



**Leading
Optimised
Runway
Delivery**



2018
World ATM Congress

**SESAR
walking
tours**

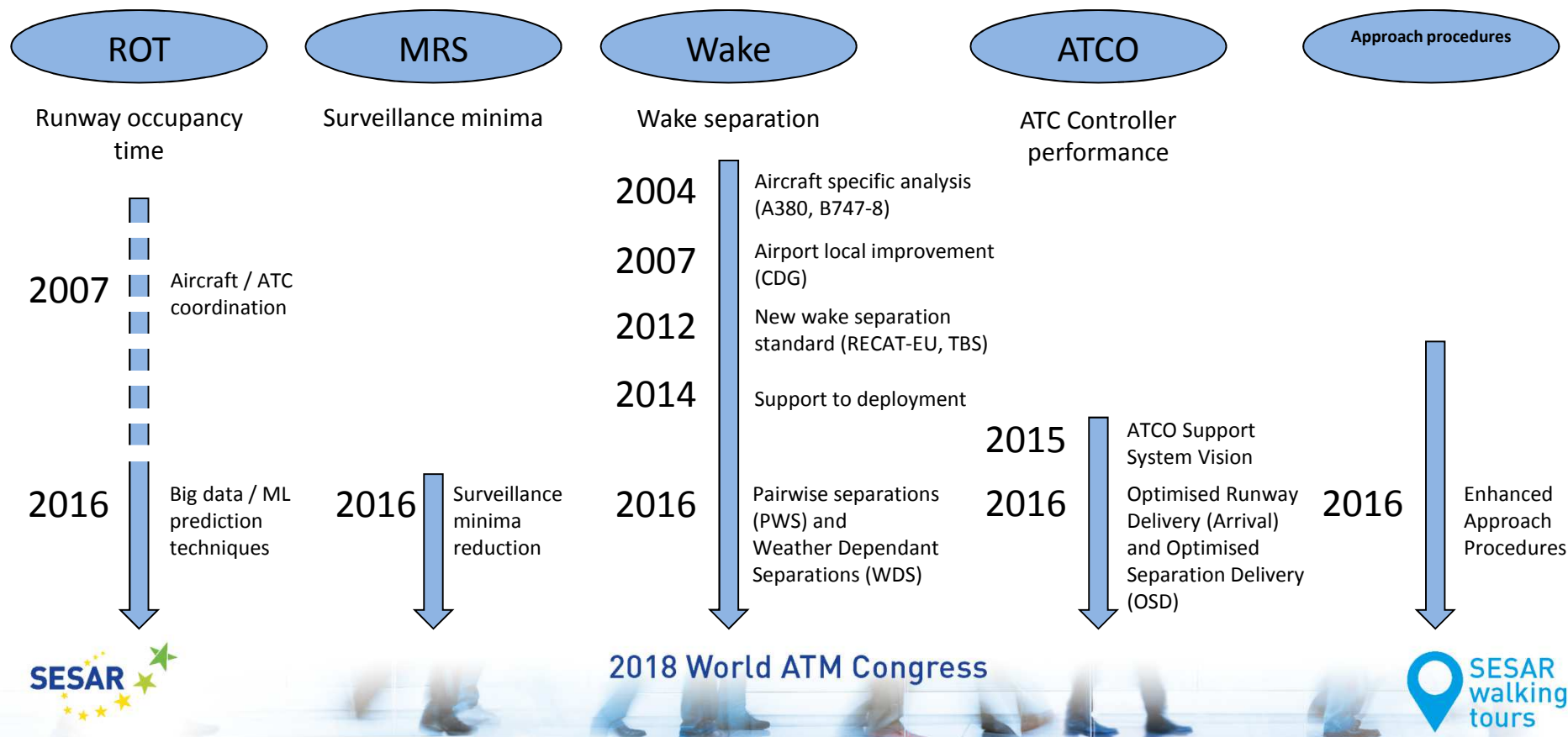
EUROCONTROL Stand



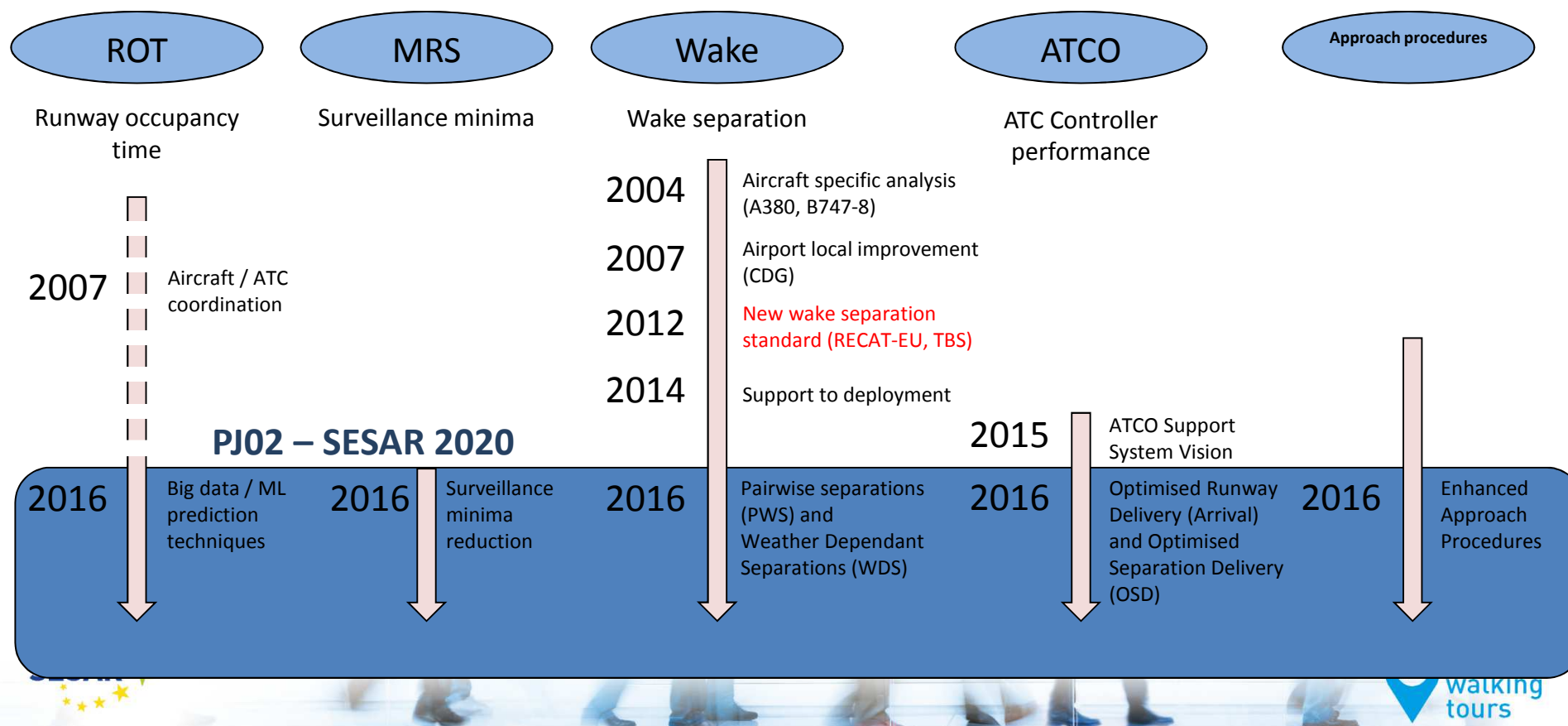
#PoweredBySESAR

Stand 890

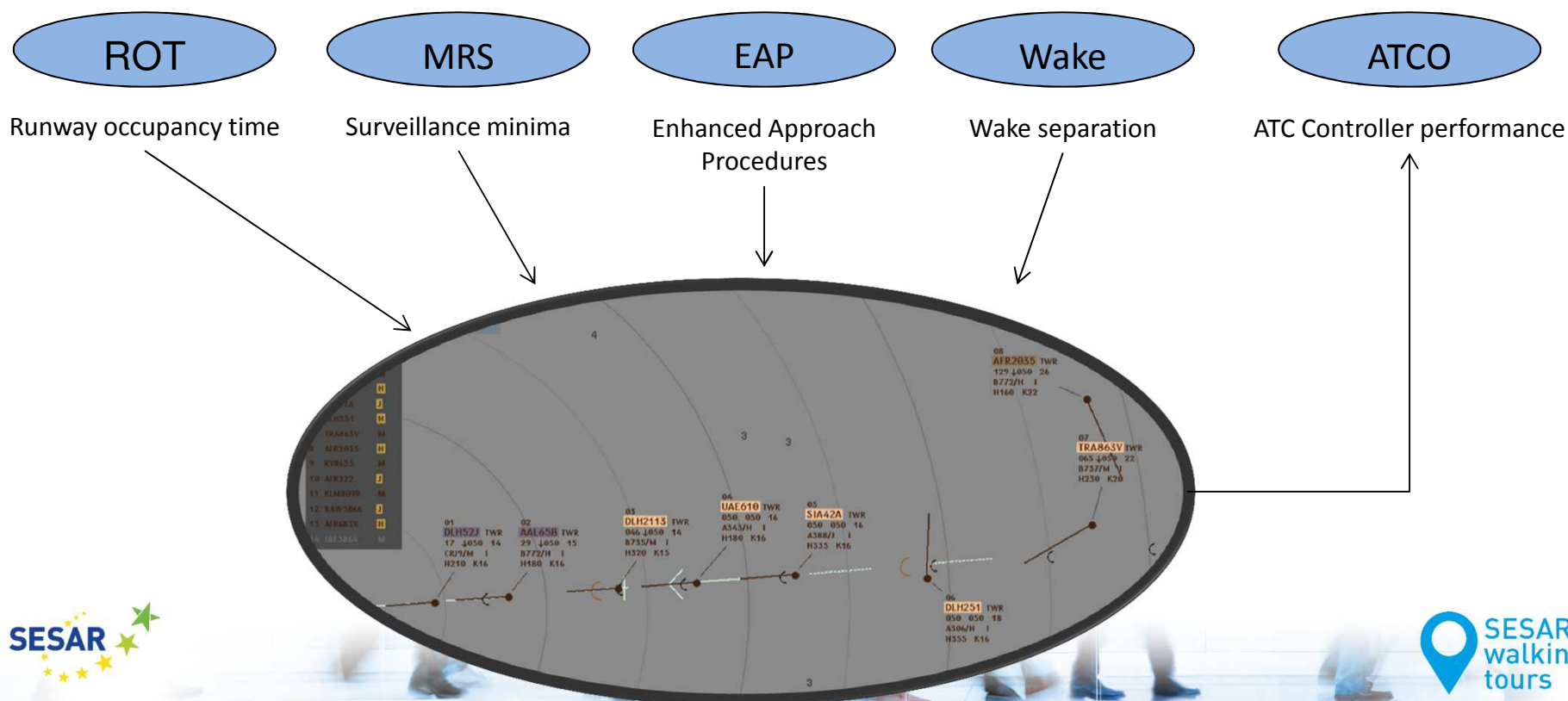
Runway throughput is constrained by...



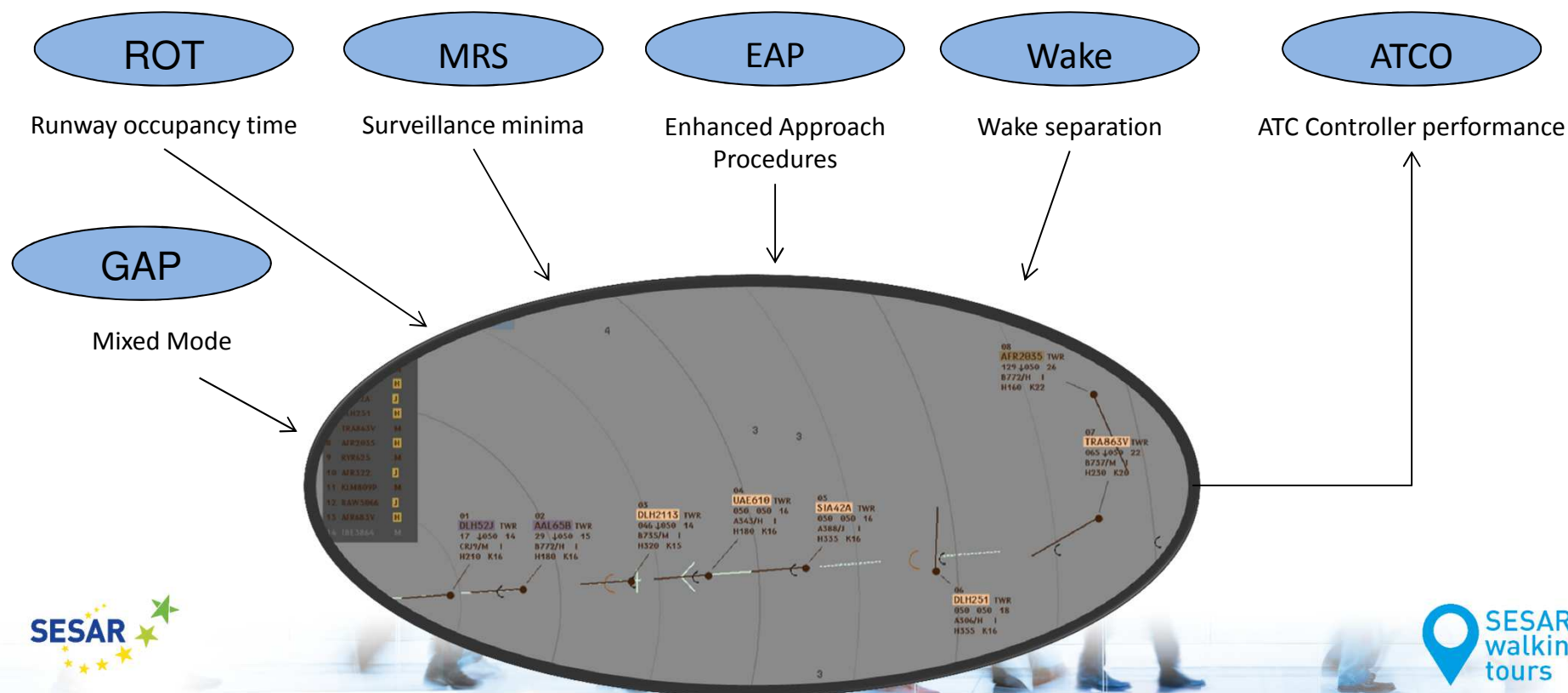
Runway throughput is constrained by...



LORD is the system vision for integrating all runway throughput enhancement solutions



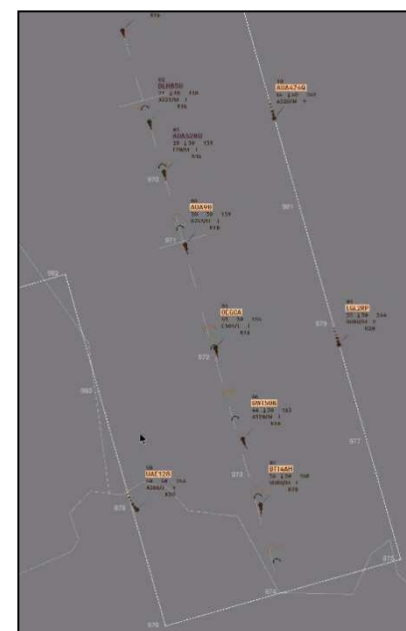
LORD is the system vision for integrating all runway throughput enhancement solutions



LORD HMI - Videos



Interception using ITD

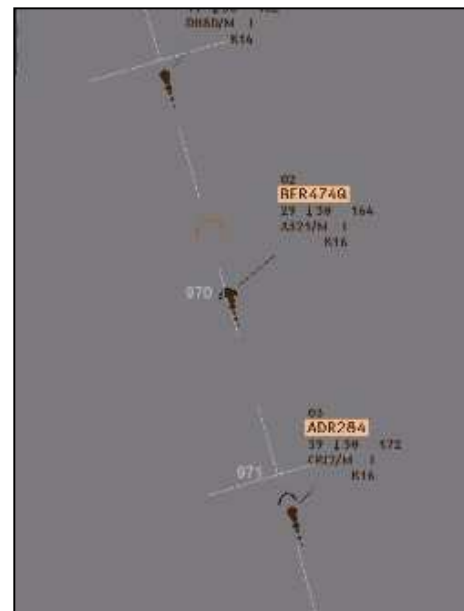


Convergence ITD on FTD

LORD HMI - Videos

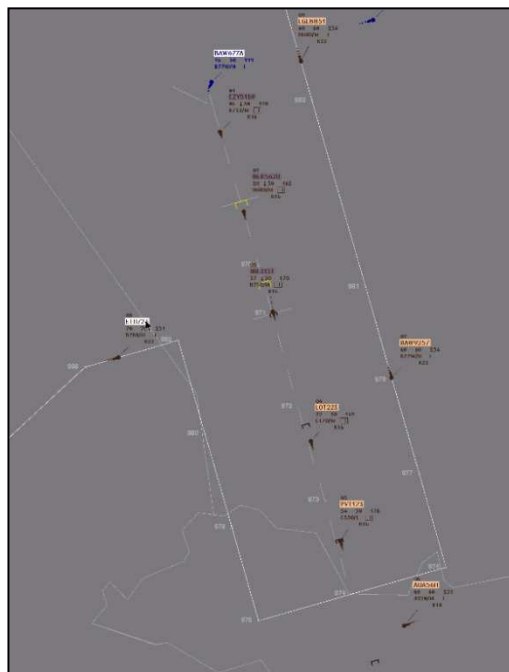


Catch-up alert



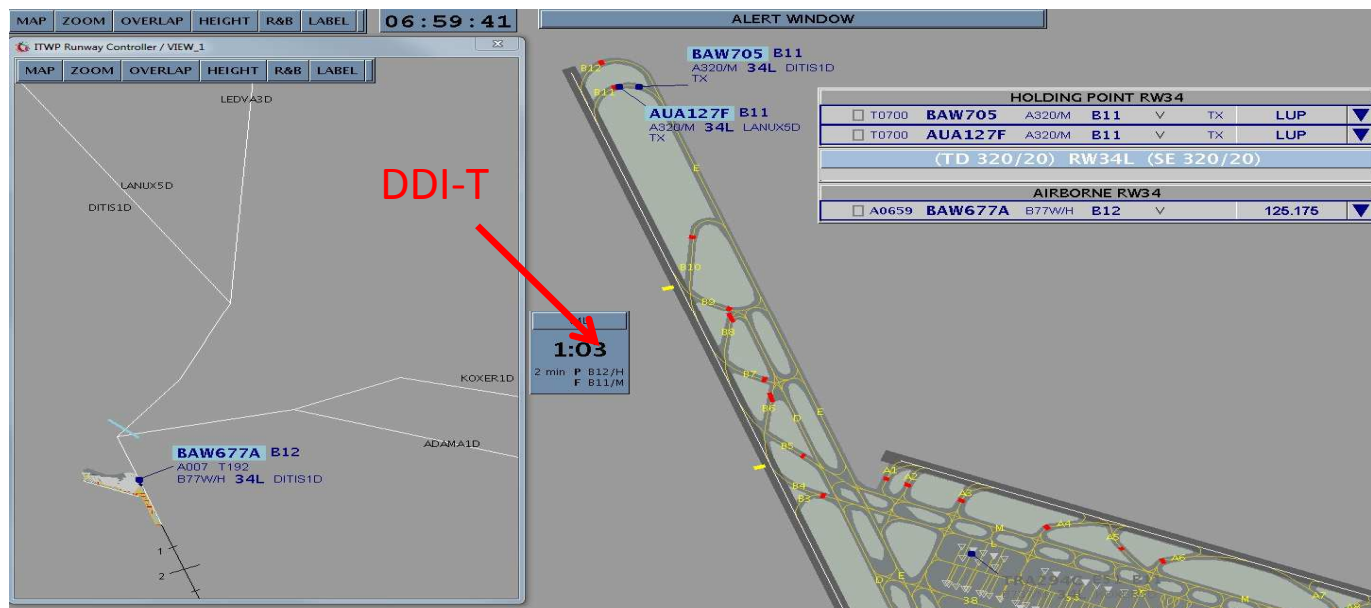
ITD Infringement alert

LORD HMI - Videos



Mix-mode

Optimised Separation Delivery (OSD) tools for departures



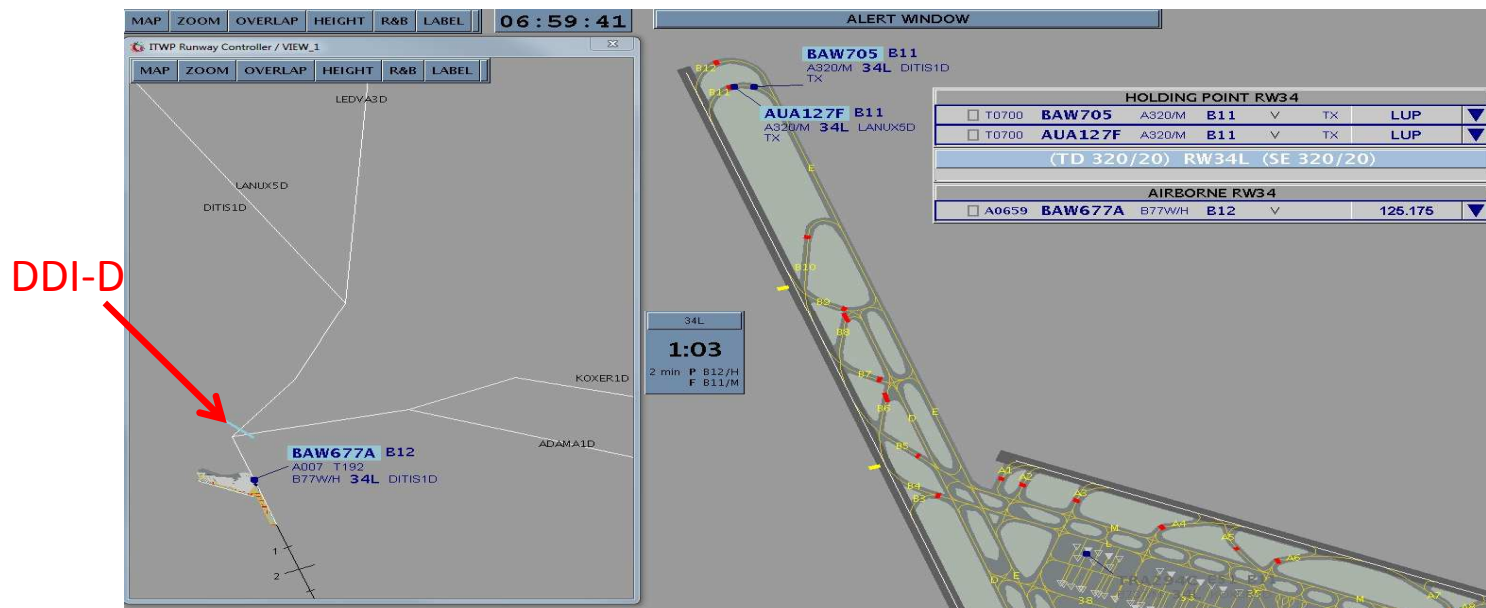
- **Timer**
 - Automated count down timer for separations based on time
 - ICAO & PWS Wake Separation scheme



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Optimised Separation Delivery (OSD) tools for departures



Departure Distance Indicator (DDI-D)

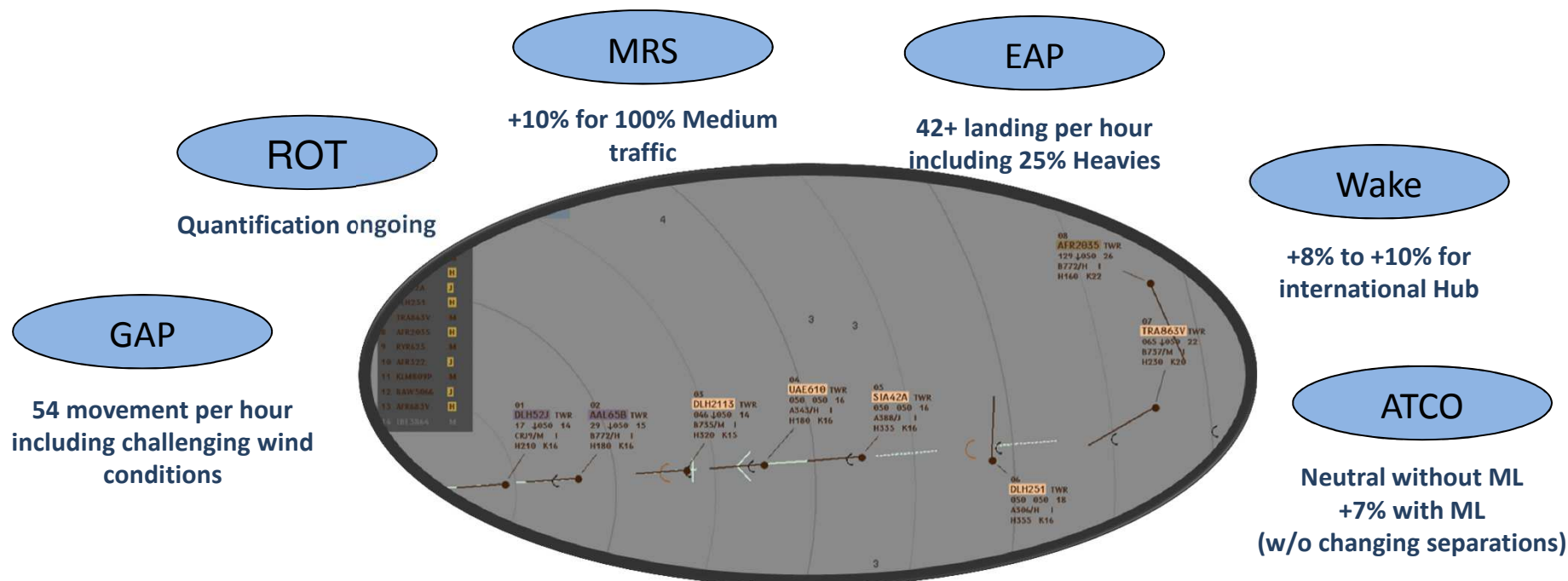
- SID, wake and spacing constraints (5NM and 8NM) in distance.



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Benefit quantifications





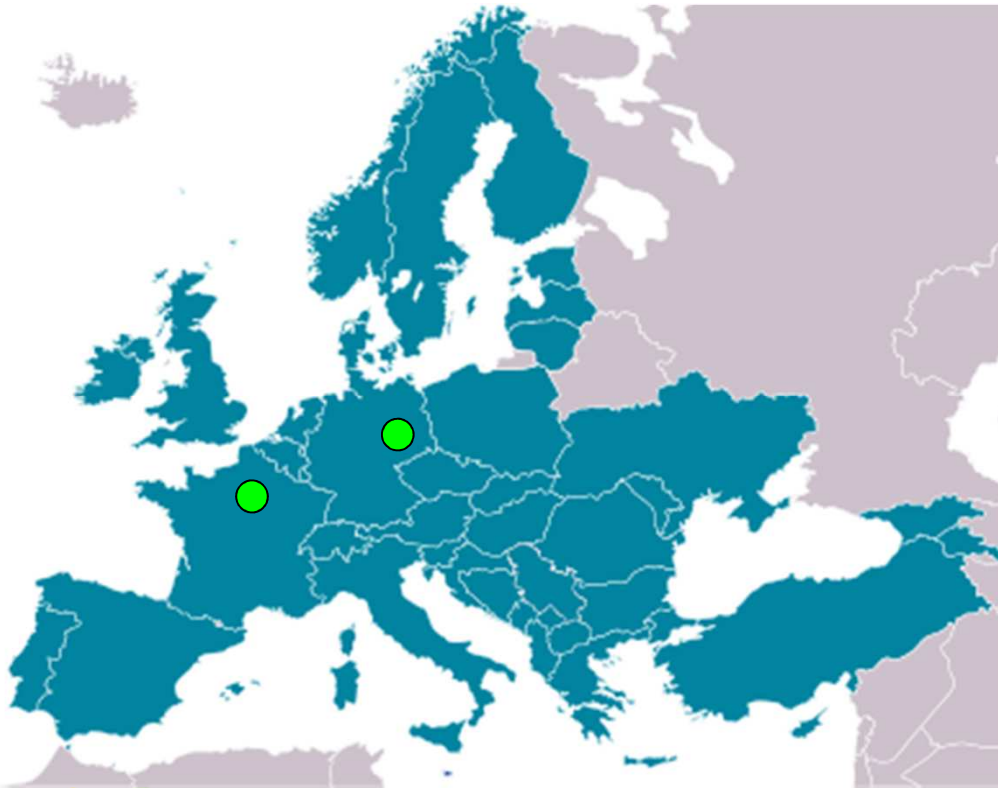
Achievements

RECAT-EU



RECAT-EU operates in

- **Paris Charles de Gaulle** (second larger airport in Europe) since March 2016
 - **10%** runway throughput observed
 - 1 year monitoring didn't show increase of wake incidents
- **Leipzig/Halle Airport** (second-busiest freighter hub in Germany after Frankfurt Airport) since July 2017



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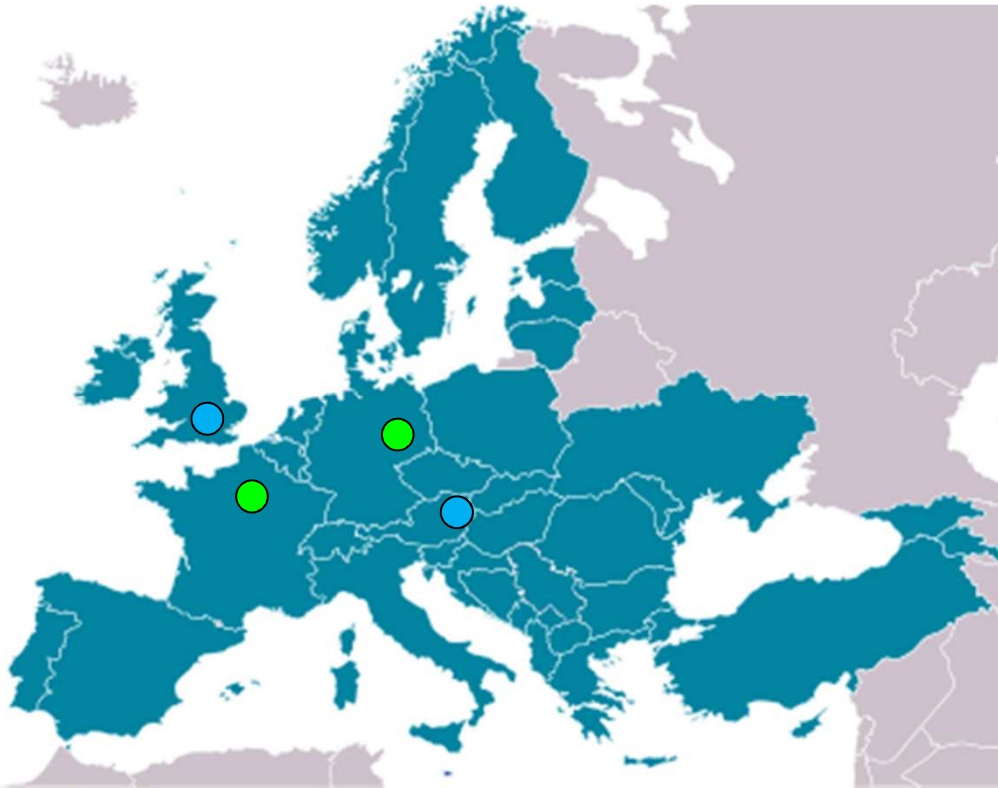


RECAT-EU



RECAT-EU will be operated in

- **London Heathrow** (first larger airport in Europe) early 2018
- **Vienna** (250,000 movement / year) mid 2018



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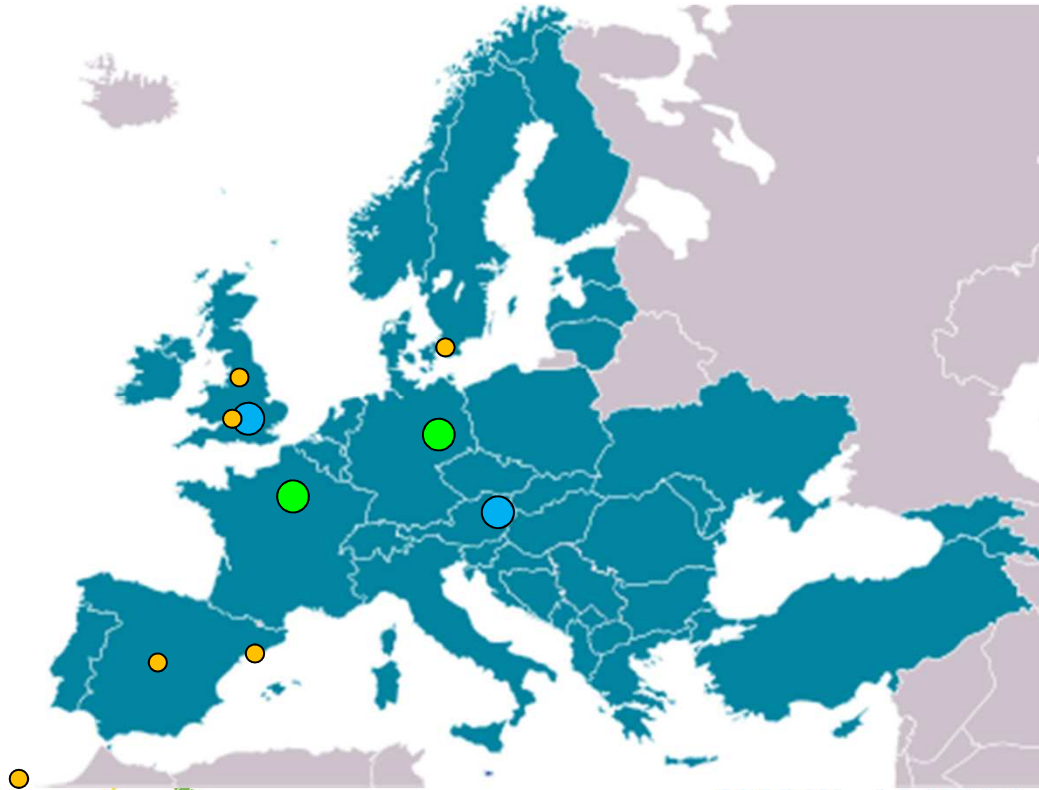


RECAT-EU



Preliminary analyses to deploy
RECAT-EU in

- Manchester
- Gatwick
- Barcelona
- Las Palmas
- Madrid
- Copenhagen



SESAR

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RECAT-EU



Bi-lateral discussion and/or
Cooperation to deploy **RECAT-EU**
in

- **Tokyo**
- **Dubai** (testing ongoing)
- **Singapore**
- **Hong Kong**
- **Moscow**



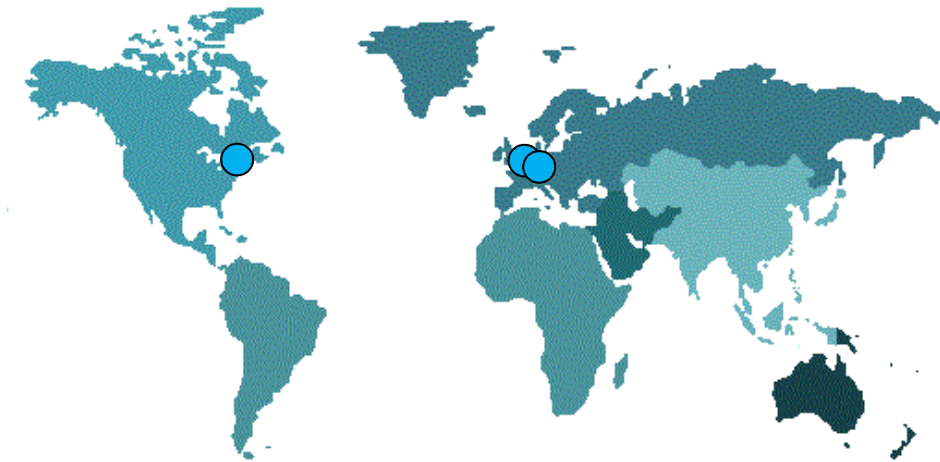
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RECAT-EU



- Validated by EUROCONTROL
- Regulated by EASA
- Now agreed to be transposed into ICAO Doc44-44



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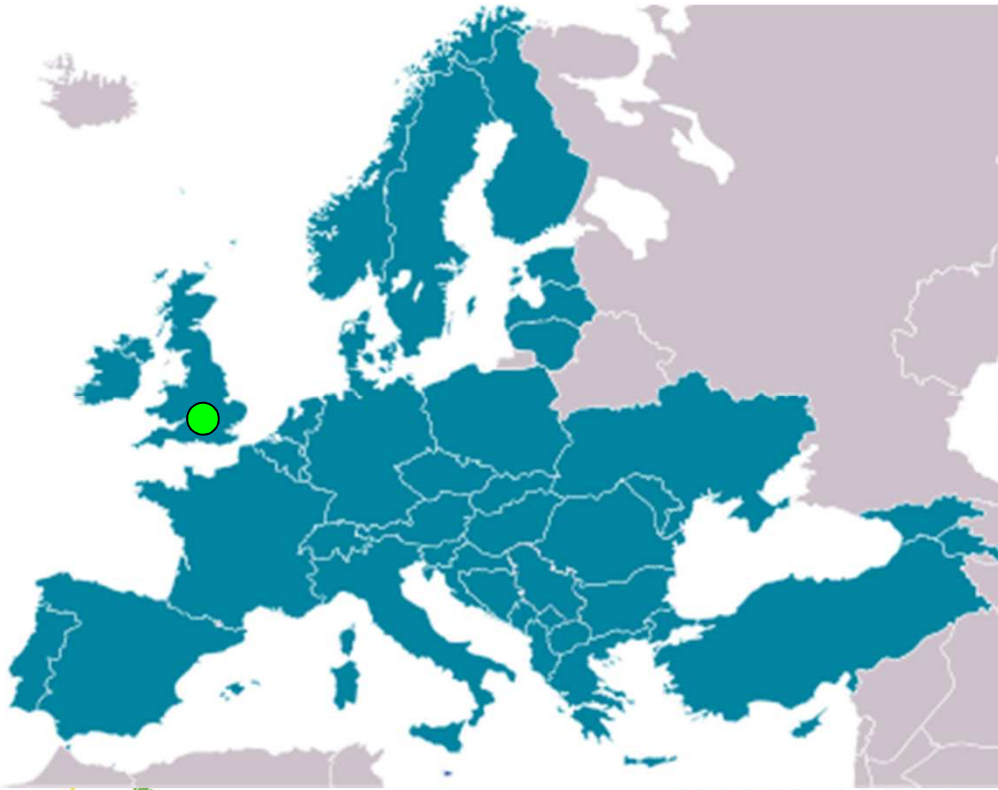


TBS



Time based separation operates in

- **London Heathrow** (first larger airport in Europe) since March 2015
 - **62%** Reduction in ATFM delay
 - **2.9** additional movements per hour in strong winds
 - **1.2** extra movements per hour



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TBS



Support provided for **Time based separation** deployment to

- **Vienna** (250,000 movement / year)
- **Zurich** (270,000 movement / year)
- **Copenhagen** (265,000 movement / year)

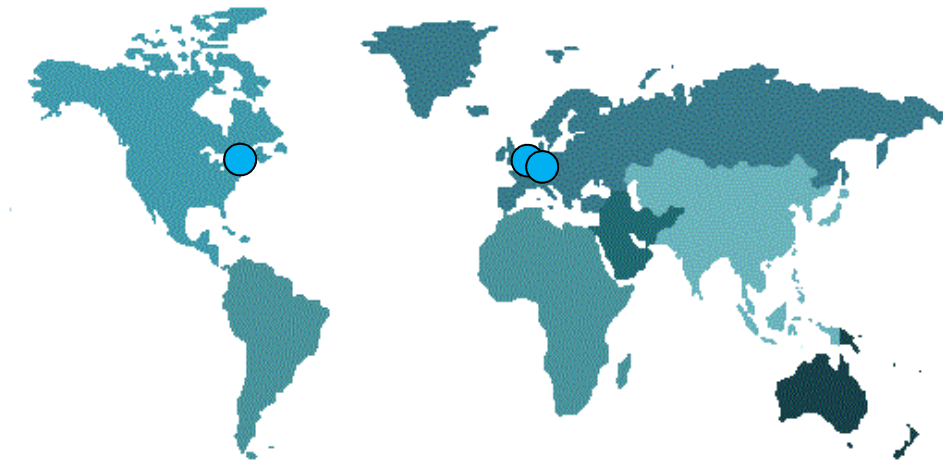
16 European airports committed to deploy Time Based Separation as from 1 January 2024)



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TBS



- EUROCONTROL Safety Case currently reviewed by EASA
- EUROCONTROL Specification just published
- Drafting of the ICAO TBS SARPs now considered



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Thank you for your attention