

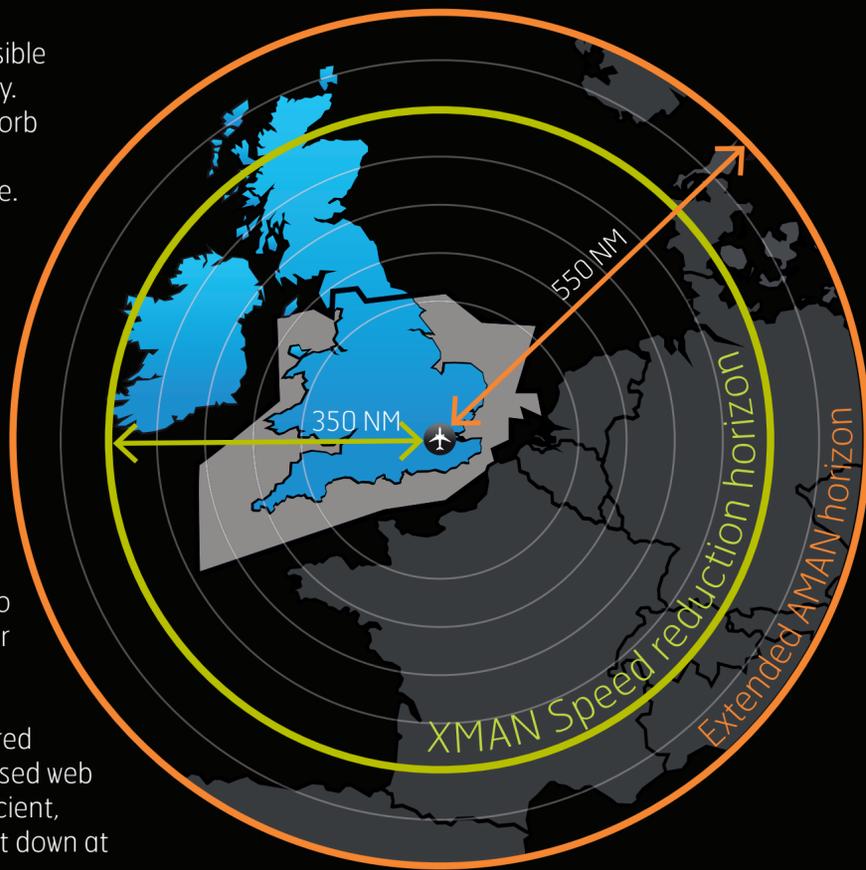
Cross Border Arrival Management (XMAN)

Congestion in busy TMAs is the most visible consequence of operational inefficiency. Currently, it is accepted practice to absorb any excess arrival demand through the utilisation of stacks in the lower airspace. This practice is most apparent at Heathrow which experiences holding in four stacks throughout the day.

The XMAN concept is based upon delay being transferred from low level orbital stacks into high level linear delay.

NATS together with Exelis Orthogon's AMAN and Snowflake's GO Publisher technology, utilised a SESAR concept to implement the world's first multi-partner XMAN system at London Heathrow.

Airborne delay data at Heathrow is shared with NATS' XMAN partners via SWIM based web centric architecture. If the delay is sufficient, partner ATCOs then start to slow aircraft down at 350nm from the airport.



Benefits

Reducing Stack Holding
Allows delay to be absorbed in the more fuel efficient and less congested cruise phase of flight.

Influencing International ATM Industry
Realising benefits by introducing interoperability using open standards.

Reduced Aircraft Fuel Burn
Up to now the trial phase has saved the airlines €1.25m.

Enabling SESAR Deployment
The world's first deployment of a SESAR based multi-partner cross border extended arrival management system.

Leading Through Innovation
Pioneering multi-national ANSP cooperation through SWIM architecture.

Reduced Carbon Emissions
The trial to date has saved 5Kt of CO₂ emissions.

Delivering

International Collaboration
XMAN has been an international FAB to FAB collaboration between UK Ireland FAB, FABEC and numerous industrial partners.

System Virtualisation
Successfully introduced by XMAN into the operational environment resulting in the consolidation of equipment and reduced operating costs.

SESAR Concepts
NATS together with Exelis Orthogon's AMAN system and Snowflake's GO Publisher software utilised a SESAR concept to implement the world's first multi-partner systemised cross border arrival management capability.

Service Orientated ATM Technology
Heathrow XMAN has demonstrated that the use of Service Oriented Architecture has tangible benefits in terms of reduced development costs and a potential for new services through open standards. SWIM provides the right information to the right people at the right time.



Achieving

Since April 2014, XMAN has saved airlines around €1.25m in fuel and 5'000 tonnes of CO₂.

