SAFER, SHORTER AND GREENER FLIGHTS WITH NEW AIR NAVIGATION CONCEPT

It was announced from ICAO HQ in Montreal on 1st April that major stakeholders of the world aviation community had signed a Declaration calling for the rapid implementation of Performance-based Navigation (PBN), a new air navigation concept that will contribute to further improving the safety, efficiency and sustainability of the global air transport system.

Speaking on behalf of the group, the President of the Council of the International Civil Aviation Organization (ICAO), Roberto Kobeh González, emphasized that PBN “Will help reduce airport and airspace congestion, conserve fuel and protect the environment, reduce the impact of aircraft noise near airports, and ensure reliable, all-weather operations. It will also provide operators with greater flexibility, while increasing safety and efficiency.

“Our collective mission has always been to provide the citizens of the world with the safest and most efficient air transport system possible. Performance-based Navigation is vital to helping us fulfil our mission today and in the future,” he stressed.

PBN sets clear performance requirements for any given flight operation. It involves a major shift from conventional ground-based navigation aids and procedures to satellite-based navigation aids and area navigation procedures, which are more accurate and allow for shorter, more direct routes between two given points, as well as more efficient take-offs and landings. This reduces fuel burn, airport and airspace congestion, and aircraft emissions.

For example, Qantas and AirServices Australia agreed to develop PBN arrival procedures for Australian airports. Phase 1 included approaches for Brisbane to be flown by Qantas’ Boeing 737’s. In the first year, Qantas flew 1612 PBN approaches to Brisbane in low visibility conditions, which reduced normal distance flown by 17,300 nautical miles and reduced CO2
emissions by 650,000 kg. Overall, the International Air Transport Association (IATA) estimates that shorter PBN routes could cut CO2 emissions by 13 million tonnes per year if globally implemented. PBN also improves customer service, by reducing diversions caused by low visibility weather conditions and providing better access to “weather-challenged” destinations, while helping to improve overall on-time performance by airlines.

In his statement, Mr. Kobeh emphasized that “the sooner we implement Performance-based Navigation, the sooner we will reap its enormous benefits. This was recognized by the 36th Session of the ICAO Assembly in 2007 when it urged all Member States of the Organization to have PBN implementation plans ready by 2009.”

The Declaration calls upon all leaders of the civil aviation community to actively implement PBN in accordance with ICAO provisions. It also reaffirms that global co-operation is essential to the success of the undertaking.

A co-ordinated action plan to assist states in the implementation of PBN, according to ICAO criteria, has been drawn up and all ICAO Regional Offices have established PBN task forces. A Global PBN Task Force, made up of States and industry partners, is assisting with the implementation of PBN. In support of worldwide seamless and harmonized implementation of air navigation systems around the world, the United States’ Next Generation Air Transportation System (NextGen) and the European SESAR future air navigation systems are based upon the application of PBN and the ICAO Global Air Navigation Plan.

The signing ceremony for the PBN Declaration was held in Geneva, in conjunction with the 4th annual Aviation & Environment Summit organized by the Air Transport Action Group.