Operational Efficiency

Safe, sustainable skies are the priority. Boeing continues to invest to ensure our aircraft have the latest equipment and services to support advanced procedures, and we also work with airlines, government customers, air navigation service providers and airports on efficiency improvements. These include procedures such as continuous descent approaches and equipment upgrades such as GPS-based navigation for more direct routings. We develop services to leverage data for fuel and flight efficiency, help customers optimize flight planning and provide pilots with real-time weather and traffic information.

"Boeing has multiple digital solutions available today and even more that are in development to help customers improve their fuel and flight efficiency while reducing carbon emissions."

Stephanie Pope, president and CEO of Boeing Global Services

Managing air traffic efficiently

Boeing works with governments, airports, airlines and air navigation service providers around the world on exploring new approaches to air traffic management (ATM).

Why it matters: Optimized ATM is a critical component needed to reach the commercial aviation industry's net-zero ambition — collaboration on how to manage airspace more efficiently can reduce emissions by about 10%, according to EUROCONTROL.

Around the globe: ATM solutions designed to address specific, local and regional needs help airports and airlines operate more safely, quietly and sustainably:

- **China:** Boeing is supporting China's Air Traffic Management Bureau in exploring a new approach to ATM called "EoR" — Established on Required Navigation Performance (RNP). It's a separation standard for landing aircraft established by the ICAO, which enables safe separation on parallel runways through simultaneous RNP-equipped arrivals, while reducing fuel burn, greenhouse gas emissions and noise.
- **Europe:** Boeing is participating in seven new Single European ATM Research (SESAR) 3 Joint Undertaking research projects, renewing a 20-year-plus commitment to aircraft operational efficiency and air traffic management in Europe and paving the way to a future sustainable sky. The seven projects address critical areas for change, including emissions reduction, automation enabled by artificial intelligence, resilient ATM service provision, as well as the swift uptake of solutions for the integration of drones (U-space), urban air mobility, multimodality and reduced emissions operations. The partnership is a European undertaking between private and public sector partners to accelerate the delivery of the Digital European Sky through research and innovation. To do so, it is harnessing, developing and accelerating the implementation of the most cutting-edge technological solutions to manage conventional aircraft, drones, air taxis and vehicles flying at higher altitudes.
- **India:** Boeing completed the development of a 10-year road map for Communication, Navigation and Surveillance/Air Traffic Management (CNS/ATM) for Airports Authority of India (AAI). Backed by the U.S. Trade and Development Agency, Boeing and AAI conducted an analysis across operational, environmental, regulatory, technological, safety and financial factors. The resulting road map focuses on improving airspace utilization and maintaining safe and efficient aircraft operations — helping to modernize the Indian National Airspace System with domestic traffic expected to double by the end of this decade.

Executive operations support assistant in EUROCONTROL's Maastricht Upper Area Control Centre, which enables air traffic controllers to provide safe and efficient air traffic services. (EUROCONTROL photo)

The bottom line: Boeing will continue developing local and global partnerships within the aviation ecosystem, enabling exchange of expertise and technology to help build a safer and more sustainable future of flight.