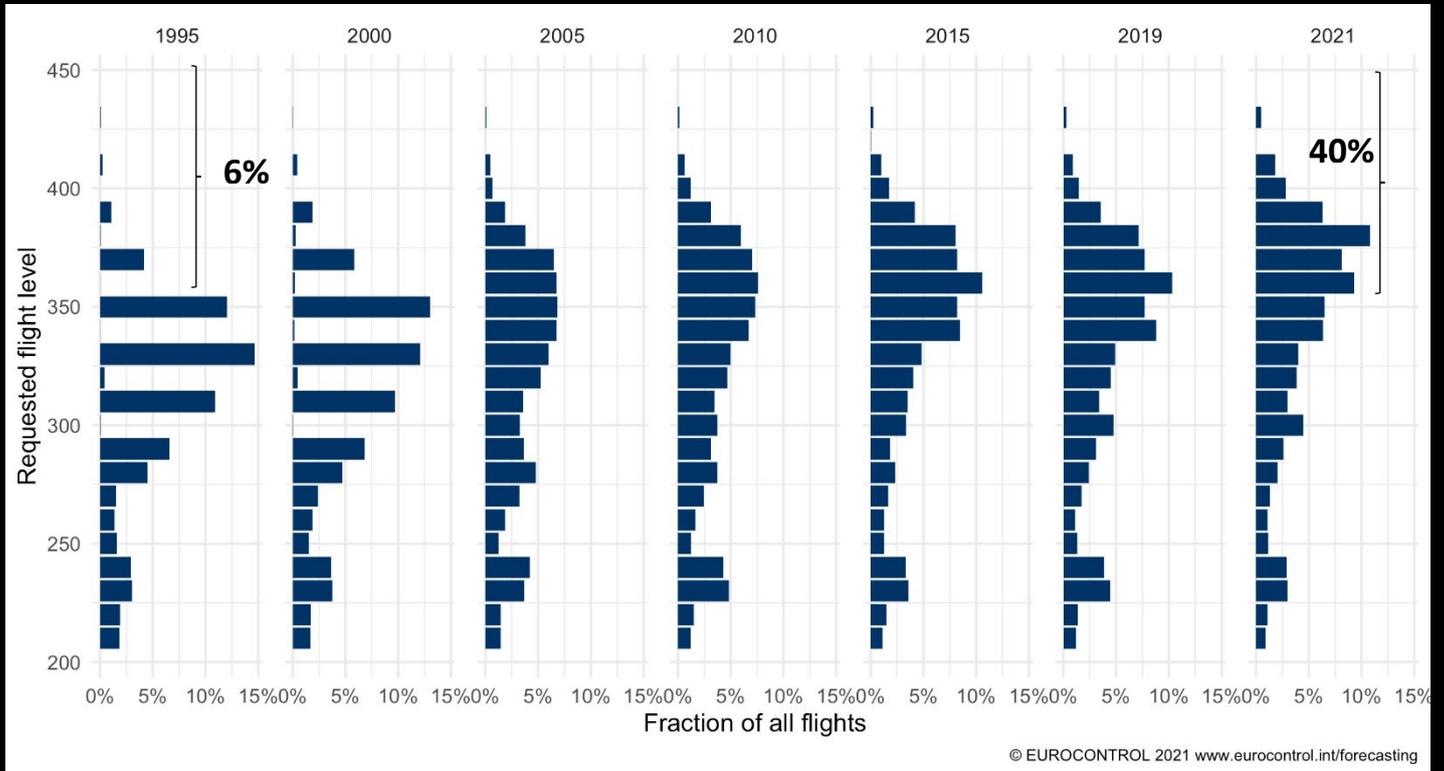


EUROCONTROL Data Snapshot

Aircraft keep flying higher, creating extra airspace capacity and burning less fuel, saving 1 million tonnes of CO₂ per year.



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In their flight plans, aircraft request to cruise at an altitude ('flight level') that's most efficient for them, so that they burn less fuel. When airspace is congested, they might request lower or be kept lower by air traffic management. The graph shows how requested cruise levels have increased over the last 25 years: in September 1995 only 6% of flights requested to cruise above flight level 350 (FL350, approximately 35,000 feet), by September 2021 40% of flights did.

Two advances in aircraft technology have driven cruise levels higher over this period. First, altimeters improved to the point where it was safe to switch from 2,000 to 1,000 foot vertical spacing in the upper airspace, as it had been in lower airspace for some years. The graph shows the benefits of the 'Reduced Vertical Separation Minima' (RVSM) project through which EUROCONTROL, air navigation service providers and airlines came together to transform European airspace at the beginning of the century, opening up the 'even-numbered' flight levels up to FL400. As a result by 2005, rather than having 13% of flights asking to fly at FL350 (in 2000), the traffic was more evenly spread.

The second advance was less of a revolution in airspace management and more an evolution of the aircraft fleet: newer aircraft are built to cruise efficiently at higher levels. By September 2021, the most-requested cruise level was FL380, 5,000 feet (1.5km) higher than 1995's most-requested FL330.

We estimate that the efficiency improvements resulting from the six new flight levels deliver annual fuel savings of over 300,000 tonnes, equivalent to reductions of almost 1 million tonnes of CO₂ every year. RVSM demonstrates that the provision of greater capacity can help to reduce the environmental impact of aviation by offering more flexibility to airspace users and ANSPs allowing them to implement more efficient and environmentally friendly operations.

The graph shows growing demand at FL410 and FL430. This is particularly true over the North Atlantic, and the air navigation providers responsible are beginning to think about what would be involved in extending RVSM above FL410.

Technical Bits: Data are for all flights in the Network Manager area, in September of the year. Some aircraft request cruise levels which are not shown in the figure, but *are* counted in the fraction of all flights. Data on requested and actual cruise flight levels are available in the [R&D Data Archive](#).

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