

# Aircraft Cabin Configuration Trends

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Densification in economy class through the installation of additional rows of new, slimmer seats continues to be popular.

Credit: Vallair

While the pandemic has had an impact on airline MRO budgets, cabin interior refurbishments are continuing—modestly. However, expect new trends to emerge in the longer term.

“Short-term refurbishments—those originally planned pre-COVID for 2.5 years out—have either been put on hold or changed to reduce overall expenditure,” says Teddy Gil, chief administrative officer of Sheffield Aerospace in Katy, Texas. “Long-term projects—2.5-5 years out—however, are still on the table, with new themes and liveries being developed by marketing teams while they assess the overall impact of the pandemic and travel forecasts stabilize.”

Still, Gil cautions that given the ongoing pandemic, airlines are taking a more conservative approach to interior modifications—at least for now.



Current modifications are more focused on increased bin sizes, a carry-over from pre-COVID-19 plans to standardize fleets. Credit: Lufthansa Technik

“Without the ability to clearly forecast a profit, airlines are reluctant to invest in cabin changes that are costly and may impact the bottom line,” he stresses. “The carriers that are accomplishing modifications are working to standardize their fleets to the most current configurations, rather than rebrand into a newer theme.”

Consequently, current modifications are more focused on increased bin sizes, a carry-over from pre-COVID-19 plans to standardize the fleets, with carpet, seat covers and cushion retrofit work done on an as-needed basis, Gil says.

The Aviation Week Fleet & MRO Forecast for 2022-31 says air transport spending on internal cabin equipment and furnishings in 2022 is estimated at \$2.2 billion out of a total \$6 billion for modifications. Steady growth is predicted for that segment through 2028, when cabin refurbishments will account for \$2.9 billion of the \$7.8 billion spent for modifications.

For the entire 10-year time frame, the forecast projects a compound annual growth rate (CAGR) of 2.4% for internal cabin refurbishments, which will be the leading category under the topic of modification spending each year through 2031.

### *What's Trending*

Current trends show continued demand for premium-economy cabins and densification in economy class through the installation of additional rows of new, slimmer seats, says Richard Brown, managing director of Naveo Consultancy in London. Airlines are also reducing the size of international first-class sections and installing an improved business class.

“There is fierce competition to capture the high-yield business class passenger, so airlines continue to innovate with seating and inflight offerings to maintain loyalty and capture market share and lucrative corporate account spending,” he says.



Thompson Aero Seating has introduced its new VantageSOLO lie-flat seat, designed especially for the premium-cabin single-aisle transport market as more narrowbody aircraft are deployed on long-haul routes. Credit: Thompson Aero Seating

Lufthansa Technik anticipates more requests for cabin layout changes that will increase, reduce or even eliminate some classes of service. Some airlines are electing to eliminate first class to use the space gained for business class and economy seating. “Requests are more toward using [reconfigured] space, instead of new cabin interiors or seats,” says Niels Dose, product sales and key account manager for the MRO.

Nonetheless, some major carriers are “entering [cabin] definition phases on some of their widebody fleets,” to be ready for the post-pandemic period when bookings are expected to pick up, and international travel becomes more stable, Dose says.

“At Lufthansa Technik, we are not getting many requests for extensive cabin retrofit projects,” he says. However, the MRO is seeing requests for temporary cargo-conversion reconfigurations for narrowbody and widebody aircraft.

Ralf Endres, Lufthansa Technik’s head of fulfillment for cabin modifications, notes there will be increased demand for cabin retrofits as leasing companies move aircraft among operators, and as air travel preferences—specifically, premium versus economy service—change.

“After two years of almost no cabin retrofits, more airlines are starting to make decisions about their current fleet and seating structure, and are now requiring cabin modifications,” Endres says. “Since they know that

there are certain lead times for these projects, it is necessary to decide now if they want a modified product once passenger numbers come back.”

Tim Lehnig, business development director at Collins Aerospace, reports that the worldwide industry slowdown at the start of the pandemic has “morphed into a more differentiated cabin-retrofit demand” scenario.

“We see some regions where there is strong demand by the airlines to bring parked airplanes back into the fleet, as well as to incorporate aircraft from other airlines—in regions with lower demand,” he explains. “This has led to an increased need for layout of passenger accommodations and interior harmonization. Initially, this was a narrowbody trend, but we increasingly see demand among widebody operators.”

Lehnig points out that, in addition to seating, the modification work often involves considerable changes to galleys and lavatories ([Inside MRO August 2020](#)). He cites growing demand for more hygienic cabin interior monuments with newly developed antimicrobial surface materials as well as electrically operated touchless components such as faucets, waste flaps, soap dispensers, and toilet flushers, seats and lids.

“In addition, there is demand for germicidal lighting to further improve lavatory hygiene,” Lehnig notes. Collins Aerospace offers various solutions in these areas for widebody and narrowbody aircraft.

Shawn Raybell, Collins Aerospace director of sales and marketing, reports that cabin refurbishment programs include an “even mix” of narrowbody and widebody aircraft. “The addition of new narrowbody aircraft, like the [Airbus] A321XLR and [Boeing] 737 MAX are driving cabin harmonization efforts,” Raybell points out. “Current modifications include new seat installations or a reconfiguration or update to existing seats. Also, inflight entertainment and connectivity solutions are often included in changes to the cabin.”

One of the more noticeable trends affecting cabin retrofits is the deployment of single-aisle aircraft on longer-range flights. “The challenges [include] how to make the passenger comfortable on a single-aisle aircraft for long-haul travel—typically 6-8 hr., and how to provide the expected passenger experience,” says Andres Budo, senior vice president for commercial at AVIC Cabin Systems (ACS), which now owns the UK-based seating OEM Thompson Aero Seating.

Budo notes that Thompson Aero Seating responded to the challenges with the introduction of its Vantage-SOLO seat. Designed and developed specifically for single-aisle aircraft, the seat offers a fully horizontal flat bed, with direct aisle access from a 33-in. pitch. “Having had two very difficult years, travelers are looking for a passenger experience that will enable comfort and a feeling of luxury but within budgetary and sustainability parameters,” he says. “This is where the long-range single-aisle aircraft can deliver, so long as the seating matches expectations.”

Budo reports that there has been “a substantial degree of interest in fully horizontal, flat-bed seating” for the single-aisle market. Citing the OEM’s VantageSOLO product, he explains it can be configured with an open aisle end, a fixed privacy screen, or a fully functioning suite door—a feature previously available only on widebodies. “Privacy is definitely something that more passengers are looking for and are willing to pay for,” he remarks. “This was true before the pandemic but is possibly even more so now that people want to keep their distance from passengers outside of their own travel party.”

While the pandemic has shifted emphasis to narrowbodies, Budo says that the company is starting to see a clear but slow recovery of its twin-aisle products. “We have been able to achieve a healthy mix with new programs awarded for long-haul single- and twin-aisle aircraft,” he adds.

## *Long-Haul*

Despite the setbacks caused by new COVID-19 strains, long-haul traffic in some markets has started to pick up. “While current projects may have been centered on narrowbody aircraft, we will see more cabin refurbishment work on long-haul, widebody aircraft, as these types change operators and return to the skies,” predicts Malcolm Chandler, head of commercial and marketing for Vallair, with MRO facilities in France.

While Chandler agrees that long-haul operators continue to focus on premium classes for cabin refurbishments, he notes that economy seats are getting attention, too.

“New cabin features being adopted by some major airline operators include slimmer sidewall panels for extra personal space at shoulder level, improved seating positions and views at windows, and larger luggage compartments capable of holding up to 60% more luggage,” he explains.

Asked about the use of sustainable, easily recycled materials for cabin interior retrofits, Chandler reports that supply chains are taking sustainability very seriously—particularly the OEMs.

“Sustainable material and processes can be found increasingly in VVIP aircraft, including the use of natural fibers such as cotton and wool as well as natural latex and composite veneers, which are derived from renewable resources,” he says. Cabinetry and carpets are increasingly including them. However, he also says that “synthetics that are sought after as second-life materials are feeding other industries.”

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