ATFM development in UAE

ATFM Workshop Casablanca Morocco

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ATFM Development:

Ground Delay Program (DFLOW):

Ground delay program is imposed on UAE airports due to flow restriction at adjacent FIRs.

ATFM Development:

Ground Delay Program (DFLOW):

- Developed in conjunction with ATM vendor
- All UAE stake holders were involved in the development
- Function is part of the ATM system
    - Makes use of other functions of the ATM system
- BADA table is used for aircraft performance

ATFM Development:

Ground Delay Program (DFLOW) today:

- Automatic slot allocation based on submitted FPLs
- Slots are automatically optimized to minimise overall delay
- Transparency through web interface
- Airlines can swap between their own flights and subject to approval with other airlines
- Gives predictability to airlines
- Can include overflights into the slot allocation process

ATFM Development:

Outlook:

The way forward from DFLOW is a collaborative ATFM solution

Advantages:

- Better planning
  - Strategic phase
  - Pre-tactical phase
  - Tactical phase
- Collaborative development of daily plans

ATFM Development:

Advantages continued:

- All traffic is included in daily plan
  - Departures
  - Arrivals
  - Overflights
- Preparation for Trajectory Based Operations
- Improved Continuous Climb Operations (CCO) and Continuous Descent Operations (CDO)
- Integration of multiple data sources

ATFM Development:

An ATFM system is required in order to achieve these objectives in a collaborative manner

There are different ATFM system implementations which are:

- Conventional system

- Private cloud

- Public cloud

- Service subscription

ATFM Development:

Conventional system:

Advantages:

- System is hosted on site (ownership)
- Dedicated and redundant servers (reduced risk of system failure)
- Control over downtime (software/hardware upgrades, maintenance)

Disadvantages:

- Dedicated workstations (limited number)
- System is hosted on site (occupies space, electricity, cooling, maintenance)

ATFM Development:

Private cloud:

Advantages:

- Hosted on site (ownership)

- Web based access (no dedicated workstation)

Disadvantages:

- System is hosted on site (occupies space, electricity, cooling, maintenance)

- IT security

- System load (number of concurrent connections)

ATFM Development:

Public cloud:

Advantages:

- Multiple hosts available
- IT security, system performance/ load is host responsibility
- Web based access (no dedicated workstation)

Disadvantages:

- Loss of internet connection = loss of service
- No control over downtime
- No hardware ownership

ATFM Development:

Service subscription:

Advantages:

- Multiple providers
- Subscriber only handles day to day operations
- Data sharing between subscribers
- Web based access (no dedicated workstation)

Disadvantages:

- No ownership (software/hardware)
- Loss of internet = loss of service
- No control over downtime

ATFM Development:

UAE stakeholders have identified ATFM as a way forward and are collaboratively working towards this goal

Thank you