Advance Flexible Use of Airspace

Time for the next level
Overview of the presentation

✓ Introduction
  ▪ EUROCONTROL
  ▪ Flexible Use of Airspace (FUA)
  ▪ Advanced FUA (AFUA) program

✓ AFUA Concept

✓ Architecture and technical support
EUROCONTROL
a civil/military state organization

40 member states & the European Community
Introduction: Flexible Use of Airspace

Performance enhancement of Air Traffic Management
A key enabler: Civil-military ASM coordination
- National and European Network
- Strategic, Pre-tactical and Tactical (execution) phase

FUA concept
- Airspace is one continuum (no CIV or MIL airspace)
- Conditional routes & temporary reserved areas
- Direct coordination between civil and military
- ASM handbook as reference

Implementation is depending on National initiatives

Evaluation
Successful but implementation not harmonized enough

The Single European Sky initiative from the European Commission
- EUROPEAN COMMISSION Regulation 2150/2005 (FUA REG)
- SPECIFICATION FOR THE APPLICATION OF THE FLEXIBLE USE OF AIRSPACE (FUA) 2009
Planned evolution

- FUA today
- Ongoing improvement initiatives
- AFUA program
- SESAR
AFUA program

Sub-activities:
- Concept & Architecture
- Performance
- Standards & Regulation
- Deployment
AFUA concept

Cornerstone for Civil-Military ATM Cooperation
Main concept elements

- Area Modularity in airspace design
- Direct routing and Free Route Airspace
- CDM with NM based on enriched information sharing
- Airspace configurations for tailored flexibility to the different environments
- Impact assessments and the use of performance indicators
- Increase the impact awareness by participation
- Sharing real time airspace status
- Maximum use of automated interfaced Local ASM support systems
AFUA architecture and technical support

Cost-efficient solutions
Architecture principles

- Service oriented architecture
- Interoperability
- Harmonization of models, interfaces and the use of standards

System support

- Centralized services (CS4)
- Network systems
- Local support systems
Centralised Service 4

Advanced Flexible Use of Airspace Support Service (AFUAS)
Advanced Flexible Use of Airspace Support Service (AFUAS)

- Provides collaborative civil-military ASM decision-making processes.
- Builds on the Advanced Flexible Use of Airspace (AFUA) Concept.
- Makes better use of available airspace.
- Allows military to use larger airspaces for missions on an absolute time-limited basis.
- Allows civil traffic to fly shorter routes.
- Provides ASM data visibility and ASM performance feedback.
- Technology exists already in some Member States.

Allows to foster innovative technologies in cooperation with the Military.
Local support systems

Example:
Local And sub-Regional ASM support system (LARA)

An ASM support system for the local or sub-regional processes and interoperable with and centralised services, Network Manager system and other systems.
Advanced Flexible Use of Airspace

ASM process (2)

Network Manager

National AMC

Military Users

Civil Service Providers
ASM process (3)
The Airspace Management (ASM) process

Real time status of the airspace structures
Expected benefits of AFUA

- Enabling the Single European Sky (SES) implementation
- Enhancement of civil-military ATM coordination and network performance
- Optimization of local/sub-regional and network ASM procedures
- Increase common situational awareness
- Enabling civil-military Collaborative Decision Making (CDM)
- Provision of better data for performance measurement

*Status Quo is no option*