

The objective of this initiative is to transform the US air transportation system to meet the needs of 2025 while providing substantial near-term benefits.

For Global Harmonisation









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www.eurocontrol.int/sesar

"Certainly, the future is for air navigation and the duty of the present is to work for the future" Victor Hugo, 1869



# Single European Sky ATM Research

# SESAR In brief



The **SESAR joint undertaking** will focus on delivering early benefits to achieve guick wins and tangible results on a regular basis.

## **Towards A Single European Sky for Europe?**

**Europe eliminated borders** on the ground with the 1985 single European market. It dismantled economic borders with the 1990 economic and monetary union. It is a widely held view that borders in the sky should not exist.

The Single European Sky initiative was launched by the European Commission in order to organise airspace and air navigation at a European rather than a local level.

By presenting a legislative approach, it will solve the issues that currently affect **air transport** along with **Air Traffic** Management (ATM), to cope with future demands.

The legislative package entered into force on 20 April 2004.

Participation and co-operation of EUROCONTROL is essential as its experience in this field will make the Single Sky a reality.

## To make SES real... Europe needs Research

Based on todays demands, European airspace is organized around fixed volumes and rigid route structures. Airspace is becoming more and more congested, and traffic forecast will grow steadily over the next 15 years.

The Air navigation services and their support systems are not fully integrated and are based on technology which is already running at maximum. In order to accommodate future Air Traffic needs, a "paradigm shift", supported by state-of-the-art and innovative technology, is required.

## Single European Sky ATM Research (SESAR) is the answer

SESAR aims to eliminate the fragmented approach to European Air Traffic Management (EATM), transform its system, synchronize all stakeholders and federate resources.

With the necessary support and regulatory measures, SESAR will re-engineer the European ATM network to achieve environmental sustainability, efficiency, full integration and cost-efficiency, resulting in maximum safety

## Three major phases:



#### SESAR Definition Phase (2005-2008)

The Definition Phase produced the SESAR Master Plan. It was developed by a representative group of ATM stakeholders. Their recognised expertise ensured wide buy-in and enhanced commitment to the decision making level of the investors.

This Plan, based on future aviation requirements, identifies the actions from research to implementation, needed to achieve SESAR goals from the perspective of each stakeholders group.

A contract, co-financed by the European Commission (through the TEN-T programme) and EURO-**CONTROL** has been let by EUROCONTROL to a Consortium representative of all relevant sectors of the aviation industry to execute the Definition Phase together with EUROCONTROL contributions.

The consortium was composed of 30 members associated to more than 20 subcontractors and project associates.

#### **SESAR Development Phase (2008-2016)**

The Development Phase (2008-2016) will produce the required new generation of technological systems and components as defined in the Definition Phase ATM Master Plan and Work Programme.

In order to federate research & development efforts in the Community and organise and coordinate this Development Phase of SESAR, a joint undertaking has been created under European Community law, on 27th of February 2007: the SESAR Joint Undertaking. (More information on www.sesarju.eu).

#### EUROPEAN COMMISSION **Founding member**

Driving of the process with the EU transport policy Proposal of adequate legislation Nonitoring of proper implementation

## **EUROCONTROL**

**Founding member** 

collaborative development of the European ATM network Management of pan-European ATM functions rovision of regional ATM services Support to regulatory activities

#### SESAR JOINT UNDERTAKING Manager of the Development phase

Coordination and concentration of all relevant research and development efforts in the Community Responsibility for execution of the ATM Master Plan

### **SESAR Deployment Phase (2014-2020)**

The Deployment phase (2014-2020) will be a large scale production and implementation of the new Air Traffic Management infrastructure, composed of fully harmonised and interoperable components which guarantee high performance air transport activities in Europe.

## How much will SESAR cost?

60 million Euro for the definition phase (50% Commission, 50% EUROCONTROL) 2.1 Billion Euro for the development phase (1/3 Commission, 1/3 EUROCONTROL, 1/3 Industries) 20 Billion Euro for the deployment phase, of which 100% percent is to be paid by the Industry.

## **Expected benefits**

Over the next eight years, the development phase will work to produce technology, standards and procedures to achieve SESAR's long term four objectives: being able to provide three times todays capacity while cutting ATM cost in half, improving safety by a factor of ten, and reducing the environmental impact of each flight by 10%.