Regional ATFM in Europe

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Regional ATFM in Europe

- From Local to regional collaboration
- Additional Functions
  - More than ATFM – Capacity optimisation and flight efficiency
  - Connecting the network and sharing data
  - Crisis and disruption management
- From regional to global
20 years ago this year it all started

- Late 1980s Serious delays airports and en-route
  - Local ATFM unable to cope
  - Political decision to create CFMU > ATFM + IFPS
- 1995 CFMU operational with 6 states
- 1996 All EUROCONTROL states participating
- 1997 Flexible Use of Airspace
- 2002 ETFMS: Surveillance data in ATFM
- 2006: Network Operations Concept
- 2011: CFMU becomes Network Manager
Unique collaboration of all ATM stakeholders
The Network Operations Concept

Flight Data Services

Regional ATFM

Regional Operations Centre

Airline  ATC  ATC  ATC  Airport

Flight Plan Management

EAD  Airspace and aeronautical data, airspace management  CACD
ATFM Model

ATM planning

Strategic ATM planning

Traffic forecast

Strategic DCB

Initial traffic demand

ATFM daily plan (ADP)

Updated traffic demand

Tactical ATFM

Dynamic traffic situation

Post-operations analysis and performance monitoring
ATFM Model

ATM planning

Strategic ATM planning

Strategic DCB

ATFM daily plan (ADP)

Tactical ATFM

Post-operations analysis and performance monitoring

Performance prediction

Airspace design

Technical infrastructure

Procedures

Staffing and training

Capacity analysis

Revised capacity

Capacity management

Weather

Airspace use plan

Staffing roster

Capacity constraints

Dynamic weather

Special use Airspace status

Actual staffing

5 years

6 months

1 week

Day -1

Day 0

Day +1
Much more than an ATFM system

- **OPTICON**: optimum sector configuration application
- **PATHFINDER**: easy to find alternative route using the Map
- **NIA**: Network Impact assessment - analyses the potential impact of any ATFM measure.
- **GRRT**: group rerouting tool offering latest available more efficient routes
- **SIMEX**: Stand alone simulation tool.
- **METEO updates**: 4 times in 24 hrs
- **NOP portal**: interactive information tool
- **E-Helpdesk**: pc to pc help desk allowing much better and faster management of the queries from customers.
- **ATFCM situation display**: shows at any moment ATFM situation in Europe.
- **Flight List**: all partners can retrieve and display detailed information on any flight, airspace, ATFM restriction
Problems and issues

- Accurate capacity data – Full, timely, honest, buffers
- Clear lines of authority – local vs network
- Balance between AO and ANSP needs: late sector restrictions
- AO intentions: not communicated early enough. CDM must improve
- Capacity assessment and airspace design – link planning, simulations (computer and real-time) into ATFM
- End user HMI - misunderstanding of the data content
- Interoperability
- Standardisation
- Training
The balancing act

- Optimise use of capacity
- Manage environment effects

Partnership: ATFM - ATS providers - Aircraft operators

Safe, orderly and expeditious
Reception of activation and surveillance data
Connecting the airports and the network
The Network Manager: 24/7 actor in coordinating & managing response to crisis affecting aviation in Europe

EACCC: NM, EC, EASA, EU Presidency, AO, ANSP, Airports, Military and 40 State Focal Points

ICAO
NM to push for sharing risk assessments

Bárðarbunga
Alert status
NM mechanisms
Readiness

MH17
Airspace status:
NM ultimate source of info & support to users

Ebola
Supporting role to coordinated response

Conflict zones
Teleconferences
Alternate routes
Mitigated impact
Role of the European Crisis Coordination Cell

Jointly established by the European Commission (EC) and EUROCONTROL.

Coordinates the management of crisis response in the European ATM network.

Network disruptions management procedures.

Main role is to support coordination of the response to network crisis situations impacting adversely on aviation, in close cooperation with corresponding structures in States.

- Propose measures and take initiatives to coordinate a response to crisis situations
- Acquire and share information with the aviation community (decision makers, airspace users and service providers) in a timely manner.
- Share information
- Link national contingency plans with those established at the network level,
- Coordinate a response and mitigation actions

In order to establish a consistent approach across Europe.

Composition: representatives of EU, EC, EASA, EUROCONTROL, military, ANSPs, Airports & AU. May be augmented on a case-by-case basis by experts, depending on the specific nature of the event.
The Global dimension

Considerable growth expected
- Gulf
- SE Asia
- China
- Russian Federation
- Predictability
- Disruption planning & management

NM area traffic 26,548 flights
The vision for Global ATFM
A set of interlinked operational ATFM regions
The key to predictability –
Local to Regional to Global – Interoperable - Sharing

Surveillance and flight data updates – Radar, ADSB, ACARS….

Local, regional and cross regional ATFM Measures

Traffic Demand: Schedules, flight plans

“Supply” information: Capacities, Events, Weather, Disruptions

Airspace Digital Infrastructure: Airports, points, routes, FIR, ACC, sectors