



Here are the Top 24 Aircraft Innovations for 2019

Finalists for the Crystal Cabin Awards 2019 include airlines, manufacturers, suppliers and universities from all over the world

Hamburg, 26 February 2019: The **Crystal Cabin Award is one of the most coveted seals of quality in the global aviation industry**. The finalists have now been decided for each of the eight categories. **Competition was never tougher for the 24 places in the finals**. The international expert jury viewed and evaluated some 94 shortlisted entries. **Airlines, manufacturers, suppliers and universities from all around the world have made it to the last round**. Just who will be taking one of the precious trophies home will be **decided in Hamburg on 2 April** at a celebrity gala dinner for the industry during the leading global trade show, Aircraft Interiors Expo.

An overview of the finalists: 8 categories, 24 innovations

Three well-known heavyweights of the aviation industry are going head-to-head in the “**Cabin Concepts**” category. Aircraft manufacturer **Airbus** has come up with a new use for the space underneath the passenger cabin with its **Lower Deck Pax Experience Modules**. Today, the space is used for, amongst other things, cargo containers. In the future, though, it could contain lounge areas or quiet zones for Economy class passengers to make ultra-long haul routes more pleasant. Travel with First Class, on the other hand, and you can already experience such luxuries on the newer aircraft in the **Emirates** fleet. The **Boeing 777 First Class Fully Enclosed Suites** have the atmosphere of a private jet. There are also numerous high-tech components such as video calls from the passenger to the crew and virtual windows for suites located in the centre of the plane. This means that every seat has a guaranteed window view. Rather than opulence, **Safran Essential Business Class** is focused on efficiency and sustainability. Doing away entirely with heavy mechanical components, the concept relies instead on innovative cushion structures. The result: 25 percent less weight and almost 20 percent more space for the passenger.

One of the central questions shaping the “**Cabin Systems**” category is how to most efficiently use the space within an aircraft. **Collins Aerospace** provides a great example with its **Flex Duet** self-service counter for snacks and drinks. During cruise flight, it can just be opened up like a closet door, folding in front of the aircraft door to give a purpose to otherwise unused space. The **X-Tend Seat from Airbus** increases efficiency in individual seating rows by partially folding down the seat cushion when the passenger stands up. This provides the passenger with more freedom of movement within the row, whilst the airline can compress the seating pitch in emergency exit rows. **Diehl Aviation**, meanwhile, offers greater seat pitch independence with its **Flexible Passenger Service Unit** system. The modules, containing for example air vents and reading lamps, are not fixed in place above the seats; instead, they can be repositioned for optimal passenger convenience.



And if perfectly positioned air vents aren't enough to keep everything smelling of roses, one finalist's concept for the "**Greener Cabin, Health, Safety and Environment**" category may have the solution: the **nanoe air filtration system** by **Panasonic** extracts pungent smells from the cabin, for example after meals, improving the air quality. Sadly, the concept is currently only available for Business Class. For some years already, the **Skycouch** from **Air New Zealand** has led the way in creating a genuine luxury upgrade for Economy Class passengers, converting an entire row of seats to a bed on demand. And now, this practical concept is available in a family edition, with new belts and safety guards ensuring that even babies and infants can be safely put to bed here. The jury showed its appreciation of this enhancement with a place in the finals. **Diehl Aviation** provides the third candidate in this category, too, with an innovation equally advantageous for old and young. The **UV-LED Water Disinfection Unit** is a retrofit antibacterial filter for the toilet area. For the first time, tap water is reliably drinkable on board.

A different type of passenger wellbeing, meanwhile, is at the heart of the "**In-flight Entertainment and Connectivity**" category. One entry here has won over not just the jury but also the Emirates airline. The **virtual windows** from **Collins Aerospace** are already in use in the airline's concept that has made the finals in another category. **Global Eagle** has a product that benefits not just First Class passengers: the **Low-Earth Orbit Satellite, LEO**. Floating in space at a relatively low altitude, it provides extra-fast broadband internet for airborne clients, even in regions currently subject to poor connectivity, such as polar regions. **United Airlines**, on the other hand, is here with connectivity between the passenger and the in-flight entertainment system. "**Entertainment for All**" provides passengers with diverse, semantically valid settings to personalise the multimedia experience on board.

Another **Collins Aerospace** concept is in the spotlight — in the truest sense of the word — in this year's "**Material & Components**" category. The **µLED Reading Light** replaces existing cabin reading lamps with ingenious LED technology. With precisely targeted light cones, a single lamp can illuminate several seats. The **Lumina** concept from **KYDEX** is all about pleasant lighting, too. The US company has developed a thermal plastic that can conduct light and provides mood lighting via plastic panels in the cabin. If privacy is what you need for a sense of wellbeing, the **Flexible Door** from supplier **Safran** may be your thing. The thinly coated element is integrated in the side wall of the Business Class seating berth and can be drawn across between the seat and the aisle, almost like a blind, when needed. For passengers, it means more privacy; for airlines, the ultralight weight makes it attractive.

The "**Passenger Comfort Hardware**" category is home to physically larger amenities. This includes the **Active Noise Control** technology for Business Class seats from **Panasonic**. Noise-cancelling headphones will be a thing of the past with this seat, which filters the cabin and engine background noise by itself at the press of a button. Calming music or bird noises can be added if required, accompanied by the appropriate lighting. It brings sleeping in the skies close to cloud nine. And in **Economy Class**? Here, too, attention has been paid to long-haul **sleeping comfort**. Seat manufacturer **RECARO** has enhanced its long-haul route seat with a number of comfort elements that make it a little more like an armchair at home. This includes a flexibly adjustable head and neck support as well as movable back and leg upholstery. French design studio **Style**



& Design has taken an even more radical approach to long-haul seating. The **Moments** concept significantly extends the seating space in Business Class, offering a range of sofa-like positions for sitting, lying and tanning, without costing the airline in terms of precious space.

Radical new travel ideas are traditionally the domain of the “**University**” category for the Crystal Cabin Award, with students from all over the world bringing their competing plans for the future to the arena. Sahngseok Lee from **Hongik University** in Korea, for example, has designed the **1 For All** concept in collaboration with seating manufacturer **Adient**. It interweaves the various seat classes to achieve the maximum possible use of space. Premium and Economy passengers may find themselves next to one another or even above or below one another — alone or within compartments. Clément Heinen of **Delft University of Technology** in the Netherlands has undertaken a redesign of Business Class, in collaboration with **Safran**. The innovative “**Stratus**” seat can not only be ergonomically tilted, it can also be turned into a standing desk for completing office work. Joseph Lane from the **University of Cincinnati**, meanwhile, has developed an innovative approach to on-board catering. With the **SkyDining** app, passengers will not just have the choice of “chicken or pasta”; instead, they can order a meal from a restaurant at the departure airport in advance, using their smartphones. The meal is delivered to the airport at the gate and served hot during the flight — in an environmentally friendly cardboard box, of course.

Creative ideas from outside the academy find their place at the Crystal Cabin Award, too, in the “**Visionary Concepts**” category. Flexibility is the order of the day here again this year, as seen in the **Ultraflex Zone** from **AIM Altitude** that has made it to the final round. Passengers of all classes can use the snack bar, relax in lounge chairs, work on a presentation at a laptop workstation or do something for their physical comfort in the yoga zone. The **Peacock Suite** from **Paperclip Design** in Hong Kong offers more space for airlines to vary their First Class products, with flexible partitions and seating arrangements allowing for individual products to be put together on a flight-by-flight basis as required, ranging from family compartments to three-room luxury suites. **Boeing**, meanwhile, has approached visionary cabin redesign from a different perspective. The **Smart Cabin** transforms the aircraft interior into an “Internet of Things” for crew members. Similar to a Smart Home infrastructure, it allows for all components to be digitally managed and controlled with voice commands, from lighting to seating and even lavatories.

The innovations of the year — showdown on 2 April

The **Crystal Cabin Award**, an initiative of the cluster **Hamburg Aviation**, is presented in **eight categories**: “Cabin Concepts”, “Cabin Systems”, “IFEC”, “Greener Cabin, Health, Safety and Environment”, “Material & Components”, “Passenger Comfort Hardware”, “University”, and “Visionary Concepts”.

To win one of the coveted snow-white 3D printed trophies, the 24 finalists now have to present their ideas in person to the 27 members of the [international expert jury](#). Winners will be announced at a prestigious **Gala Dinner** taking place in the **trading floor hall of the Hamburg Chamber of Commerce on 2 April**, as always as part of the Aircraft Interiors Expo (2 – 4 April in Hamburg). Guests of honour will include **Hamburg’s Governing Mayor, Dr Peter Tschentscher**, along with



the **Federal German Government's Coordinator of Aerospace Policy, Thomas Jarzombek**. All winners will then present their concepts once again at the Hamburg show in the **Cabin Space LIVE Auditorium**, near the official Crystal Cabin Award Gallery on the first floor in Hall B4, at **2:30 p.m. on Wednesday, 3 April**. Information on all finalists will be available there throughout the entire Expo. This year, for the first time, trade fair visitors can also take part in a popular vote.

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You too can join the list of sponsors and supporters of the Crystal Cabin Award. Information on sponsoring opportunities and packages is available from Carmen Krause: carmen.krause@crystal-cabin-award.com

Note for the press:

A selection of images from all finalists is available for editorial use at:

<https://seafife.hamburg-tourism.de/f/9826bb3a4e174905a0ce/?dl=1>

The complete overview of 2019's finalists with English press statements, contact details for entrants, and images is available for download here:

<https://seafife.hamburg-tourism.de/f/8ed4e1d4dad24cc98c2d/?dl=1>

Film material for all finalists will be available shortly. For further information, send an email to julia.grosser@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.

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