



- # Aviation package

Towards a truly Single European Sky

● EC Aviation Timeline

- Single Market Air Transport – 1992
- EASA – 2002
- First ATM Package – 2004
- Second Package + EASA extension - 2008



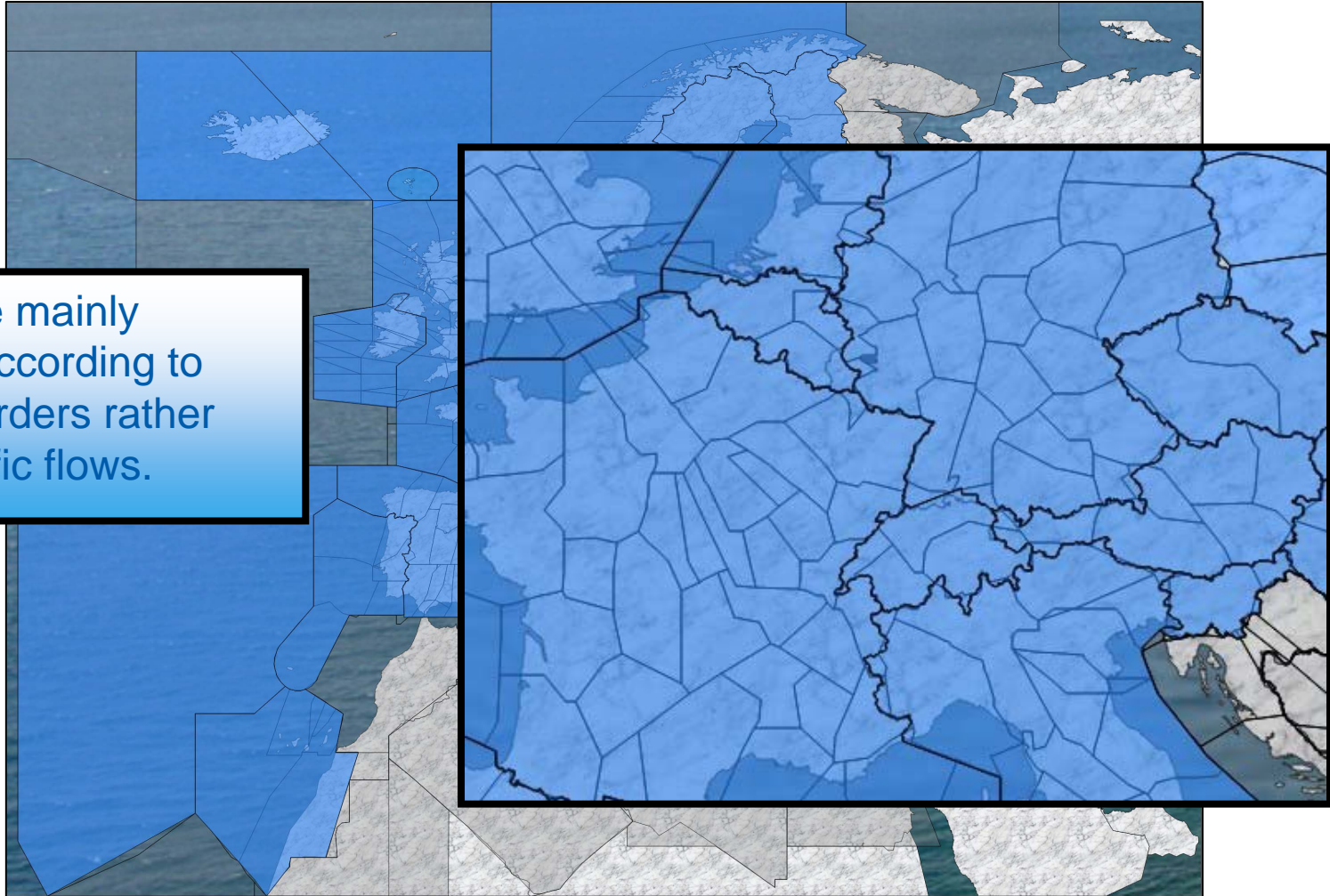
● Looming crisis in the air

- Traffic growing faster than capacity
- Emissions growing faster than any other transport sector
 - » Some 90% growth since 1990
- Fuel crisis coupled with high cost of air traffic services
- Implementation of original Single European Sky (SES)
 - » Fragmentation
 - » Cost of inefficiencies 4.4bn€/year

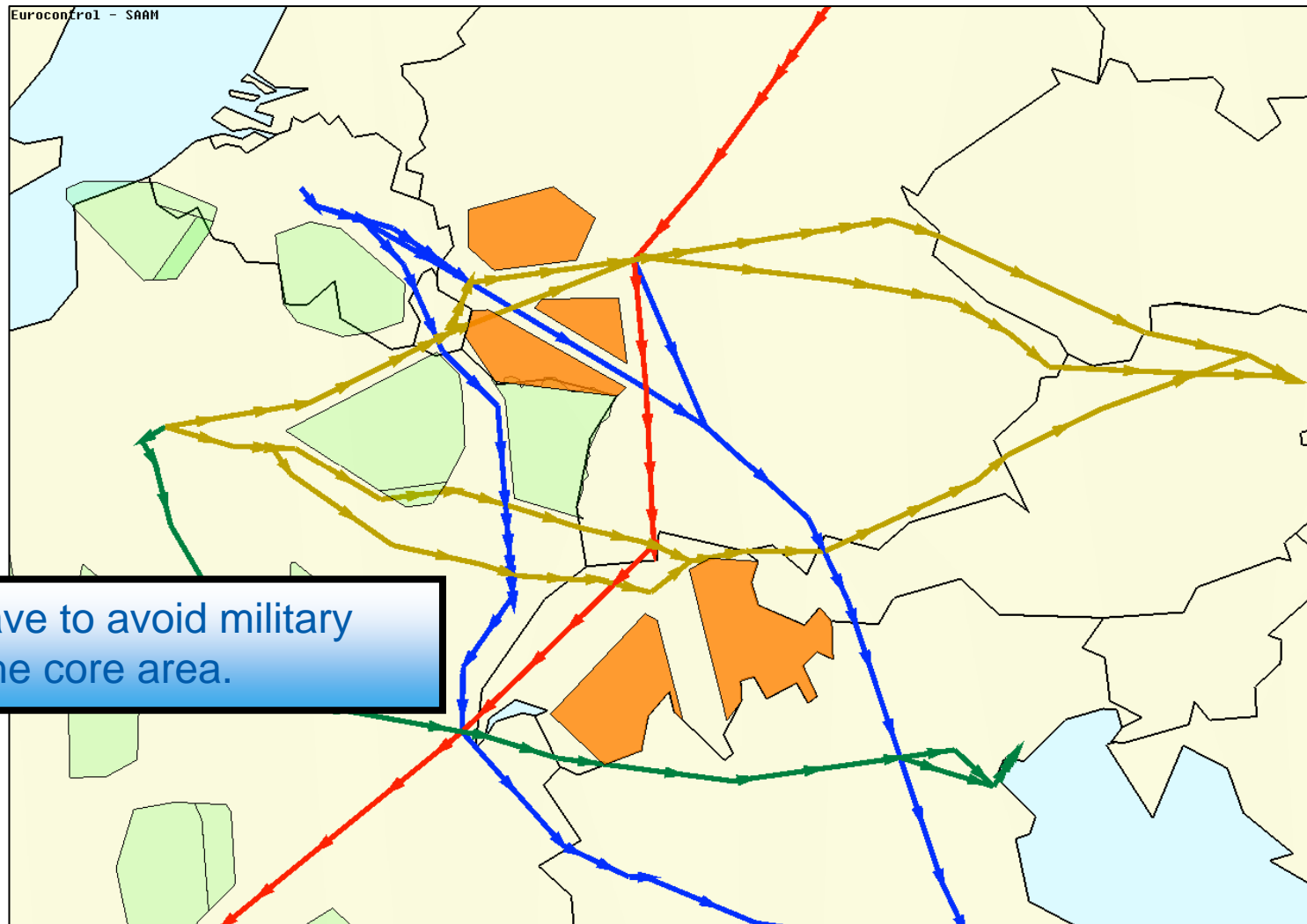


● Fragmentation of airspace

Sectors are mainly designed according to national borders rather than to traffic flows.



- Not straight “as the crow flies”

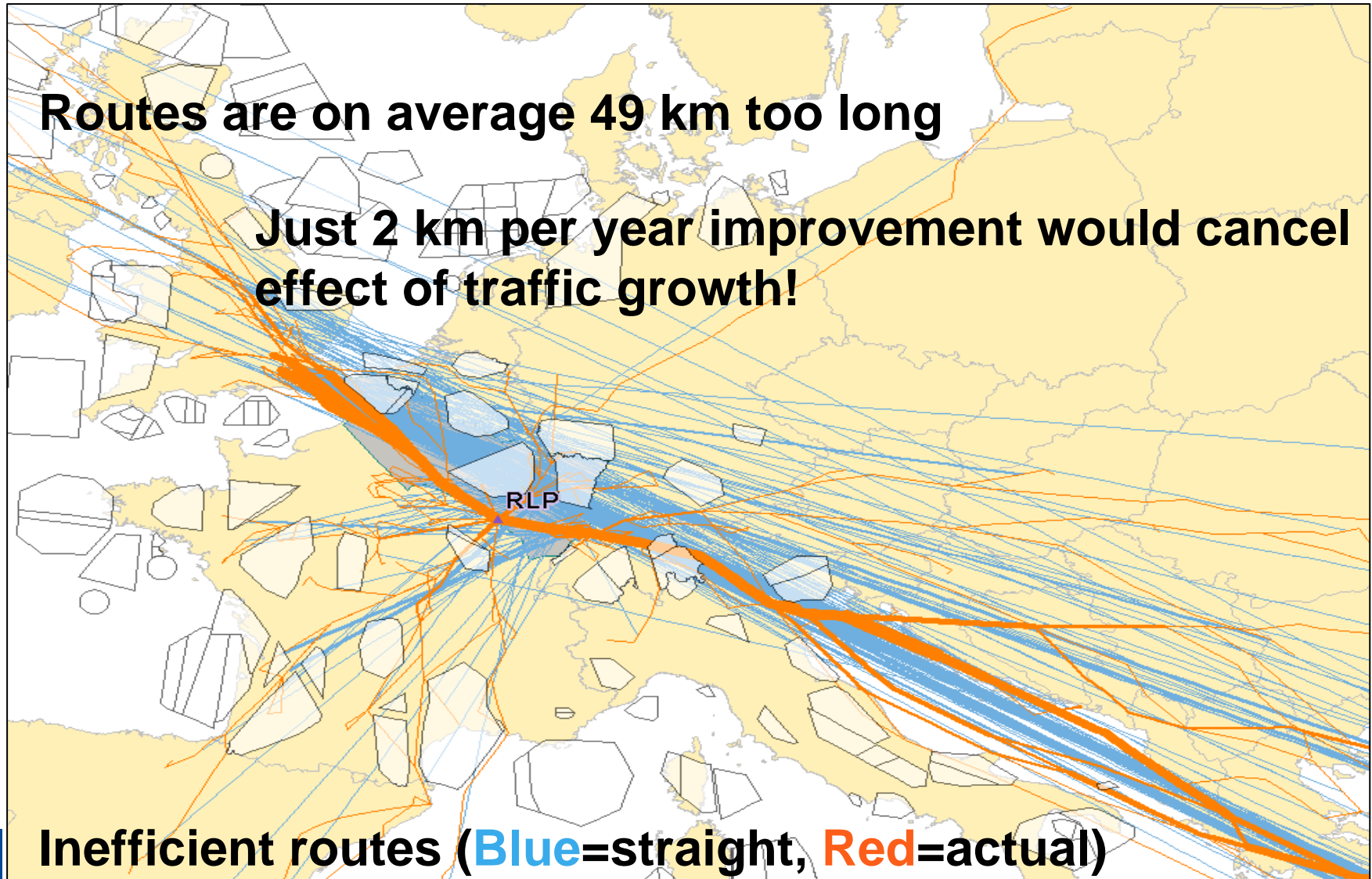


Routes have to avoid military areas in the core area.



Routes are on average 49 km too long

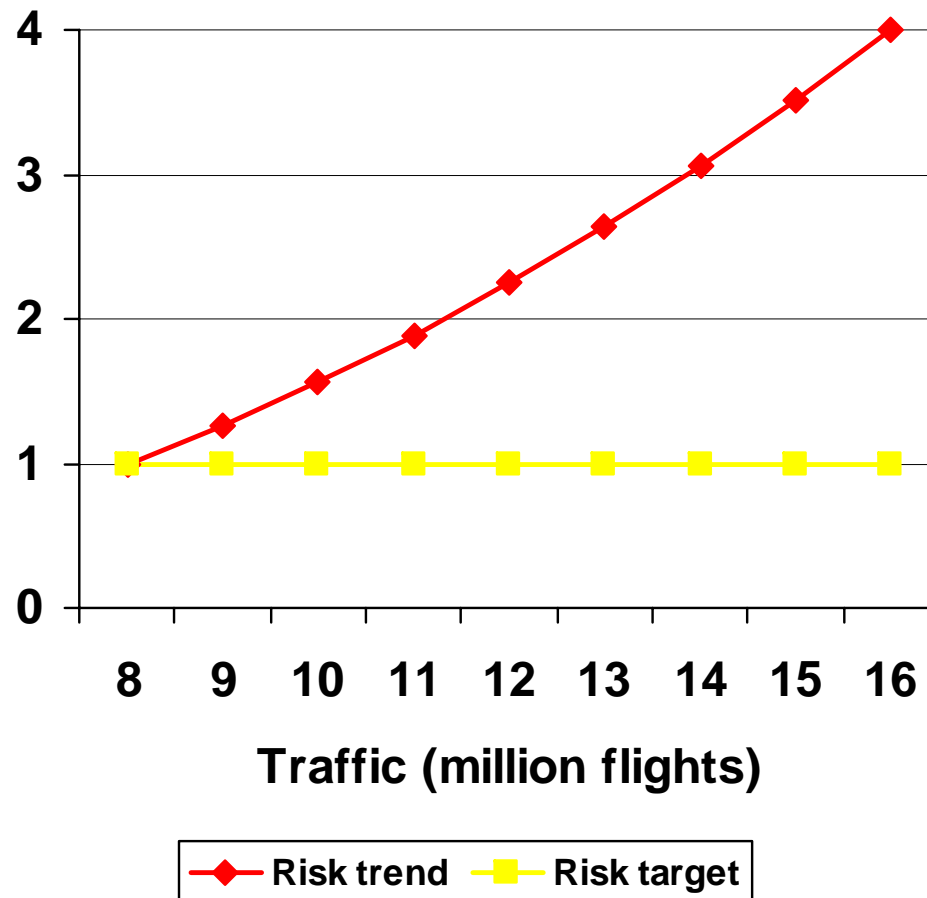
Just 2 km per year improvement would cancel effect of traffic growth!



Inefficient routes (Blue=straight, Red=actual)



- Safety risk quadruples when traffic doubles



SOURCE: Eurocontrol



- Four pillars of Single European Sky 2
 - Single European Sky legislation on ATM
 - » Binding performance targets
 - » Network management functions
 - Extension of EASA competences to ATM and aerodromes
 - » Fill the missing link in EASA & address key safety issues
 - SESAR – upgrade technology of ATM
 - Airport capacity
 - » Co-ordination between air & ground bottlenecks



● SES 2 - Legislation

● Performance regulation

- » Enforce binding performance targets on ANSP's (safety, cost efficiency, environment, capacity)

● Network management

- » Bring high level network management into
 - Flow management & slots
 - Route design
 - Frequencies & codes
 - New SESAR tech functions...

● Technical updates to regulations



● SES 2 – SESAR technology initiative

- Much of today's technology decades old
 - » NDB,s from 1920's, VOR's from 1930's...
 - » Traffic about to double or triple by 2025
 - » Same situation in US, Australia...
- SESAR initiative to modernise technology
 - » Public-Private partnership (joint undertaking)
 - » SESAR Master Plan approval by Council
 - » New technologies & concepts
 - Satellite navigation (Galileo)
 - System Wide Information Management
 - Datalinks etc.



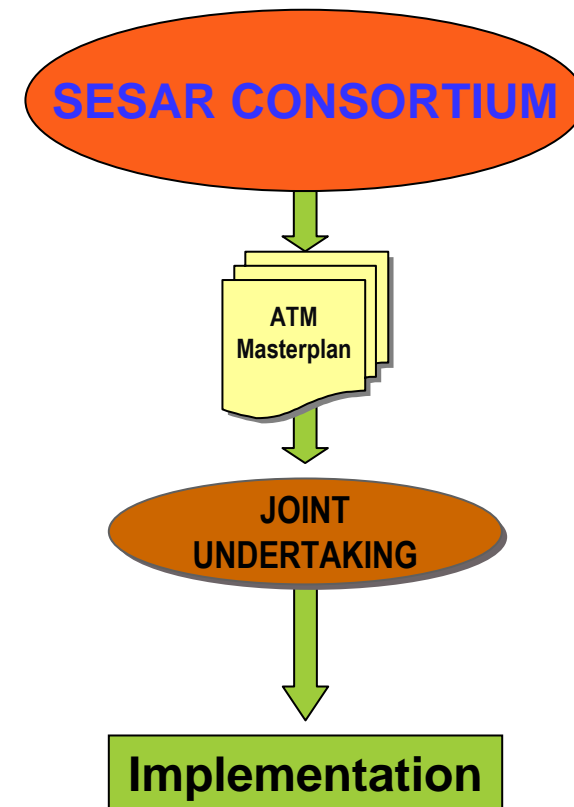
● SES 2 – SESAR structure

Three phases:

- **Definition phase (2005-2007),**
- **Delivering the European ATM Master Plan.**

Development phase (2007-2013):
Develop the new systems

Implementation phase (2014-)
Deploy the new technologies



● SES 2 – EASA extension ATM & Airports

- The missing links in the safety chain
 - » Airworthiness of aircraft, operations etc are already part of EASA's remit
 - » Airport and air traffic management not yet
 - Identified as top threats by IATA
 - Runway incursions top threat for Eurocontrol
- Lays the final stone in foundation for “a total systems approach”
- Detailed implementing rules later by EASA





SOURCE: Eurocontrol

Just one example of improving routings:

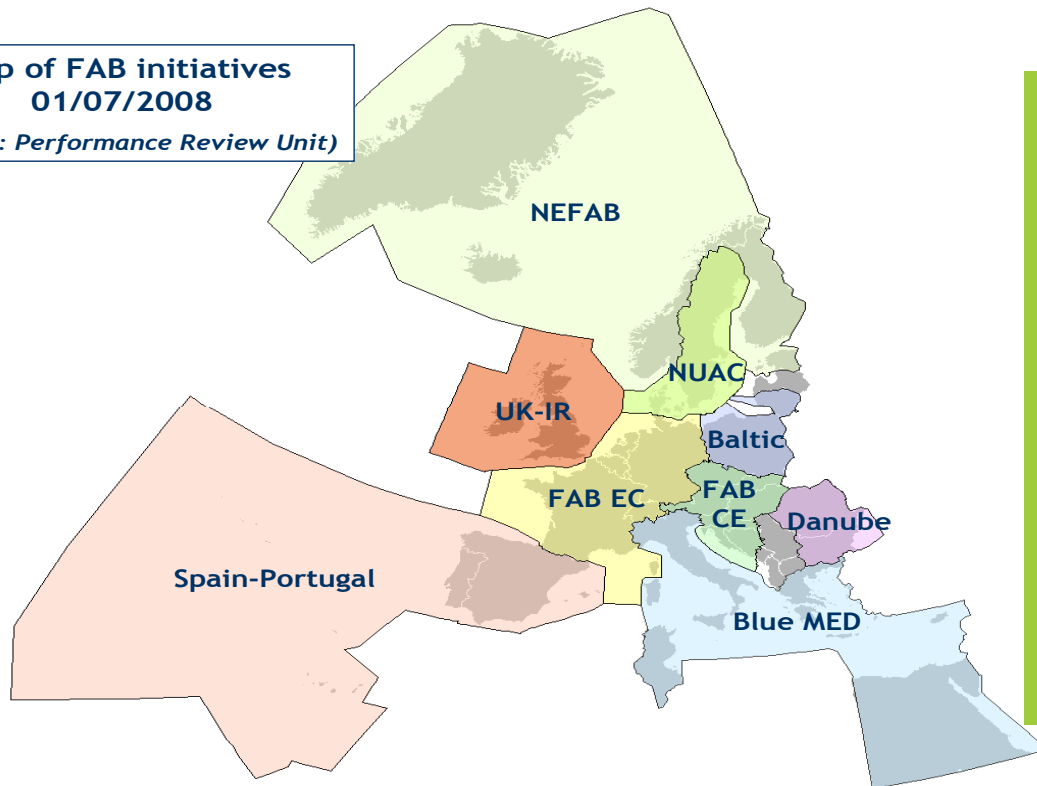
- **Daily distance saving: 2165 kilometres**
- **Daily time saving: 168 minutes**
- **Daily fuel saving: 6598 Kg**
- **Daily CO2 saving: 20777 Kg**

But improvements are possible - example



EUROPEAN
COMMISSION

Map of FAB initiatives
01/07/2008
(Source: Performance Review Unit)



**Example of defragmenting
airspace:**

- **Currently 28 major service providers in EU**
- **Functional Airspace Block initiatives defragment ATM service provision**
- **Firm commitments by 2012**

