Fifth Meeting of the Directors General of Civil Aviation- Middle East Region

الإجتماع الخامس للمدراء العامين للطيران المدني في منطقة الشرق الأوسط

DGCA-MID/5

Kuwait 4-6 Nov 2019

الطيران المدني
Civil Aviation
State of Kuwait - دولة الكويت

MID Region Air Taffic Flow Management Project

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Outline

- What is ATFM/CDM
- ATFM Main Objectives
- ICAO Guidance Material
- Why ATFM is needed
- Link to ASBU
- ATFM Regional developments

What is ATFM?

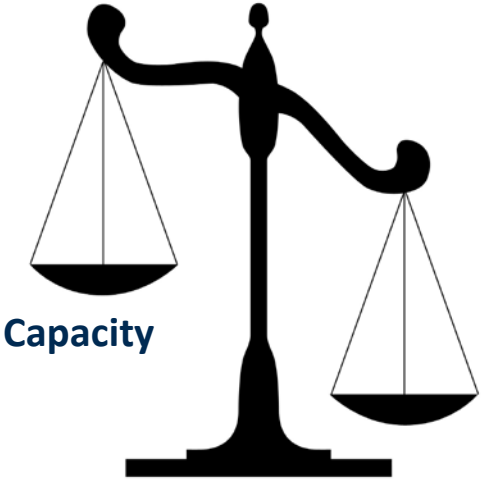
What is ATFM?

ATFM is an enabler of air traffic management efficiency and effectiveness in a way that minimizes delays and maximizes/optimizes the use of the available airspace contributing to the safety and environmental sustainability of an ATM system.

Long Term Objective is Global ATFM

Over time, local ATFM implementations conducted worldwide are going to shape a Global ATFM supporting the implementation of ATFM processes and operating procedures in an effective, coordinated, Standardized and Harmonized manner.

ATFM is demand/capacity balancing



When demand exceeds capacity then "flow" management is required

The objectives of ATFM/CDM

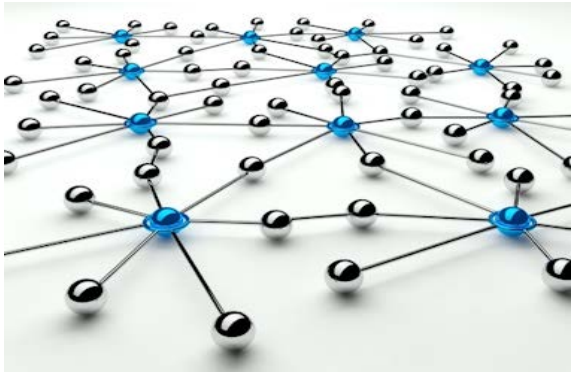
- Enhance safety
- Reduce workload
- Optimize the use of available airspace
- Improve operational benefits, predictability and efficiency
- Effective management of capacity and demand
- Increased situational awareness among stakeholders
- Provide for coordinated, collaborative development and execution of operational plans
- Reduce fuel burn and operating costs
- Support effective traffic management of irregular operations, Contingency, Emergency, and the recovery of such situation

Keys to successful implementation

- ✓ The Collaboration Decision Making (CDM) process is a key enabler of an ATFM to achieve a robust coordination among aviation stakeholders.
- ✓ All the stakeholders work together to improve the overall performance of the ATM system
- ✓ Due to their far-reaching effects on the flow of traffic elsewhere, ATFM and its applications should NOT be restricted to ONE State or FIR
- ✓ PANS-ATM, Doc 4444 states that ATFM should be implemented on the basis of a regional air navigation agreement or, when appropriate, as a multilateral agreement.

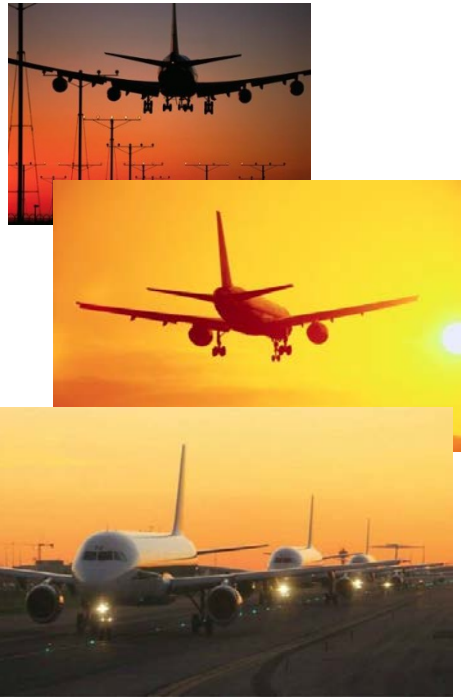
Drivers for the ATFM Guidance material

Traffic pressure



ATFM systems Interdependencies

Hub operations



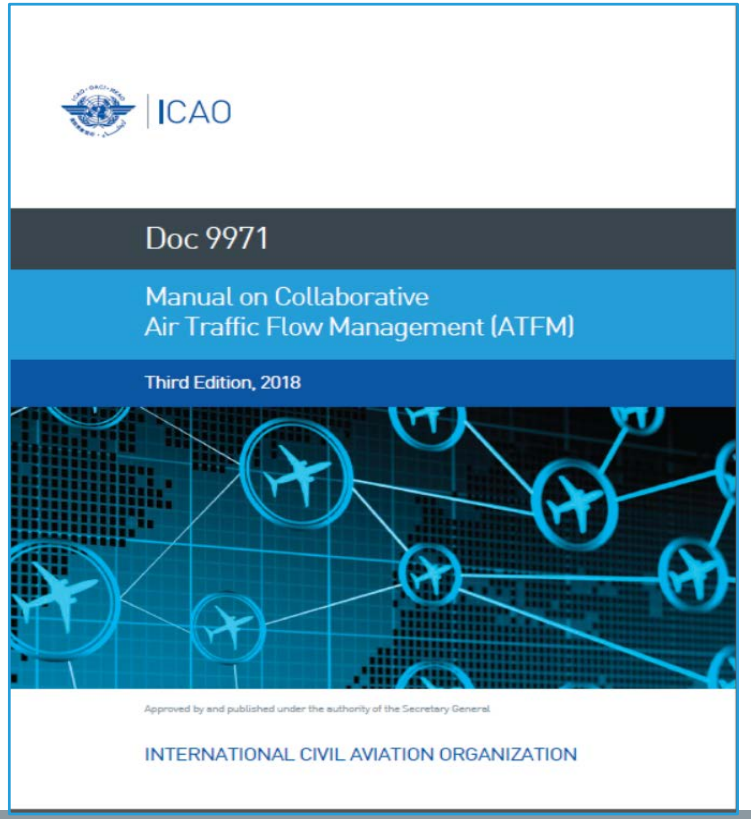
Doc 9971: Manual on…

Doc 9971 was published in 2012 (3rd Edition in 2018)

Part 1 – Collaborative Decision Making (CDM)

Part 2 – Air Traffic Flow Management (ATFM)

Part 3 – Airport CDM (A-CDM)



ATFM Service and Organization Structure

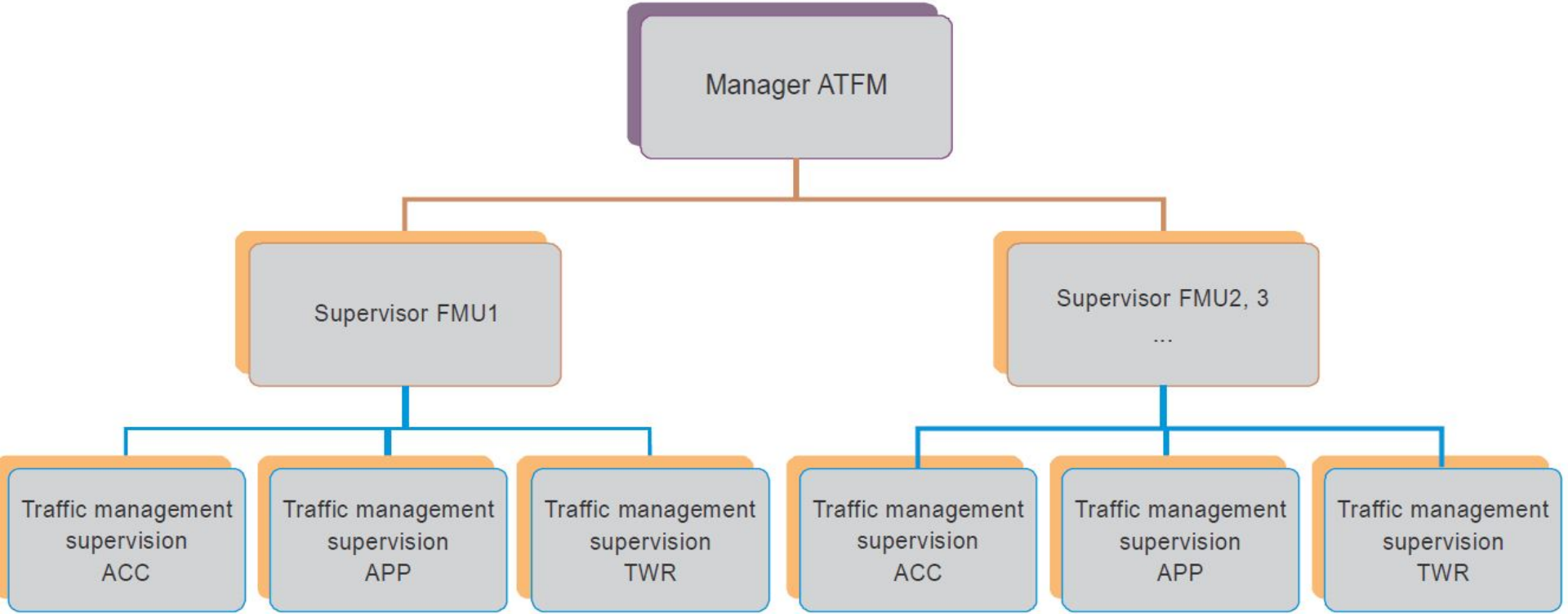
- State should ensure that an ATFM organizational structure which meets the needs of the aviation community is developed.

- This structure should, at a minimum, allow the management and oversight of the ATFM service and the coordination and exchange of information, both internally and externally.

- The structure should also ensure the existence of a line of authority for the implementation of decisions and compliance with the mission requirements assigned to the ATFM services.

- A line of authority to support the ATFM service should to include the following:
  a) an ATFM service manager;
  b) the flow management unit (FMU) that provides ATFM service for a specific set of ATS units; and
  c) flow management positions (FMPs) at specific ATS units responsible for the day-to-day ATFM activities

Sample of an ATFM Service and Organization Structure

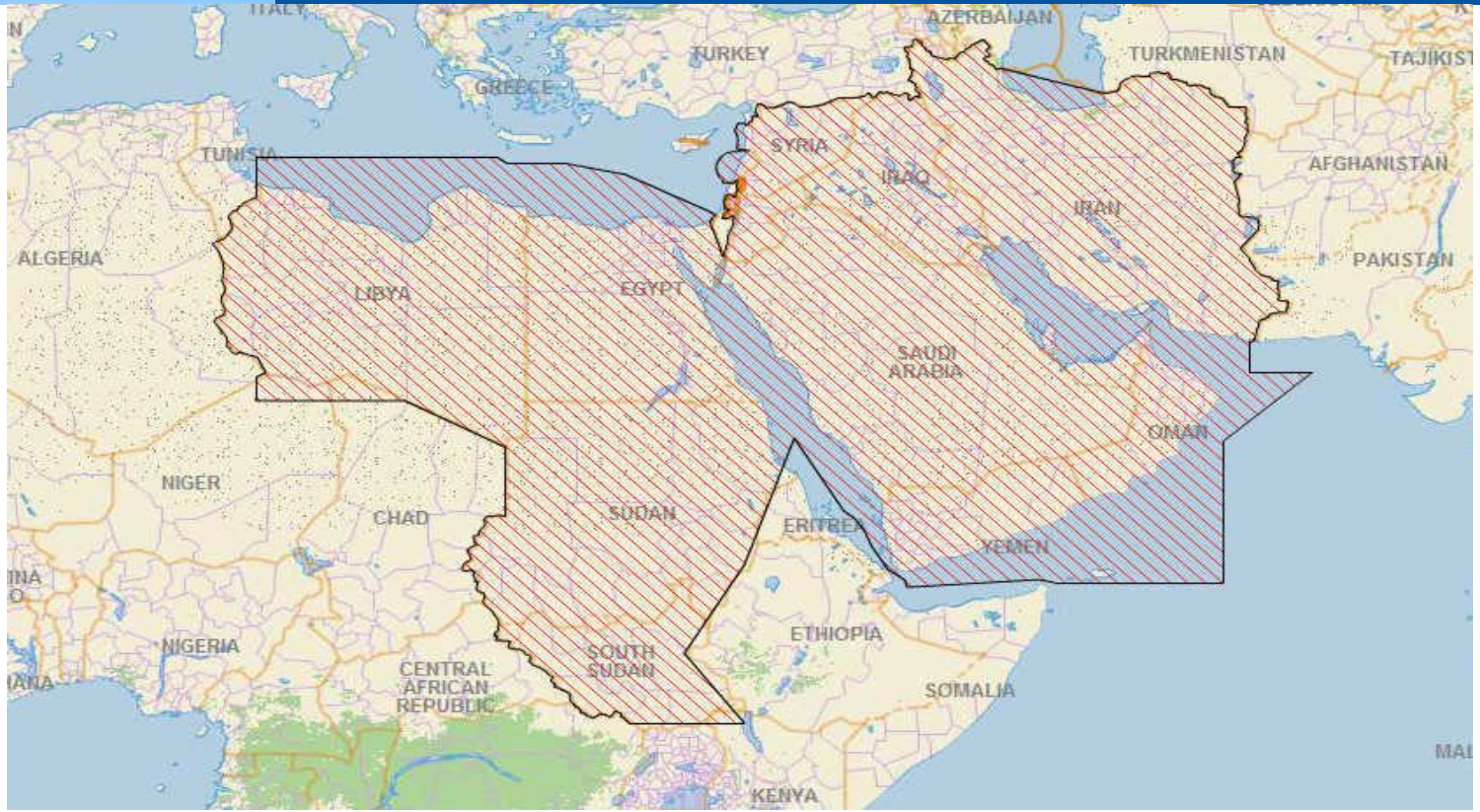


ATFM Training Requirements

- States should ensure that ATFM service is provided by adequately trained, qualified and competent personnel

- Staff of other units/areas/entities should be aware of and understand the ATFM services such as:
  a) ATC;
  b) aircraft operators;
  c) pilots;
  d) airport operators;
  e) military, both service providers and users; and
  f) regulatory bodies (CAAs and equivalent).

Why ATFM is needed in the MID Region?



ICAO Middle East Region is composed of **15 States**:

Bahrain	Oman
Egypt	Qatar
Iran	Saudi
Iraq	Arabia
Jordan	Sudan
Kuwait	Syria
Lebanon	UAE
Libya	Yemen

ATFM TF Meetings

- The First Meeting of the Air Traffic Flow Management Task Force (ATFM TF/1) was successfully held in Muscat, Oman, 23 - 25 September 2018. The meeting was gratefully hosted by the Public Authority for Civil Aviation (PACA), Oman.
- The ATFM TF/2 was successfully held in Casablanca, Morocco, 19 – 20 March 2019. The meeting was gratefully hosted by the Arab Civil Aviation Organization (ACAO).
- The Meeting supported the recommendations emanating from the ACAO/ICAO ATFM Workshop (Casablanca, Morocco, 17 – 18 March 2019) held-back-to-back with the ATFM TF/2 meeting
- The ATFM TF and FWC2022 TF meetings are being held back-to-back

Where we stand Now?

The ATFM TF/1 meeting established the ATFM Core Team composed of volunteer experts from Bahrain, India, Oman, Qatar, Saudi Arabia, UAE (ATFM TF Chairman), USA, ACAO, AEROTHAI, CANSO, EUROCONTROL, IATA and ICAO to carry out the task assigned by the ATFM Task Force that include but not limited to:

1. Carry out a survey to assess the status of the MID Region related to ATM/ATFM capabilities, airspace, sectors and airports capacity, etc.
2. Carry out teleconferences with States' ATFM focal points to explore their views and thoughts related to ATFM taking into`set of data that should be exchanged and explore means that would be used for the exchange of data including the development of a common template.
3. Prepare an initial draft ATFM CONOPS.

4. Develop guidance as required to support States addressing issues related mainly to:

   a) aerodromes and airspace capacities;

   b) regular review for aerodromes and airspaces where traffic demand is expected to reach capacity, or is resulting in traffic congestion;

   c) compliance by airspace users with ATFM measures

   d) any other guidance relevant to the regional ATFM Framework

   e) mechanisms for ATFM data gathering, collation and sharing between States, Organizations and ICAO

5. Develop a Template to support States with the development of National ATFM Implementation Plan.

ATFM Core Team Members

Name/Title	State/Organization	Contact details
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Main Outcome of ATFM TF based on the Core Team work that was supported by MIDANPIRG/17

- The meeting reviewed the responses to the survey received from 10 States.
- It was recognized that the MID Region is still in the first steps related to the establishment of ATFM capabilities.
- It was recommended that qualification of experts in ATFM as well as raising awareness should be given high priority.
- The meeting agreed to a set of criteria to be used for the evaluation of the scenarios based on the severity of the challenge to achieve the criteria as well as its weight/importance on the success of the scenario.
- The meeting emphasized that establishing a centralized ATFM Unit would be the optimal solution followed by the scenario in having 2 Centres for 2 participating areas, then a centralized scenario through a third party providing the ATFM service and the last one would the Multi-Nodal. However, considering the challenges, feasibility and time and efforts required, the Multi Nodal Scenario achieved the highest Score
- MIDANPIRG/17 agreed that **Multi Nodal Scenario** to be implemented as initial start

High level outline to be considered during the development of the CONOPS

Phase I- Building State's National ATFM Capabilities

1. Raising awareness related to ATFM
2. Establishing the regulatory framework for ATFM at national level
3. Establishment of ATFM Services within the ATS organizational structure (FOC, FMP, FMU, etc.)
4. Human resources
5. Training
6. Operating Procedures
7. National ATFM Team to ensure Collaborative Decision Making (CDM)
8. Tools to be used
9. Determine and declare Airspace and airports capacity
10. Establishment of State's National ATFM CONOPS

High level outline to be considered during the development of the CONOPS

Phase II – Establishment of Regional Framework

1- Setting up the concept/framework for Cross border ATFM in the MID Region
2- Define which ATFM Measures would be required including GDPs (where applicable to be defined by States)
3- Agreement on the Format of the ATFM Messages
4- Means to be used for Communication between adjacent States ATFM FOC
5- Development of Common Operating Procedure (COP)
6- Agreement on LoA template for ATFM (App G of ATS LoA Template)
7- Agreement on the coordination procedures
8- Signature of LoAs between adjacent ATFM FOC
9- Establishment of platform to be used for sharing of information

High level outline to be considered during the development of the CONOPS

Phase III- Implementation of Cross border ATFM

1- Exchange of information through the established platform and/or periodic daily teleconferences

2- Sharing of the ATFM Daily Plan

3- Implementation of the ATFM/CDM process for regulating traffic when required (regional and later inter-regional)

4- Post Implementation Review

5- Research and future development

Action by the meeting

The meeting is invited to:

a) commend the work carried out till today by all the experts supporting the ATFM TF and the ATFM Core Team

b) encourage States and Organizations to continue their collaboration and provide further support in order to prepare the MID Region to accommodate the significant increase of traffic due to the FIFA World Cup 2022 or any other major events in a safe and efficient manner; and

c) urge States to take necessary measures to ensure the establishment of ATFM service at the national level, including the promulgation of the required regulations, organizational structure, human and financial resources, training, etc.

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YEARS OF CONNECTING THE WORLD
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Thank You