

Optimized flight routes

NEW TECHNOLOGY REDUCES CO₂ EMISSIONS

Starting in 2024, the Lufthansa Group will equip its fleet with an innovative flight route technology to avoid flight diversions and, consequently, reducing CO₂ emissions. Four years later, the technology is to become mandatory in Europe. The EU Commission is called upon to adhere to its schedule in a binding manner.

In addition to the use of fuel-efficient aircraft and sustainable fuels, modern airspace management plays a crucial role in achieving environmentally friendly aviation. The “Automatic Dependent Surveillance – Contract Extended Projected Profile” (ADS-C EPP) continuously transmits real-time flight data to the ground, enabling continuous adjustments to the current flight route.

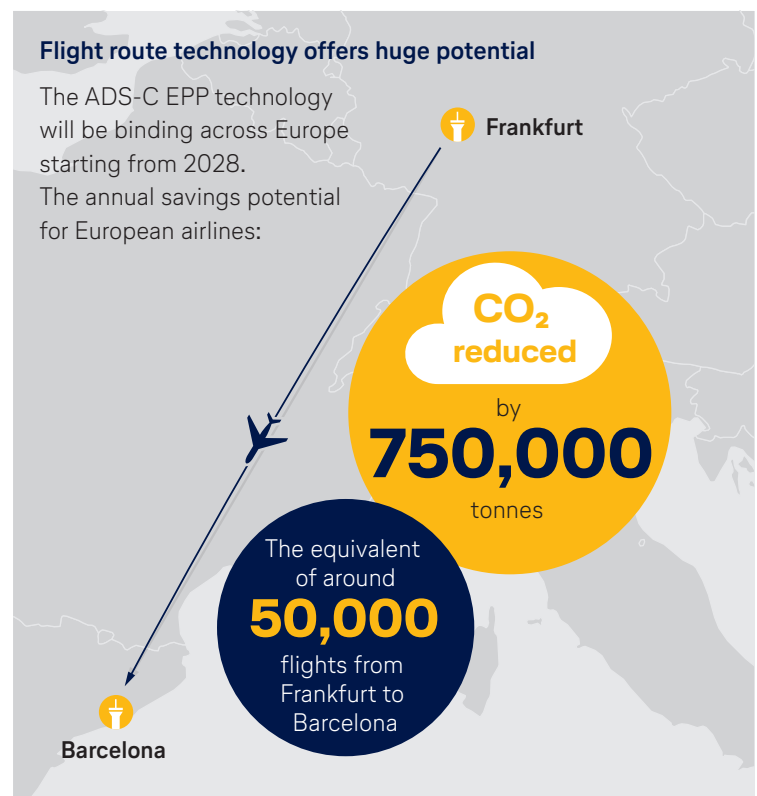
Making more efficient and sustainable use of airspace

With the assistance of this application, which creates a 4D flight path in spatial dimensions (length, width, height) and time, flight information is transmitted automatically and in real time to air traffic control. The generated data is extremely precise, facilitating more efficient airspace management. Air traffic controllers can continuously determine optimally coordinated flight routes for all aircraft equipped with the technology, thereby enhancing airspace capacities. This approach minimizes diversions, leading to reduced kerosene consumption and lower CO₂ emissions. In figures, this translates to each equipped aircraft saving up to 80 tonnes of CO₂ per year. For European airlines, this represents a potential reduction of around 750,000 tonnes of CO₂ annually – equivalent to nearly 50,000 flights from Frankfurt to Barcelona.

ADS-C EPP also optimizes takeoffs and landings: in a traditional step-by-step ascent, aircraft reach their desired flying altitude through individual steps, which consumes more fuel and requires air traffic controllers to provide instructions at each step. On ascents optimized by ADS-C EPP, aircraft can

Flight route technology offers huge potential

The ADS-C EPP technology will be binding across Europe starting from 2028. The annual savings potential for European airlines:



ascend continuously in a fuel-efficient manner. Additionally, this technology reduces CO₂ emissions during landings by enabling aircraft to fly for longer at their optimal cruising altitude, where fuel consumption is lower.

Lufthansa Group takes on a pioneering role

Starting from 2028, the new ADS-C EPP flight data technology is to become mandatory for all new aircraft and air traffic control ground systems. The Lufthansa Group will begin using this technology as early as next year to expedite CO₂ savings on its flights. To achieve this goal, over 65 Airbus A320neo and A321neo aircraft will be equipped with this system starting in 2024.

Investments require planning certainty

To realize full CO₂ saving potential, all airlines and air traffic control will need to adopt the new technology in the future. However, airlines will only invest in this technological equipment if Brussels adheres to the agreed implementation timeline starting from 2028. Therefore, it is crucial for the EU Commission to pursue the established schedule in a clear and binding manner, and to offer significant incentives for investments right away.