

THE GLOBAL IMPACT OF COVID-19 ON COMMERCIAL FLEETS

The COVID-19 pandemic has had a monumental impact on air travel, which has disrupted how airlines utilise their aircraft fleets. Cirium joins CANSO to cover the data insights surrounding the impact on fleet utilisation by aircraft type and region.

PRE-COVID-19

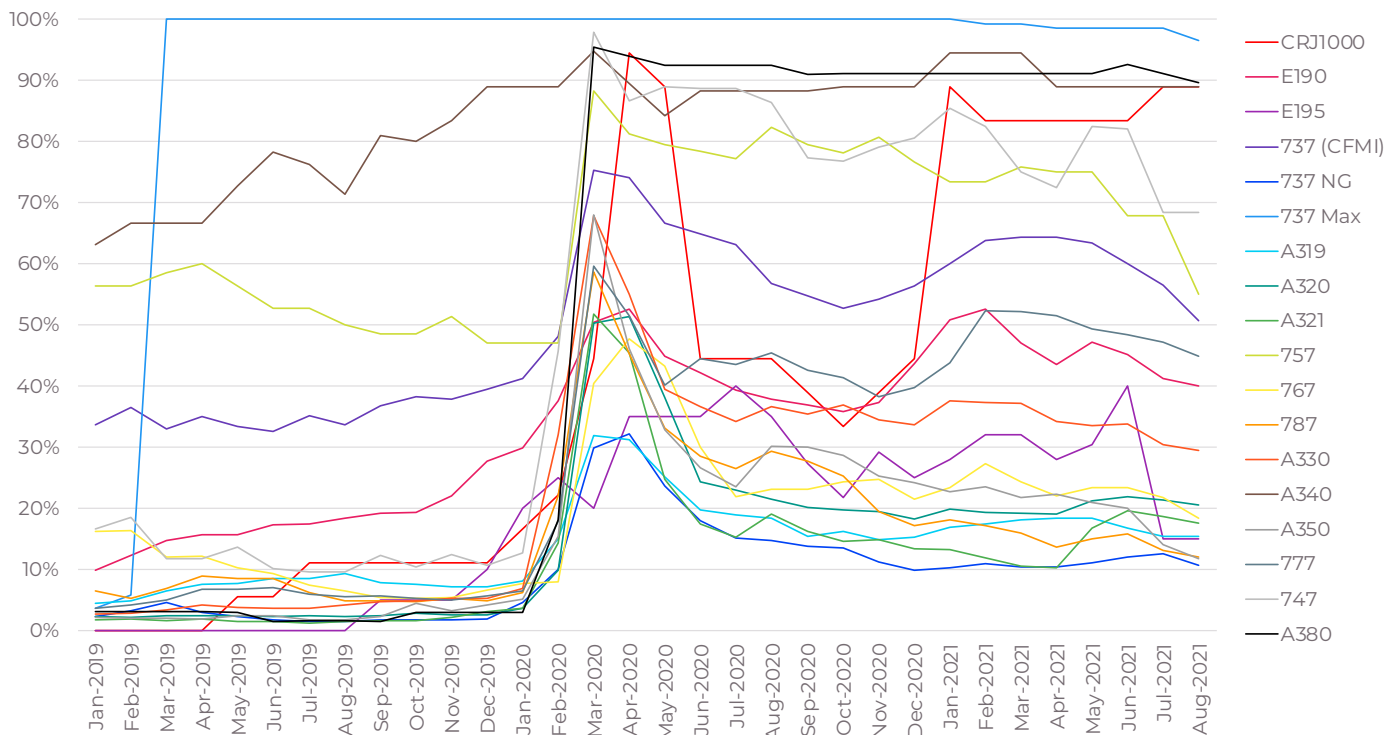
Before the pandemic, over 90% of the world's passenger jets were in active service and being operated at high rates of daily utilisation, with average passenger load factors of nearly 95%. Aircraft were typically placed into storage only if they were nearing the end of their economic lives. Aircraft manufacturers, the aerospace supply chain and aftermarket service providers had a clear view of current and predicted aircraft utilisation, enabling them to plan production of systems and parts and shop visits for aircraft, engines and components.

THE IMPACT

As a result of the pandemic, travel restrictions were enforced and passenger confidence to travel reduced. The airlines found themselves with capacity that vastly outstripped demand almost overnight, resulting in almost 17,000 passenger jets being placed into storage in April 2020. This figure stabilised at approximately 9,000 by the second half of last year. Those aircraft that remained in service saw their daily utilisation fall well below pre-pandemic levels as airlines operated 45% fewer flights in 2020 compared with 2019.

Encouraging signs of recovery began with domestic flights, as they began to recover from May onwards, especially in China and the US.

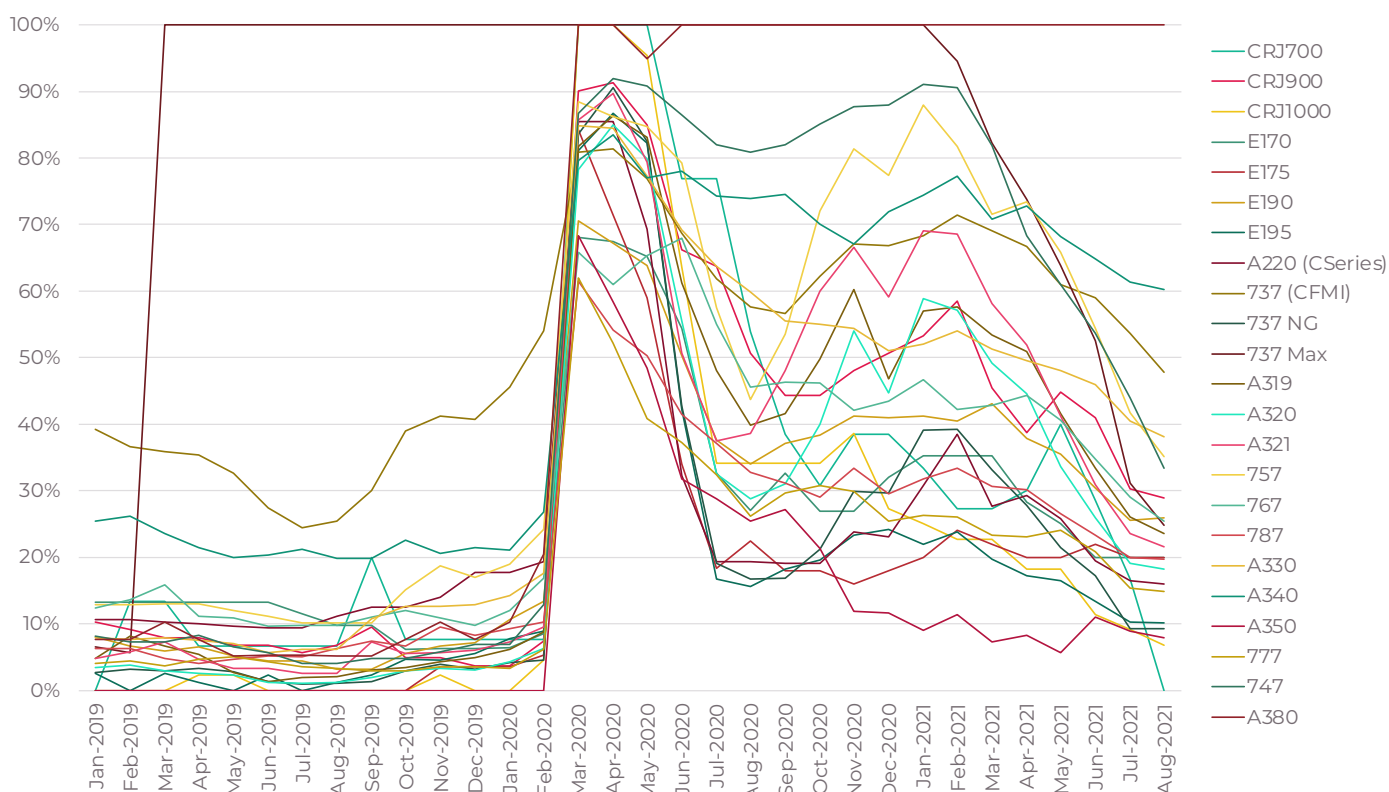
% of fleets in storage – Asia Pacific



Asia Pacific airline fleets were the first to be heavily impacted when COVID-19 emerged in the region in early-2020, forcing the region's operators to remove large numbers of aircraft from service. The Boeing 737NG in-service fleet – the region's largest by type – fell from over 2,200 to below 1,600 by April 2020, but the A320 fared worse, falling from almost 2,200 to a little below 1,100. The 737NG – demand for which was underpinned partly by the ongoing grounding of the 737 Max in China and elsewhere in Asia – recovered to over 2,000 in-service aircraft by November 2020, but drifted down again slightly during mid-2021 as China grappled with a new wave of COVID-19. The region's A320 in-service fleet remained lower by approximately 400 aircraft at August 2021 compared with the pre-pandemic level, as operations by the region's larger low-cost carriers remained severely curtailed.

At the upper end of the market in terms of aircraft size, the in-service A380 fleet hit a peak of 65 during 2019, but collapsed to just a handful of aircraft in March 2020 and has remained in single figures ever since.

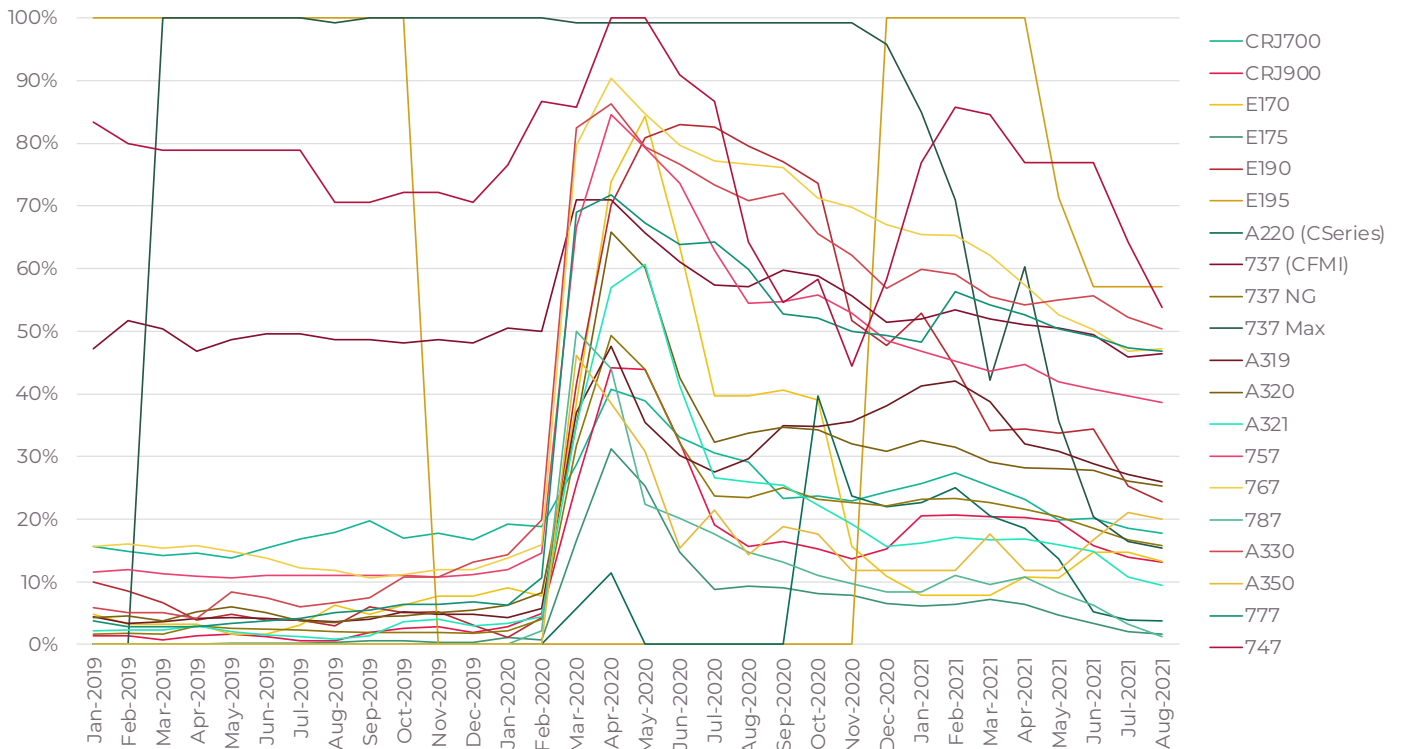
% of fleets in storage – Europe



Fleets of both the A380 and its smaller four-engine sibling, the A340, were hard hit in Europe by the onset of the pandemic. No European-operated A380s have been in service since March 2020, while the region’s A340 in-service fleet reached a low of 17 aircraft in April 2020, recovering to 35 by August 2021. At the opposite end of the scale, Airbus’ latest and most efficient big twin – the A350 – has been in strong demand with on average less than 10% of the European fleet having been inactive throughout 2021. By contrast, just over 20% of the 180-strong European-operated fleet of Boeing 787s remained in storage in August 2021, compared with 60% in March 2020.

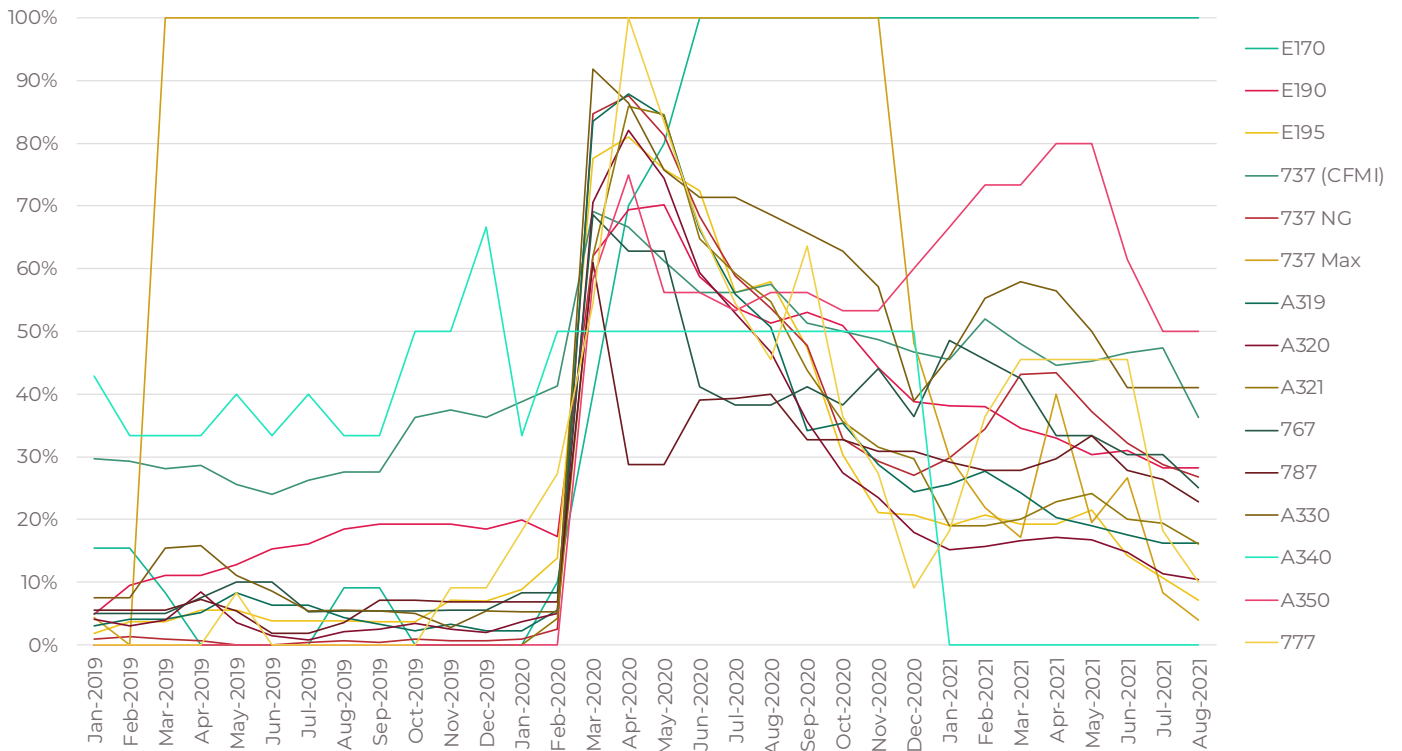
The regional jet fleets, including the Bombardier CRJ700 and 1000 and Embraer 195 have bounced back strongly, with most aircraft now returned to service.

% of fleets in storage – North America



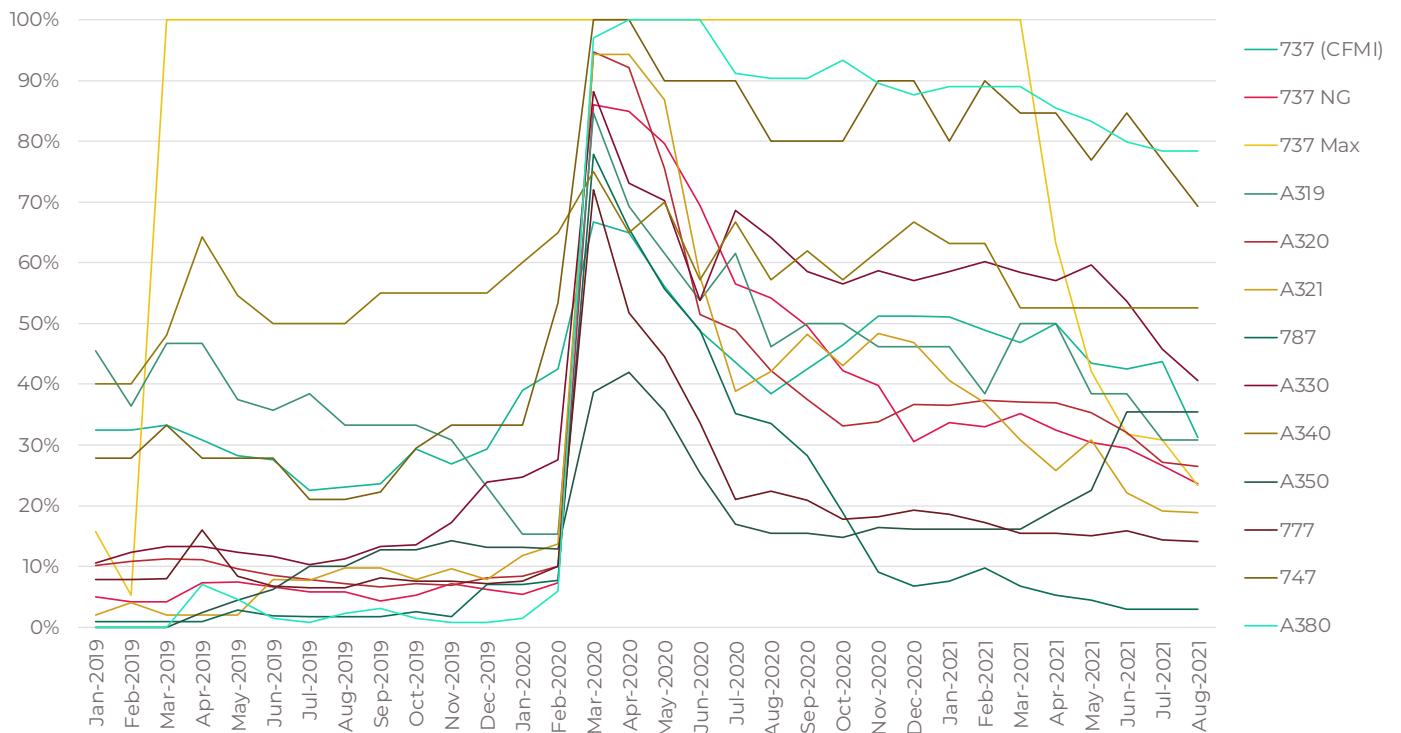
In North America, the pandemic may have resulted in a more fundamental shift in the operational fleets of legacy types such as the 757, 767 and earlier model 777s, with almost half of those fleets remaining inactive since the onset of COVID-19, despite substantial traffic recovery in the region. Just over half of the continent's A330s were also in storage in August 2021. Meanwhile four out of five latest-generation A350 widebody twins out of a modestly-sized overall fleet of 21 aircraft were operational, alongside more than 98% of the region's almost 160 787s. At the lower end of the capacity scale, the CRJ700/900 and E170/175 fleets – accounting for in excess of 1,200 aircraft combined – have recovered well with significantly more than 80% of aircraft active as of August 2021.

% of fleets in storage – Latin America



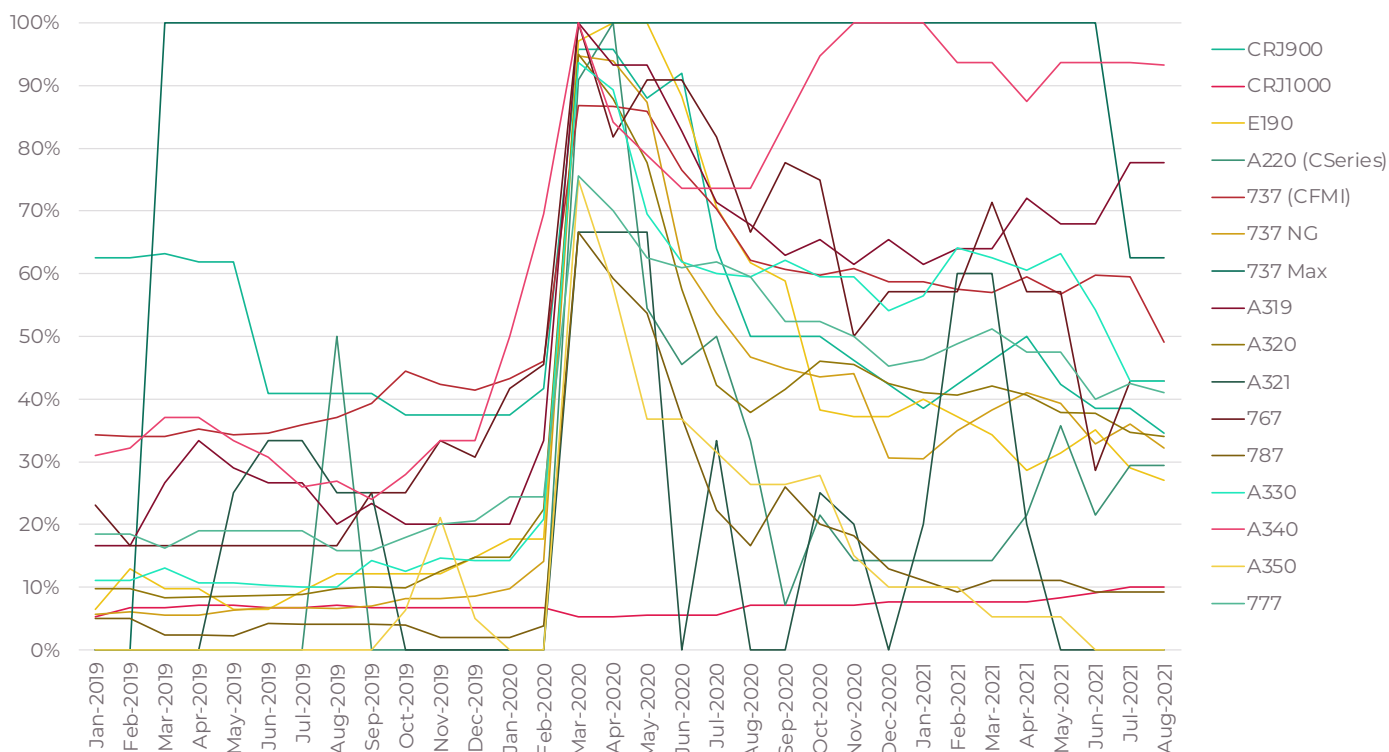
Latin America was the first region to see the 737 Max re-enter revenue service – in late-2020 – and all but 3 aircraft out of the 51-strong fleet were in service by August 2021. Nearly three-quarters of 737NGs are now in service, compared with the low point of April 2020 when barely one in 10 of the type escaped a period of storage. A320 Family types have also made a strong comeback with storage numbers having dropped from over 80% to well below 20% over the same time period. Widebodies have been slower to come back due to ongoing restrictions on international travel, with more than 20% of 787s remaining in storage, while 40% of A330s and 50% of the small fleet of A350s were still in storage.

% of fleets in storage – Middle East



Most notable for the Middle East has been the collapse in A380 activity. The region’s carriers entered the pandemic with a combined in-service fleet of more than 130 of the ultra-large type (dominated by Dubai-based Emirates), and all of the aircraft were placed in storage in March 2020. A handful of A380s returned to service in July of that year, and the active fleet had crept up to 30 aircraft by August 2021. The 777 widebody twin, with its relatively large belly cargo capacity, became the workhorse for the region’s carriers, while almost 75% of the nearly 300-strong fleet entered storage during the peak of the first wave of COVID-19, as of August 2021 fewer than 40 of the type remained in storage.

% of fleets in storage – Africa



The in-service fleet of Africa's single-aisle workhorse – the 737NG – fell to just 13 aircraft in March 2020 after more than 230 of the twinjets were placed into storage. However, by August 2021 just over two in three of the inactive inventory had been returned to operation. The smaller A319/A320 fleets followed a similar pattern. On the long-haul side, most 787s and A330s were grounded at the height of the pandemic, but these have recovered to the extent that only four of 54 of the Boeing twinjets are currently stored, versus 13 of the 35 Airbus type aircraft operated by the region's carriers.

CONCLUSION

While load factors, particularly for international travel, remain low in many regions, airlines have sought to reduce excess capacity through changes in how their fleet is deployed, often parking their larger aircraft. As traffic begins to recover, there is evidence of larger aircraft coming back into service, even if daily utilisation rates (flights and flight hours) remain lower than normal.

This change in airline fleet mix is coupled with a rise in business aviation traffic. Several regions are reporting business aviation traffic at 25% higher than 2019 levels. All signs of recovery are welcome, but the shift in fleet warrants watching for its implications for overall system capacity and the revenue picture for ANSPs, whose charges to a significant extent are based on aircraft weight. Traffic movements may be back at pre-pandemic levels well before the revenue picture recovers.