WE ARE ON THE BRINK OF A SUPERSONIC RENAISSANCE: WHAT DOES THIS MEAN FOR AIRCRAFT CABIN DESIGN?

SUPersonic TRAVEL

MATERIALS
Lighter, stronger and with new possibilities – take a look at tomorrow’s exciting cabin materials

CABIN NOISE
How do you create the right noise levels in the complex cabin environment without increasing weight?

BIG DATA
Facebook and Google share the secrets of leveraging big data for big profits
“This is necessary as the limitations in size and weight will preclude the usual multifunctional bed, lounge and office that a first class suite provides. Rather than offering everyone a compromised choice to cover all eventualities, the airline can offer a far higher-quality tailored space and service to suit the passenger’s needs,” Tighe explains.

Simply phone the airline ahead of your flight – or have your people call their people – and the right environment for your journey will await you. Want to relax and enjoy the view? No problem, the seat will be preset to suit. Need to work all journey? The fastest desk in the world will be waiting. Don’t need IFE? It won’t be uploaded. Not hungry but want champagne? It’s being chilled to perfection. “This will drive a smart, super light but configurable cabin, all enabled by getting the passenger to buy into the ethos of the experience,” Tighe adds.

For an airline view we spoke to Cristian Sutter, a cabin design specialist with experience at Thomson Airways, British Airways and Jet Aviation Basel, who predicts seating with a footprint comparable to today’s premium economy, but with a little enhancement through the use of ergonomics with flexible and adaptable geometry, built-in cooling and heating systems, a massage function, and headrest-mounted noise-cancelling systems.

Darbyshire also predicts an offering of something close to premium economy, but with more comfort and offering the privacy that Forbes List flyers might demand. Joan Collins was reported to have paid for the front four seats on Concorde just to achieve privacy in the small cabin, so how can the Joan Collinses of this world enjoy tomorrow’s supersonic travel without having to quadruple their flight costs?

Darbyshire suggests staggered seating as an option and that sleeping comfort will be important for overnight flights of six hours – San Francisco to London, say. For flights closer to three hours, he thinks that reclining seats, with a gimbal mechanism if there is a vertical climb, would seem appropriate.

THE CABIN IS THE IFE

The experience of supersonic flight will be a greater attraction than even the most gripping of movies. Entertainment options are necessary though, and the IFE systems on board these aircraft could take a new direction, making the passenger part of the action, rather than being a passive observer.

There is clear potential via previous suggestions such as AMOLED walls and ceilings, which could show a feed from outside to make you feel like an aviator, and visual sonic booms as the aircraft accelerates through the sound barrier. As an excited Harcup says, “With developing organic OLED technology, it might be feasible to propose a flying planetarium!”

This would be an amazing prospect for some, but terrifying for others – perhaps best restricted to a dedicated section of the cabin for enthusiasts. “The experience may not necessarily be about speed but might reflect a new expression of travel through virtual reality or similar technologies not yet defined,” says Darbyshire.

“The interior could be about enhancing the travel experience through stargazing, or relate more to space technology through virtual tours. Using modern technology creatively would mean you could customize the experience for different passenger types, from the wealthy thrill seeker to the time-poor business executive.”

One view most of our experts had in common was a view that ‘traditional’ IFE content would be offered via streamed content or pre-loaded tablets, rather than seatback displays, and given that the captains of industry likely to be on board, reliable and powerful connectivity to keep in touch with the boardroom is a must.

Speed aside, the most exciting thing about supersonic travel is that it could embrace the wonder of flight within the passenger experience, with everything geared toward involving flyers in the journey rather than distracting them from it. If you want lie-flat beds, 32in IFE and showers, take the slow plane – the supersonic experience will be too exciting to sleep through.
Autonomous galleys

The notion of the connected aircraft could be applied to the galley space. “We believe that future galleys must get connected if they are to create smarter service and operational solutions,” states Tim Manson, design director at JPA Design. “We can imagine that galleys, carts, cabin crew, passengers and ground services alike will all be digitally linked, all talking to one another, collating data, streaming information, and providing airlines with rich information to analyze and discover new and creative ways to be more efficient and to add value.”

“Taking it a step further, it’s not inconceivable that galleys will become fully autonomous, pre-empting operational needs, pre-ordering a passenger’s favorite foods, optimizing electrical loads and managing their own repairs, and even automatically ordering parts for their own servicing.”

RIP OUT THE GALLEYS

Having considered the catering needs of short-haul low-cost carriers, Jean-Pierre Alfano, founder and creative director at Airjet Designs in Toulouse, France, proposes replacing galleys with vending machines. The machines would use NFC technology for payment and would be placed over the wing area in narrow-body aircraft for reasons related to minimizing passenger traffic and weight balance.

How would this work in practice? “Passengers would order from their seats through the cabin wi-fi network and dedicated airline app. The vending machine could also possibly be coupled with an automated trolley robot or a flying drone that would take and deliver the food and beverages to passengers,” explains Alfano.