin

Sustainability is the central issue of almost any public discussion about aviation in 2022. So it's no surprise that the Sustainable Cabin category has become a hotbed of activity, with creative submissions that seek to reduce aviation's ecological footprint. Recycling cabin plastics, for example, is an attractive but difficult way to lower ecological footprint. In cooperation with **AkzoNobel**, **Rescoll** and **Roctool**, Swedish manufacturer **Diab** has pioneered a thermoplastics manufacturing process to produce 100% recyclable panels for cabin interiors. The process is faster than methods using adhesive films, with the thermoplastic sheets welded directly to the foam core which, incidentally, offers improved improved acoustic insulation for the finished material. A cooperation between **Lantal Textiles** and **Olivenleder®** have come up with Sustainable Genuine Leather, which uses a tanning process based on vegetable oils instead of chrome- and gasoline-based chemicals, with no compromises on haptic quality. But materials



hidden from passenger view can also have a sizable impact on sustainability, as proved by **Lufthansa Technik AG**'s AeroFLAX prepreg. Using natural fibres and a bio-based resin system instead of glass fibre, AeroFLAX saves CO₂ not only as a by-product of weight reduction but also during the manufacturing process itself.

University

The University category is a playing field for imaginative concepts with a clean-sheet approach to a range of issues and situations. Carlos Gatti, student at **Wichita State University**, has come up with a novel way of accommodating wheelchair passengers. The Fly Your Wheels Suite replaces the front left closet on aircraft like the Boeing 737-800 with a multi-purpose module that can function as a safe parking berth for a wheelchair user during a flight. Rather than taking away existing seating, the idea would let airlines add one paying passenger – the wheelchair user. Jiayi Yu from the **University of Reutlingen** designed the Shift Cabin Interior, a study that allows operators to configure seats in multiple positions for work or relaxation, both along the axis of the seat as well as to the side. Aside from the advantage of flexibility, the concept lets airlines fit more seats into the same business class space. Ken Kirtland of the **Georgia Institute of Technology** has high aims with Portal: to create an electric short-haul airline based around an innovative aircraft that emphasises a calmer flight experience at slower speeds and fantastic views.

The Innovations of the Year: Presented in Hamburg on 14 June 2022

The **Crystal Cabin Award, an initiative of Hamburg Aviation**, is presented in eight categories: “Cabin Concepts”, “Cabin Systems”, “Health and Safety”, “Passenger Comfort”, “IFEC & Digital Devices”, “Material & Components”, “Sustainable Cabin” and “University”.

To win one of the coveted snow-white trophies, the 24 finalists present their ideas in person to the 27 members of the [international expert jury](#). The winners will be announced at a prestigious **Gala Dinner** during Aircraft Interiors Expo (14-16 June 2022 in Hamburg). **The winners will present the winning concepts on 15 June at Hamburg Messe in the Cabin Space LIVE Auditorium.** The **Crystal Cabin Award Gallery**, with an overview of all the finalists, will be displayed at the Hamburg Pavilion, jointly presented by Hamburg Aviation and Hanse Aerospace in Hall B6, Stand 6B90.



Downloads

Images and graphics, a list of the final entries as well as a complete PR package for all 2022 finalists are available for download here:

<https://seafife.hamburg-tourism.de/d/2496142dfdf14af69cdf/>

Acclaimed industry award – acclaimed industry support

The Crystal Cabin Award is supported by:

Platinum Sponsors: Etihad Aviation Group, Panasonic Avionics Corporation (Category Sponsor: Sustainable Cabin)

Gold Sponsors: AERQ, Airbus, The Boeing Company, Collins Aerospace, Diehl Aviation, Thales Avionics, Thompson Aero Seating

Silver Sponsors: Ameco Beijing, ATR, Jetliner Cabins, Boltaron Inc. - A Simona Company to Simona Boltaron, TSI Seats

Online Sponsors: Sekisui Kydex

Crystal Cabin Award Show Partner: Aircraft Interiors Expo

Media Partners: Aircraft Interiors International, APEX, Flight Chic, Flightglobal, Future Travel Experience, Inflight Magazine, Runway Girl Network

Join the sponsors and supporters of the Crystal Cabin Award! Information about sponsoring opportunities and packages is available from Lukas Kaestner: lukas.kaestner@hamburg-aviation.com.

About the Crystal Cabin Award

The Crystal Cabin Award is THE international prize for innovation in the aircraft cabin. A high-calibre jury made up of renowned academics, engineers, specialist journalists and airline and aircraft manufacturer representatives comes together under the slogan “Let your ideas take off” to honour extraordinary cabin concepts and products. The competition was launched by Hamburg Aviation and is organised by the Crystal Cabin Award Association. This unique honour has been presented at the Aircraft Interiors Expo in Hamburg every year since 2007. The trophies have become a seal of quality, known and coveted around the world.

Press contact:

Crystal Cabin Award e. V. | Hamburg Aviation
Angus Baigent

Telephone: +49 40 2270 1988

Angus.baigent@hamburg-aviation.com

www.crystal-cabin-award.com

Follow the [Crystal Cabin Award on LinkedIn](#)