

# AIRCRAFT CABIN

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MANAGEMENT

## Exclusive

The new ESP seat

## Sky's the limit

Satcoms update

# Purple haze

Virgin's 787 mood lighting

# Back to the drawing board

IAN HARBISON HAS BEEN CHECKING OUT SOME OF THE LATEST CABIN TRENDS WITH THREE OF THE LEADING DESIGN AGENCIES

\* **Design agencies** are always aware of developing trends as their work is carried out long before the final product hits the runway. Although client confidentiality comes into play, they are still willing to share their experience.

## JPA DESIGN

Ben Orson, Managing Director at JPA, says there have been several clear trends in recent cabin design. One making significant waves is the increasing segmentation of the cabin; from Etihad's palatial first class offering, 'The Residence', at one end, through to high density economy layouts with no seat recline at the other. These trends are now being recognised by both airlines and the seat OEMs, becoming an increasingly common aspect of any design brief from new clients.

However, as passengers are generally getting larger there is little that can be done to reduce seat pitch. Reducing seatback thicknesses and raising the pivot point could help to reduce bothersome seat-back recline in tight spaces, but with such horizontal limitations the only other option is to make better use of the vertical space in the cabin. Orson believes that stacking designs – examples of which have been shown as concepts at a number of recent Aircraft Interior Expos in Hamburg – will be introduced, perhaps even appearing in business class by the end of 2015, or early 2016.

With all the focus having been on seats, one neglected area galleys, but these are now "under attack", he says, as airlines try to make these entry areas look more dramatic. JPA worked with American Airlines on their new Boeing 777-300ER layout; together they designed a striking bar area that also serves as

the entrance way. However, it isn't just a question of concealing galleys or making the area look more attractive to passengers when boarding, they also need to be more compact, potentially freeing cabin space for additional, revenue-earning seats. Orson points out that the same galleys must also become more efficient, something that will be increasingly important as airlines invest in levels of service that will create differentiation from other carriers.

On IFE, there is a bit of a division between the classes. For first and business, the trend for bigger screens is a reflection of an older, less technology-driven clientele, while the rest of the aircraft is seeing the introduction of personal electronic devices. Although this now includes the cabin crew, he says research shows that passengers still prefer face-to-face interaction, rather than ordering via a phone or tablet. Technologies that will emerge throughout the aircraft are touchless and gesture-driven controls, according to Tim Manson, Design Director. He cites the increasing use of touchless controls in toilets as one example – a result of cultural influences from Asia, which has a particularly acute approach to health and hygiene compared to Europe and the US. This usage is expected to increase, mainly due to Asia being the world's biggest growth market. Manson adds that as the middle classes expand, the region will have the greatest percentage of first time flyers, as such, airlines would be wise to take advantage of this by providing some welcome surprises in their cabin layouts. He also suggests that anti-microbial or dual property materials (such as acoustic deadening) are on the way, along with improved cleanability.

Returning to design briefs, Orson says airlines are becoming increasingly design aware and more sophisticated in their expectations. They are also recognising a link between the aircraft and the ground. A good example of this is the company's recent work with Air China, involving the airline's working on new lounges in Beijing and Shanghai (which both opened in 2014), as well as on the carrier's brand new aircraft – the aim of both projects was to provide a seamless transition between the two for the airline's premium customers.

As well as making use of the airline's branding and colour schemes, it also incorporated elements of traditional culture in thread patterns on the seats and cushions. JPA created all the materials and finishes for the seats, wall and divider wall laminates, the curtains, carpeting, entrance areas, bar, stairwell area, as well as the colour and trim for the lavatories and cabin lighting. Because there was less emphasis on hard furnishings and seat surrounds for this project, the company also created a set of inflight soft goods that compliments the scheme, including pillows, blankets, duvets, pyjamas, slippers, eyeshades and toiletry bags. The new cabin was launched in October 2014 with the arrival of the first of seven Boeing 747-8s and will also feature in 15 787-9s due for delivery from 2016.

Another recent project has been the development of Premium Economy for Singapore Airlines, featuring seats from ZIM Flugsitz for 19 Airbus A380s and 19 Boeing 777-300ERs, as well as Zodiac Seats for the first 20 A350s. Manson says this is introducing a new design concept, with different surfaces and finishes, colour accents, plus novel stitching and an asymmetric look. ▽

He adds that the void between business class and economy is huge, as such airlines are meeting market needs by filling this space with premium economy. Orson comments that business class is now putting pressure on first class: the products have evolved so fast that the gap between them has closed and it is hard to justify the extra cost on cabin product alone. However, the overall package (with additional services such as limousine pickups) would clearly be superior. While business class has resulted in a wide range of seat types, the fact that first class seating does not need to be as smart with space has spawned fewer successful basic product archetypes (for example, forward facing, staggered, or herringbone).

He says that while the catalogue system meets the aspirations of the lower tier carriers, it does not cater to the very top tier airlines that ultimately set the agenda for the industry, and for whom product differentiation is of paramount importance. That being said, an increasing number of seat designs are being added and OEMs are increasingly seeking JPA's support in creating both off-the-shelf and catalogue products.

One stumbling block is that the typical product development time for a business class seat is 18 months. If this could be reduced, new products would be more accessible to airlines that have tight aircraft delivery schedules, giving them greater flexibility.

## VIEWPORT STUDIO

Viewport Studio (formerly VW+BS) made its entry into aviation with the Upper Class bar for the Virgin Atlantic Airbus A330 fleet, working alongside AIM Aviation. This was followed by a

cabin upgrade for the Little Red fleet of A320s (which comprised of leased Aer Lingus aircraft operating UK domestic flights that connect with Virgin longhaul operations from London Heathrow), then came the redesign of the Virgin Atlantic Upper Class meal service. The company's latest development is the interior of the Upper Class bar for the Boeing 787, working with Altitude (since taken over by AIM).

One outcome of this long standing relationship has seen designer Gareth Southall leave the airline last year in order to join Viewport. In his new role, he says travel patterns by regular passengers are changing, with more decisions being made on the basis of user points programmes. As these have become ever more interlinked, with the inclusion of hotel chains, credit cards and banks, the challenge to brand loyalty for individual airlines has increased – maximum points per trip is now the main goal, rather than airport lounge access. For airlines with a limited network there are fewer opportunities to redeem any collected points, hence the success of the global alliances that combine multiple carriers.

While this would seem to make identity less important, Southall says passengers are also looking for the same flexibility from the onboard service package – which has a more immediate effect on cabin design. Of course, the most obvious example of this is the surge of interest in premium economy cabins which, he believes, is being driven by customer demand, not by airline initiatives. On a more simple level there are options like seats with extra legroom, here, perhaps after a tough day or due to a delayed flight, a customer can justify a last minute purchase or upgrade. Generating

higher revenue per square metre of the cabin is a bonus for the airline, but it needs to be thought through for maximum benefit. He says juggling the LOPA (layout of passenger accommodations), namely by moving galleys and lavatories, may actually free up more of these seats and make it a much more attractive proposition.

Though such offerings are hard to manage for a carrier in terms of predicting revenue, they can have a positive effect on the airline's image – Southall cites the example of the Air New Zealand SkyCouch, which is used by very few passengers but is appreciated by many. There is also the case of the Upper Class bar on Virgin – he says passenger surveys often come up with the comment 'I don't use it, but don't get rid of it'. Surveys and focus groups are gaining greater importance when it comes to developing a new cabin but, he comments, the airlines are simply catching up with other industries. This lag is unsurprising as it is very difficult, and very expensive, to carry out trials on an aircraft – just getting the equipment on board means it has almost certainly already gone through extensive certification tests.

The design development process has also undergone a number of changes. Most agencies work across several industries, which can bring its own benefits – Viewport is strong in the field of architecture, which creates a good understanding of space, something that proves very useful in a confined area like a fuselage. He adds that this multi-industry approach is simply good business practice, minimising any risk if there is an economic downturn, when airlines are generally first to suffer.

It is now much more usual that the commercial department of the airline gets involved at an early stage, trying to determine the cost-effectiveness of the project. As they gain experience, they become useful partners which, Southall feels, can only be a good thing. It certainly means that designers are handing over viable proposals with preliminary costings and engineering data. Fortunately, there is still room for the 'lightbulb moment' and a groundbreaking new product.

## DCA DESIGN INTERNATIONAL

DCA operates across a number of industries as well as having the ability to call on in-house engineering expertise. These factors are, and will continue to be, very important for the development of first and business class seats in the future, according to Dominic Hargreaves, Sector Project Manager. As they become lighter and more technically challenging, there will be a greater need to understand the complex structures and mechanisms required to produce the designs. Having the resources available at an early stage of the project will produce real benefits.

The Virgin 787 bar from Viewport Studio and Altitude (photo: Virgin Atlantic)





Future premium seats are likely to be more complex, as such a design agency with engineering experience will have an advantage (photo: DCA Design International)

Regarding materials' development, DCA stresses the importance of accelerating testing which, again, should be undertaken early in the process in order to ensure the durability and reliability of materials and components. This testing not only gives the airlines confidence in the products, but also provides the security of knowing that whichever materials they choose are fit for purpose and service.

Hargreaves states that for DCA to focus on the development and delivery of total brand packages, rather than just on a cabin refit, produces the positive benefit of a strong and consistent visual identity across every aspect of an airline's service. Complete brand packages are being driven by an increasing need for airlines to achieve market differentiation. Above all, he says, the would-be passenger is only a few clicks away from an online view of the travelling environment they are being offered. Smaller carriers are realising this and are aware that they cannot be left behind when it comes to interior design innovations. Some of these airlines are economy class only, so there is a need to counteract and alleviate the natural feeling of confinement; passengers should be able to take ownership of the seat-back in front of them as part of their living space, for example.

For frequent fliers on longhaul flights, Hargreaves says that one way of achieving this is to take more care when building IFE programming so that a more personal offering can be delivered. For example, passengers should be alerted if the running time of a film they have chosen exceeds the duration of the flight and, if required, a catch-up facility on a subsequent flight would be a useful addition. A more radical service extension could even offer a means to stream the remainder of the film to a portable device in their hotel room.

Finally, Hargreaves believes that the total brand service needs to change to reflect the passenger profile at different times. For example, weekend flights with a large number of leisure passengers could have a different service that caters to the needs of this type of customer. ●



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