

# MET *matters* in a Single European Sky

Ken Reid  
Head International Technical Relations



# 20 Million The Ambition in 2030



## The Ambition

Enabling handling  
**3 times the traffic**

**Improving safety**  
by a factor of 10

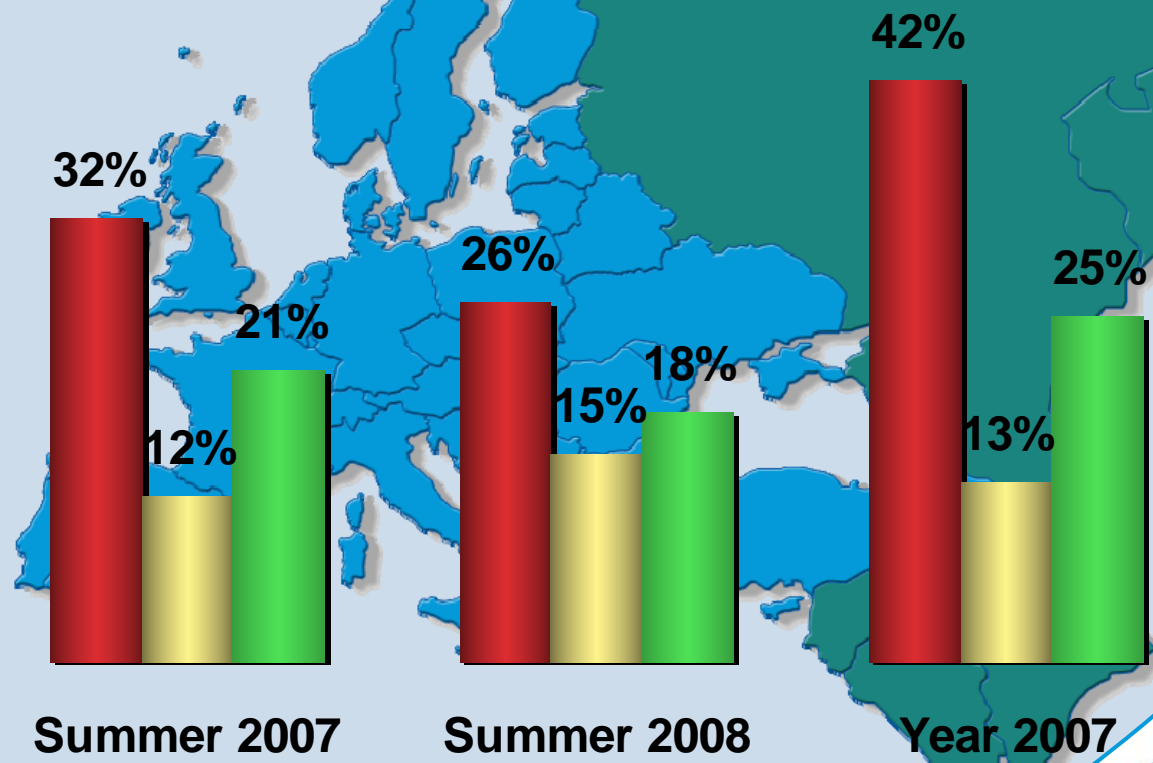
**Reducing by 10%**  
the **environmental**  
**impact**  
per flight

**Cutting ATM**  
**costs by 50%**



# The Challenge; MET Today

■ Airport delays   ■ En-route delays   ■ Total delays





## The Money Today; MET

Performance Review Report 2008 (EU footprint):  
- 3.6 b€ loss in ATFM delays and route extensions  
- 25% of these ATFM delays are attributed to WX



## Fragmentation Example

The 100 main airports are:

- connected by approx. 600 airspace segments
- controlled by 66 ATCC's with many systems
- operated by 38 ATSP's with different cultures

Sectors and routes are designed according to national borders rather than traffic flows

ACCs below optimal economic size, duplication of systems & piecemeal procurement, high contingency costs, support costs on research, training & admin too high



## The Approach; SES

- Establishing a single aviation market
- Adopting common rules in most relevant areas of the air transport system
- Enhancing competition and efficiency throughout the whole value chain of aviation
- Developing an external dimension of the EU single aviation market

Started in 2004 by laying down the foundations for:

- Legal and institutional framework
- Separation of services
- Transparency of
- Harmonisation in
- Advancing the ef
- Moving towards i

### **SES 2 (adopted March 2009) focus:**

**- PERFORMANCE**

**- SAFETY**

**- CAPACITY**

**- TECHNOLOGY = SESAR**



# The Approach; SESAR

## Definition phase

Resulted in the **European ATM Master Plan**

## Development phase

Managed by the **SESAR Joint Undertaking**

Based on the Master Plan, results in **Standards, new operational procedures, new technologies and pre-industrial components**.

## Deployment phase

Implements the results of the development phase, delivers **the service performance increase** foreseen in the ATM Master Plan

2006-2008

2008-2014

2015-2025





# The SESAR Concept

PAST



## Procedural Control

**Estimate** the current and planned a/c positions

TODAY



## Radar Control

**Know** the current and **estimate** planned a/c positions

TOMORROW



## Trajectory Management

The Business trajectory principle:  
**Define together optimal flight path**

# Foreseen ATM Concept of Operations



Civ/Mil ATM Performance Partnership

Integration of Air- and Ground-systems

Integration of Airport "turn-around" operations

Time and performance based operations /  
4 D B/M Trajectories

## **The ATM intranet – SWIM**

Rolling Network Operations Plan

Automation support to the Human

Efficient separation modes



# The Weather View of SESAR

The logo consists of the letters 'W' and 'X' in a bold, serif font, rendered in a metallic, 3D style. It is centered within a circular frame that has a blue and white checkered border.

Requirements

Exchange

Integration



# SWIM

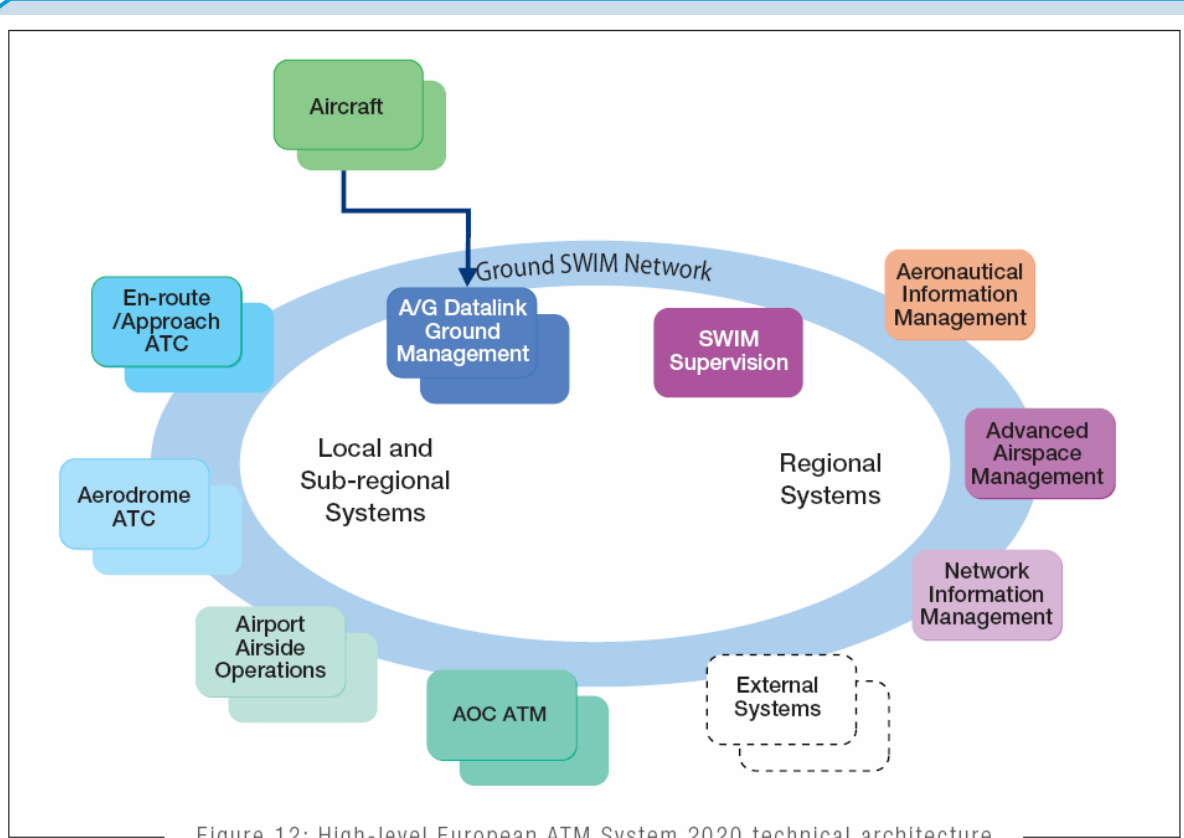
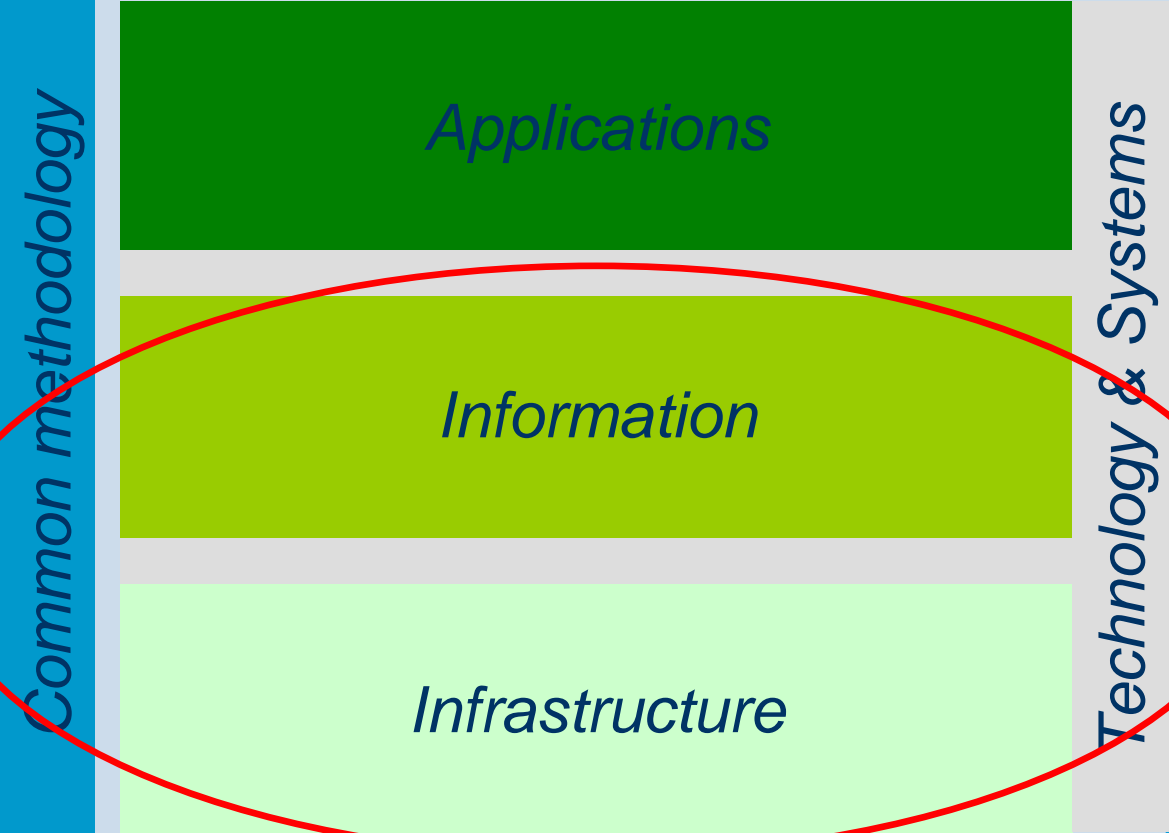


Figure 12: High-level European ATM System 2020 technical architecture





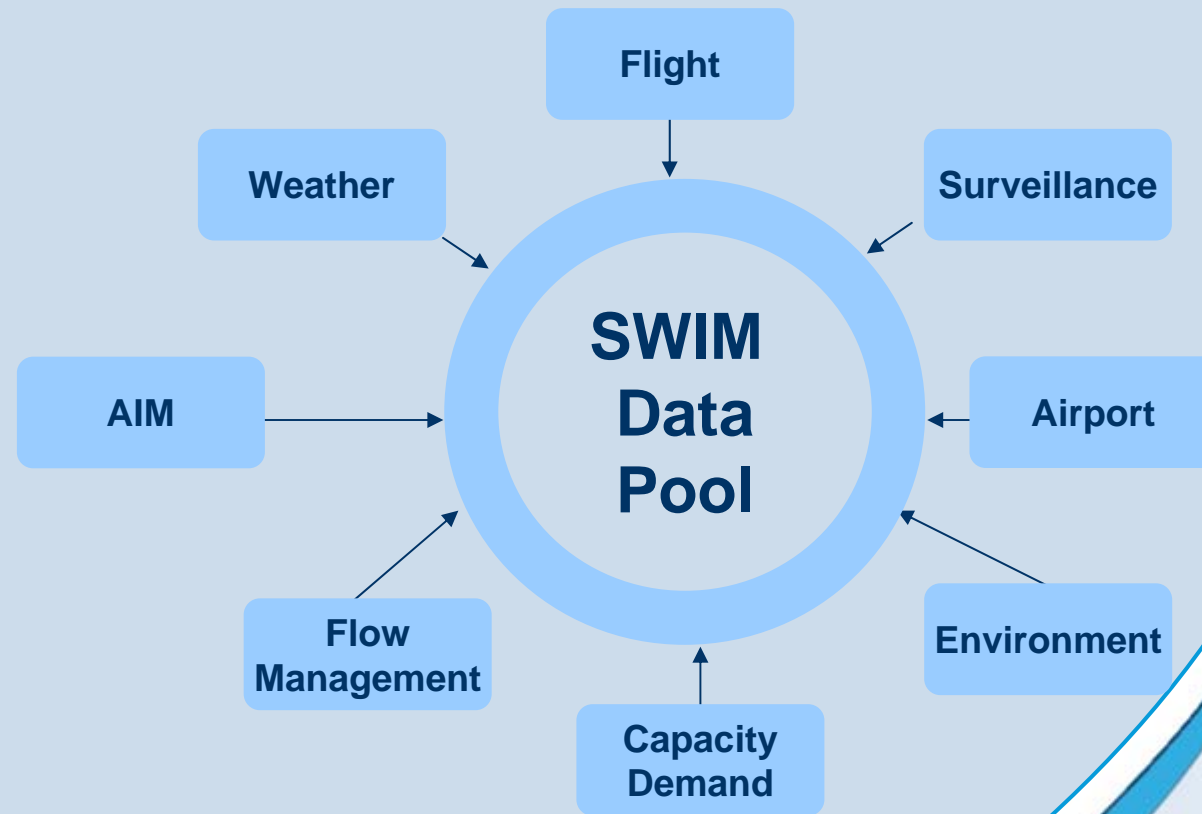
SWIM



SWIM Scope



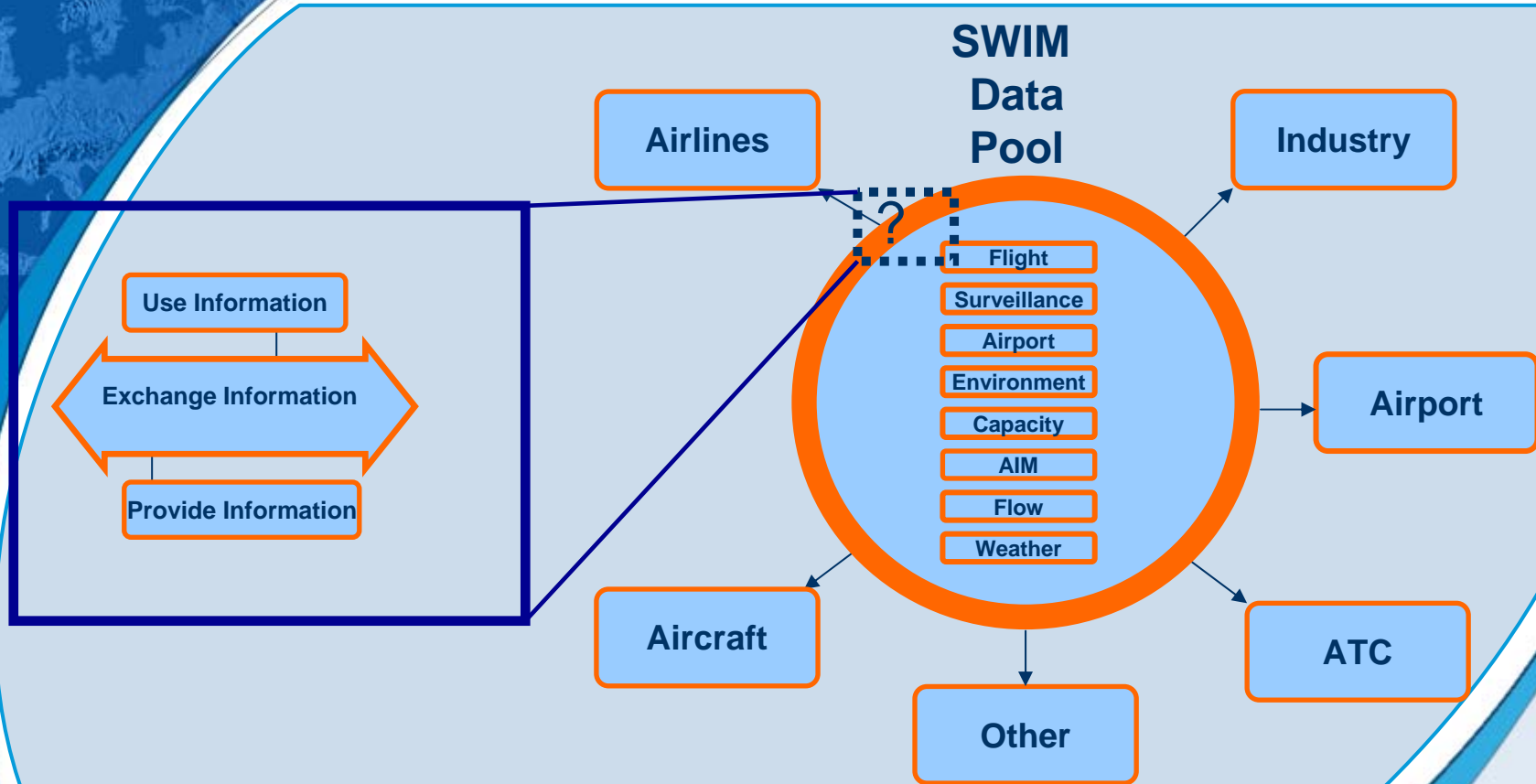
# Transition to SWIM



ATM Data Domains share data into SWIM



# Transition to SWIM



Connecting information users and providers  
Towards seamless information sharing



# Provide / Exchange / Use Information

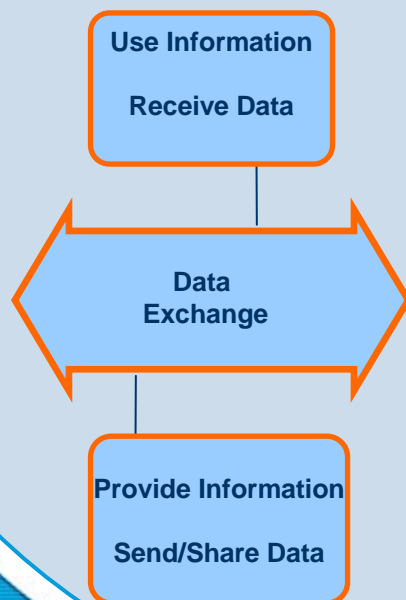


→ <Geo-enabled>

→ <Time-enabled>

→ <Seamless>

→ <Open>





# Interoperable Information Exchange Models

## Aeronautical Information



## Airport Mapping



## Weather Information



## Airport Operations Information



# WX Model Development Status



# Cooperation & Harmonisation is a MUST

Air transport is a 'business' on a global scale

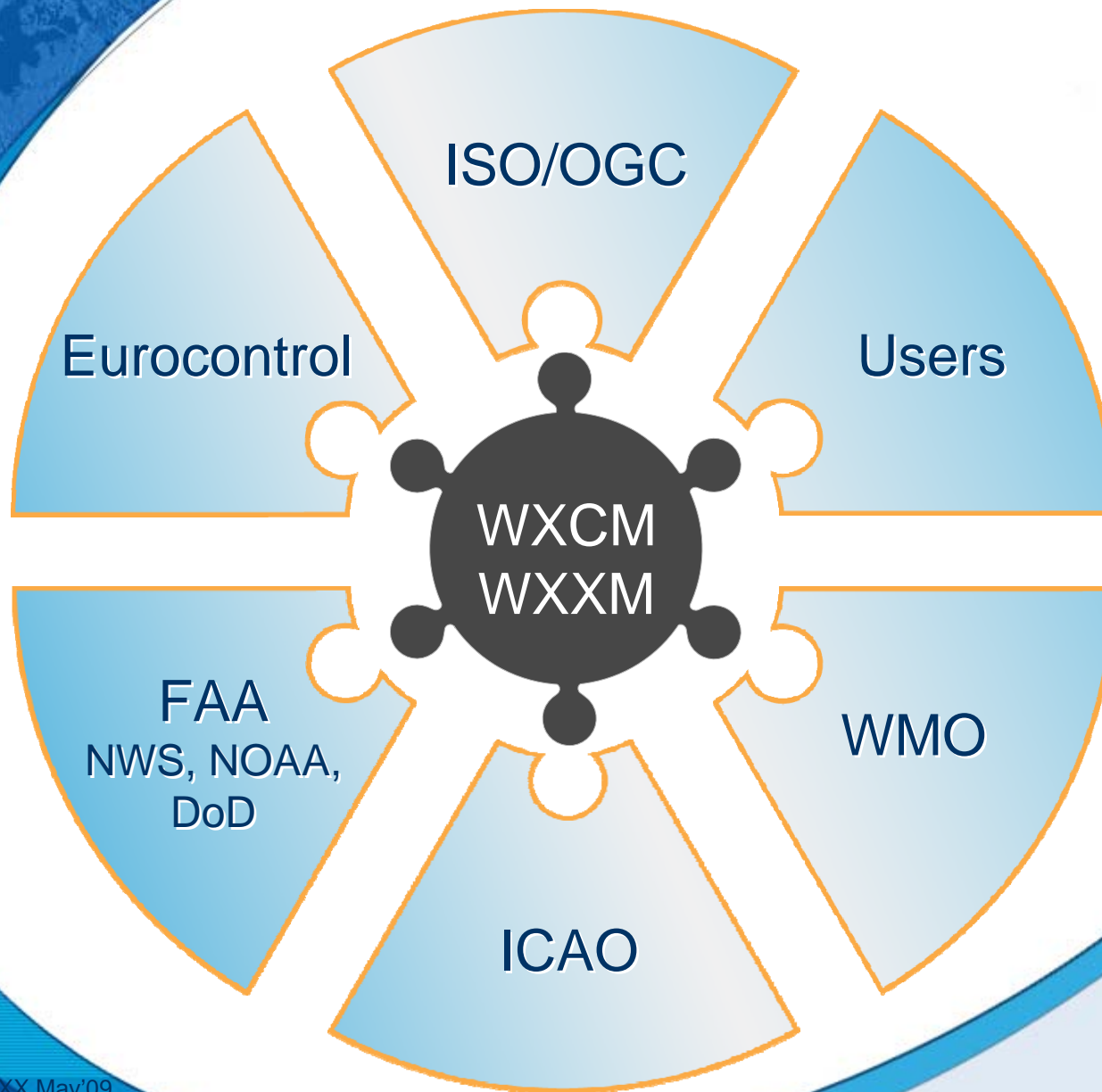
Modernisation is therefore a world-wide issue

Today's Regional problems become tomorrow's global issues and must be solved only once

SESAR's problems are NextGen's problems v.v.



# Weather Information Exchange







### Future events

- **MET Support to ATM Workshop; May 27-28, 2009; Brussels, Belgium**
- MET Support to ATM Workshop; October 27-28, 2009; Brussels, Belgium
- FAA-EUROCONTROL Technical Interchange Meeting; October 29-30, 2009; Brussels, Belgium

