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The Unbearable Heaviness of Business Class

Gizmo-laden business class seats are raising planemakers' costs and threatening their production schedules

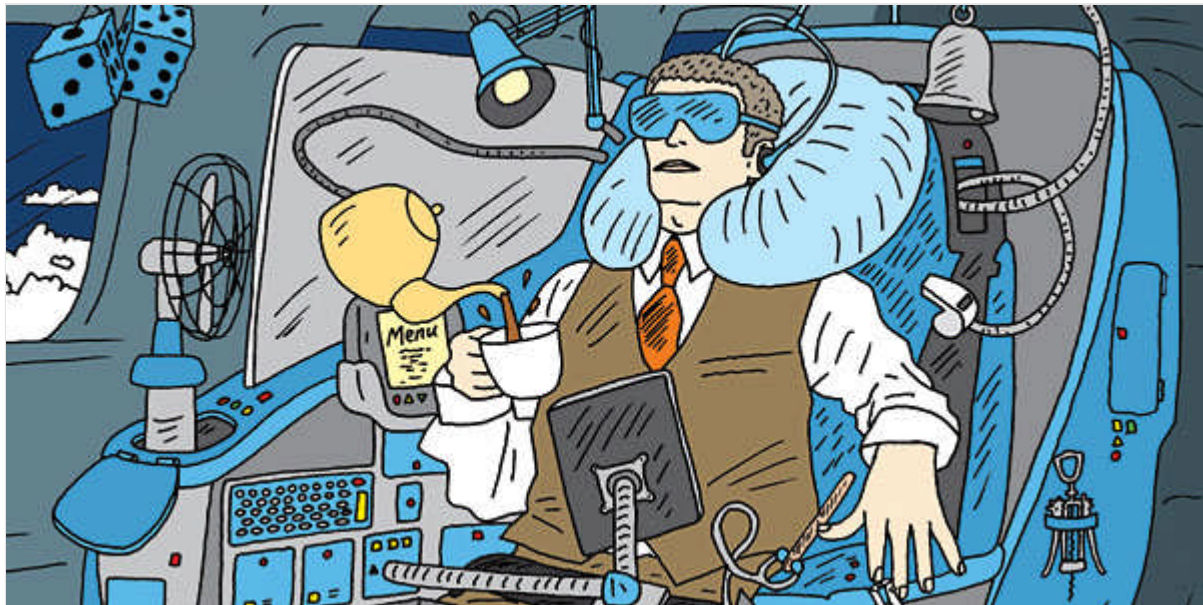


Illustration by Peter Arkle

By Andrea Rothman and Chris Jasper

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Airline seats have come a long way since British Airways unveiled the first lie-flat bunk in 1995. On Emirates' new A380 superjumbos, business class seats extend to form a flat bed up to 79 inches long, with a touchscreen controller to adapt the shape to individual bodies or provide massage.

They also include in-seat power supplies for laptop computers, dual USB ports, large worktables, 1,200 channels of entertainment, and a built-in minibar at every seat. Special lighting even helps temper jet lag.

International airlines are locked in a technology-led competition to provide the best business class seats and win the largest share of big-spending corporate travelers. But those same gizmo-packed chaises are proving a headache for Airbus and Boeing (BA). The aircraft manufacturers are more concerned with shedding excess weight and simplifying production than pampering fliers. And they say the trend toward ever-more-lavish pleasure domes is both threatening their production schedules and stealing from hard-won gains in fuel efficiency.

“Seatmakers and airlines have gone overboard with bells and whistles,” says John Leahy, Airbus’s chief operating officer. “It costs a small fortune to take 100 kilos out of an airplane [design], and then they throw it all back on with gizmos and little motors and things.”

A single business class berth crammed full of entertainment systems and the electronics needed to morph into a bed can weigh 300 pounds, three times its coach class counterpart, and typically costs \$80,000 to \$100,000. Yet airlines aren’t about to switch gears after years of placing the once-lowly seat at the center of their premium class strategies, says Peter Cooke, design manager at British Airways, whose current business seat is 25¼ inches wide, 5¼ inches wider than its first flat bed.

Business class on long-haul flights usually comprises less than 15 percent of the total seats, but since those passengers pay four to 10 times the economy fare, it can account for half of a flight’s revenue. “The flat-bed seat amounted to a fundamental step change for the airline business,” Cooke says. “Industrial design suddenly became prevalent in cabin interiors, whereas before it was very much commoditized.”

Trans World Airlines designed the first business class seat a quarter-century ago to help it compete with Pan Am for North Atlantic traffic, says Jennifer Coutts Clay, a consultant and author of *Jetliner Cabins*. The seat had a cradle-shaped construction with a five-inch-wide leather-covered central armrest, stereo sound, and a pivoting footrest—all luxuries at the time.

It wasn’t until 2000, when British Airways brought flat beds from first class into the business cabin, that the seat became a powerful lure for corporate fliers. That set off a frenzy among airlines, each

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eager to outdo rivals with comforts. Electrical motors inside seats multiplied, to create platforms that could be transformed with the flick of multiple switches to hoist the feet to just the right angle, coddle the back, or massage the neck.

The proliferation of seat offerings added to the challenges of getting new planes approved by regulators for crash-worthiness, with certification taking 12 to 24 months on average. Side-facing seats, often used to increase passenger privacy, require more extensive testing and more time for certification, says Jeremie Teahan, a spokesman for the European Aviation Safety Agency. "It takes the better part of three years to design and certify and get a seat into my aircraft," says Cathay Pacific (CPCAF) Airlines Chief Executive Officer John Slosar. "This is even longer than it takes to get a new car designed."

The ongoing revolution in in-flight entertainment, as airlines have replaced the one-movie-for-all with a selection of dozens of films and scores of music and video channels, also has required planemakers to spend more time engineering the complicated wiring needed to give each seat the autonomy of choice.



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Airbus says that the rush toward customization was the primary reason behind production stumbles on the first A380s. Airlines such as Singapore Airlines and Emirates saw the double-decker giants as a chance to vaunt the best in customer comfort, though the complicated wiring required helped push the A380 program into a two-and-a-half-year delay. Boeing also has grappled with growing seat customization requests—and delays. “Sometimes we can’t meet the requirements of a customer in terms of certification and deliveries,” says Randy Tinseth, vice-president of marketing at Boeing Commercial Airplanes. “In the worst case for them, they take delivery of a plane and then have to put it into a hangar” awaiting seat approvals.

Seatmakers say that rising oil prices, which make extra weight more costly, and the seven-year backlog for commercial aircraft orders are pushing them to shed pounds. “You’ll see continued trends in weight reduction with the use of advanced materials, composites, carbon fiber components, [and] reinforced plastics,” says Tom Plant, vice-president and general manager of seating products at Florida-based B/E Aerospace ([BEAV](#)), the world’s No. 1 airline seat producer.

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THIS ISSUE

lanemakers also are trying to rein in buyers who go overboard on seat accoutrements. Unlike, say, cockpits or landing gear, seats traditionally were not included as part of a plane's purchase price. Instead, airlines contracted with independent manufacturers to produce them. That meant the difficulty of building or time spent installing customized seats often wasn't fully considered. On its new 787 Dreamliner, Boeing largely scrapped that process. Instead, it chose seat manufacturers and seat models on its own to assemble a catalog, offering airlines six choices for economy and three for business seats, with limited flexibility on such things as colors, fabrics, and features.



Airbus, too, sought to limit choice on its A350, but with more latitude. “We basically have a contract in place with suppliers that specifies the interface these guys need to comply with—the target weight, performance, reliability, manufacturing capability, engineering, all the requirements we want them to meet. And then commercially, we have a catalog price,” explains François Caudron, vice-president of A350 customer and business development. Demanding customers can still negotiate directly with Airbus’s suppliers for seats with greater sophistication—at extra cost.

The bottom line: Airlines’ embrace of customized business class seats, costing up to \$100,000 each, has caused production delays for new planes.

With Susanna Ray

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Pan-Am launches the first branded business-class service, **Clipper Class**, in the early 1980s. The main draw: wider seats.



In the mid-1990s, Continental drops first class on some international routes in favor of the more ambiguous designation **BusinessFirst**.



British Airways in 2000 introduces a 72-inch-long seat that reclines to a **fully flat** position.



Further proof that the war for well-heeled passengers is waged in inches: Singapore Airlines unveils the 78-inch **SpaceBed** in 2002.