



International Civil Aviation Organization

MIDANPIRG Air Traffic Flow Management Task Force

Second Meeting (ATFM TF/2)
(Casablanca, Morocco, 19 - 20 March 2019)



Hosted by ACAO

Agenda Item 2: Regional ATFM Framework

OUTCOME OF THE FIRST MEETING OF THE ATFM CORE TEAM

(Presented by the Secretariat)

SUMMARY

The aim of this paper is to review the outcome the First meeting of the ATFM Core Team for appropriate action by the meeting.

Action by the meeting is at paragraph 2.

REFERENCES

- ATFM Core Team/1 Summary of Discussions

1. INTRODUCTION

1.1 The First Meeting of the MIDANPIRG ATFM Core Team (ACT/1) was thankfully hosted by the General Civil Aviation Authority – UAE at Sheikh Zayed Air Navigation Centre in Abu Dhabi, UAE, from 22 to 24 January 2019.

2. ACTION BY THE MEETING

2.1 The meeting is invited to review the Summary of Discussions of the ATFM Core Team/1 meeting at **Appendix A** and take action as appropriate.



Abu Dhabi, UAE, 22 - 24 January 2019)

Phase I- Building State's National ATFM Capabilities:

Phase II – Establishment of Regional Framework

Phase III- Implementation of Cross border ATFM

			5										
27. When determining an ATFM Measure, are the following factors considered?													
31. What are the primary demand-capacity imbalance reasons for the ATFM Measures?	Airport capacity					NO			OOMS		OEJN, OERK, OEMA, OEDF and OEAB		OMDB
	Sector capacity		East High, Central, North - demand exceeds capacity;			YES			Central sector	YES	ACC-West, ACC-northeast upper and lower		
	Route/Airway capacity					NO			TONVO A777 NADSO and LALDO B525 NADSO	YES	L604, L677, L550& UL768		
	Other					NO							
	Comments					procedure includes the formula							
32. Does your State initiate the following ATFM Measures with adjacent FIRs?	Miles-in-trail (MIT)		OMAE		YES	NO	YES	OMAE	NO	YES			OOMM, OIIX, OBBB
	Minutes-in-trail (MINIT)		NO		YES	NO	YES	OMAE	NO	YES. Muscat, Bahrain, Cairo, Jordan, Khartoum, Sanaa and Doha			OEJD
	Speed restrictions		NO		YES	NO	YES	OMAE	NO	YES			OOMM, OIIX, OBBB, OEJD
	Airborne Holding		NO		NO	NO	YES		NO	YES			OOMM, OIIX, OBBB, OEJD
	Fix balancing		NO		NO	NO	NO		NO	NO			OOMM, OIIX, OBBB, OEJD
	Altitude/Flight Level capping		OMAE, OKAC		NO	NO	NO		NO	YES. AMMAN, DOHA, BAHRAIN, KUWAIT & CAIRO			OIIX, OOMM
	Alternative routing options		NO		NO	NO	NO	OMAE	NO	YES			OBBB, OEJD, OOMM

Question		Bahrain	Egypt	Jordan	Kuwait	Lebanon	Oman	Qatar	Saudi Arabia	Sudan	UAE		
	Fix crossing times	NO		NO	NO	YES	OMAE	NO	YES		OOMM, OEJD		
	Airport slot	NO		NO	NO	NO		NO	YES		NO		
	Minimum departure intervals (MDIs)	NO		NO	NO	YES		NO	YES		OOMM, OIIX		
	Published, pre-defined alternative routes	NO		NO	NO			NO	YES		NO		
	Ground delay program (GDP) – airport arrival constraint	NO		NO	NO			NO	YES		OOMM, OEJD		
	Ground stop (GSt)	OMAE, OEJD, OKAC		NO	NO			NO	YES		OOMM, OIIX, OBBB, OEJD		
	Ground delay program (GDP) – airspace constraint (also known as airspace flow program: AFP)	NO		NO	NO			NO	YES		NO		
33. What is taken into consideration when an ATFM Measure is implemented			Volume and sector capacity, weather, outages		Delay action/holding/miles in trail/minutes in trail		ATCO workload, traffic demand/sector capacity, Airspace complexity and weather.	Capacity overload	• Reduction of ATCOs workload to ensure the safe provision of ATS; • Reduction of congestion and operating costs		Demand Exceeds capacity, Weather, Military Exercises, Resources, Maintenance/ Outages, Vip movements		
34. How is the duration of the selected ATFM Measure determined?			Tactical decision based on real-time information		Regional coordination.		The duration of the selected ATFM Measure is determined based on extent of over demand	By traffic levels	Declared capacity will be the main factor that is considered in the application of ATFM measures. When the capacity is reached, ATFM measures are applied until the capacity is exceeding the demand by at least 10%. Therefore, the timing will vary depending on the level of traffic		Sector and aerodrome forecast, as well as duration requirements by accepting unit		
35. Does your ANSP carry out any post-operations analysis?			NO		NA		PACA carry out any post-operations analysis using the flexible statistical tools to generate report on the metrics	NO	SANS are using the post-analysis to determine the bottleneck, Peak hour, congested airway, waypoint and congested aerodrome. This practice will improve enhance with the implementation of activation of ATCFM section		YES		
36. How is the effectiveness of the ATFM Measure analyzed?			NA		NO		The use of flexible statistical tools to effectively analyze and report on the metrics	Unknown	Refer to question number 30		Departures: o Monthly DST Compliance and Ground delay □ Arrivals: o Runway throughput and airborne delay		
37. Are the ATFM Measures included in LOAs?			YES		NO	NO	YES	Operational LoA with UAE ACC, Appendix G : Air Traffic Flow Management	NO	No, it will be included in the ATM operation manual and later on LoA		YES	
38. Does your State communicate ATFM Measures through automated or verbal communication with adjacent FIRs?	Miles in trail		Automated and verbal with OKAC, OEJD, OMAE		Verbal		Verbal	Verbal OMAE		Verbal: Muscat, Bahrain, Cairo, Jordan, Khartoum, Kuwait,		Verbal	
	Speed restrictions				Verbal		Verbal	Verbal OMAE				Verbal	

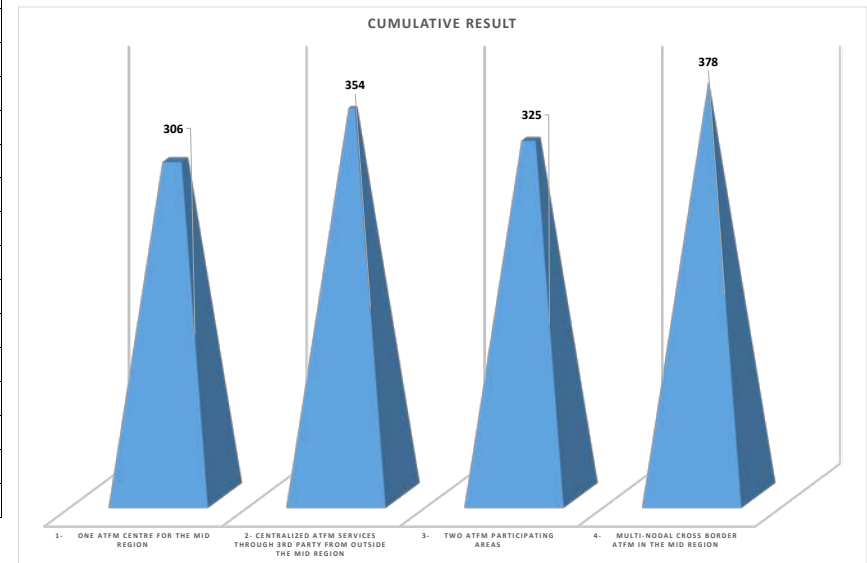
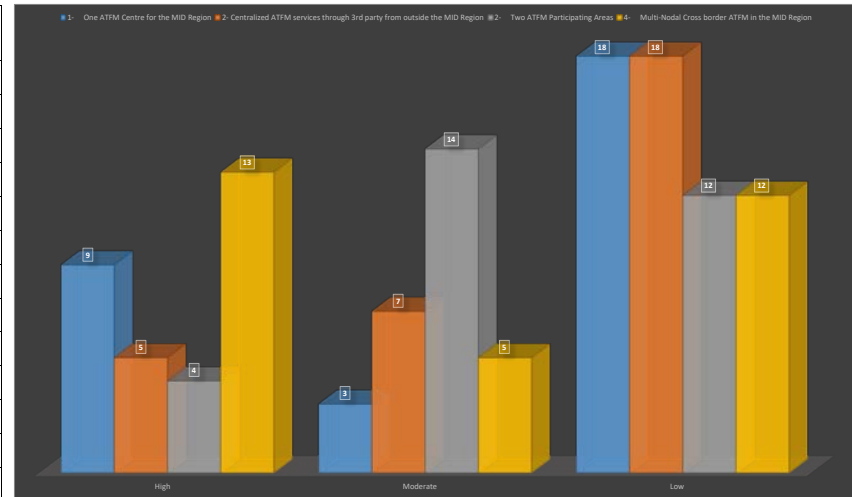
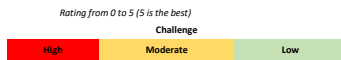
Question		Bahrain	Egypt	Jordan	Kuwait	Lebanon	Oman	Qatar	Saudi Arabia	Sudan	UAE	
ATFM initiatives planned, please list them below.	Initiative Title						CDM EXCHANGE OF DATA with UAE		SFAC-ATFCM Saudi future airspace concept project and air traffic flow and capacity management system	Waiting for regional initiatives	Airport CDM and Departure Manager	
	Primary Functions								Re-structuration of the whole airspace and implementation of ATFM system		Collaborative Departure Sequencing	
	Status (Planning, Approved, Implementation, Testing)						Planning		Planning/Tendering		Testing	
	Initial Operational Capability Date								2022		Q4 2018	
	Full Operational capability Date								2023		Q2 2021	
	Comments		Bahrain is in the process of building a new FIC and implementing a new ATM system which will include integration of ATFM functionality such as SWIM capabilities, AMAN/DMAN. Est. completion mid 2020.									
					NO							
	Initiative Title						CDM EXCHANGE OF DATA with UAE		IFPS initial flight plan processing system	Waiting for regional initiatives		
	Primary Functions								Exchange ATS service messages and FPL			
	Status (Planning, Approved, Implementation, Testing)						Planning		In progress, designing phase			
Initial Operational Capability Date								Q4/2019				
Full Operational capability Date								Q2/2020				
41. ICAO has identified various ATFM and CDM initiatives in the Aviation System Block Upgrades (ASBU) process (Block 0 and Block 1 to be implemented by 2018). Please identify which of the following have been implemented or are planned to be implemented:	B0- A-CDM Improved Airport Operations through Airport-CDM		End 2019 Planning/Coordination completed. Design/config. In progress	Implemented		Planned	2019	Mid 2019	TBD		Q4 2020	
	B0-RSEQ Improved Traffic Flow through Runway Sequencing (AMAN/DMAN)		Partially Full by 2020	Not Implemented			2019	Mid 2019	Q3-2019		Implemented	

Question	Bahrain	Egypt	Jordan	Kuwait	Lebanon	Oman	Qatar	Saudi Arabia	Sudan	UAE		
B0-FICE Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration	Partially Full by 2021		Planning no date		Planned	2019		End of 2019 AMHS capability End of 2019 AIDC/ OLDI capability end 2019		Implemented		
B0-DATM Service Improvement through Digital Aeronautical Information Management	Implemented		in the process		Planned	2020		Ongoing. Ref questionnaire		Implemented		
B0-FRTO Improved Operations through Enhanced En-Route Trajectories	Partially Full by 2020 Current status: Pre Tactical basis		Implemented		Planned	2019		Ongoing. Ref questionnaire		Q4 2020		
B0-NOPS Improved Flow Performance through Planning based on a Network-Wide view	Partially Established ATFM measures		NO		Planned	2020		2022		Q4 2022		
B1- A-CDM Optimized Airport Operations through A-CDM Total Airport Management	End 2019		NO			2020		TBD		Q2 2021		
B1-RSEQ Improved Airport operations through Departure, Surface and Arrival Management	Partially full by 2020		NO			2019		2021		Q2 2021		
B1-FICE Increased Interoperability, Efficiency and Capacity through FF-ICE/1 application before Departure	Partially Full by 2020		NO			2019		2020		Q2 2021		
B1-DATM Service Improvement through Integration of all Digital ATM Information	Partially Full by 2020		NO			2020		2021		Q2 2021		
B1-SWIM Performance Improvement through the application of System Wide Information Management (SWIM)	2020		NO			2022		Q4 2020		Q2 2019		
B1-NOPS Enhanced Flow Performance through Network Operational Planning	Dependent on Regional agreement Planning phase		NO			2022		2022		Q4 2022		
B1-AMET Enhanced Operational Decisions through Integrated Meteorological Information	2020		Ongoing			2022		Q4 2020		Q4 2020		
B1-TBO Improved Traffic Synchronization and Initial Trajectory-Based Operation	Partially by 2020		NO			2022		Q4 2020		Q4 2020		

Scenarios for MID Regional ATFM Framework

	Criteria/Advantages/Challenges	Scenarios for MID Regional ATFM Framework				Weight (1 to 6)	1- One ATFM Centre for the MID Region	2- Centralized ATFM services through 3rd party from outside the MID Region	3- Two ATFM Participating Areas	4- Multi-Nodal Cross border ATFM
		1- One ATFM Centre for the MID Region	2- Centralized ATFM services through 3rd party from outside the MID Region	3- Two ATFM Participating Areas	4- Multi-Nodal Cross border ATFM					
1	Institutional Framework (legal, financial, funding mechanism, etc.)	3	3	4	5	6	18	18	24	30
2	Time required for the States to join the project (legal, Financial, etc.)	1	2	3	5	6	6	12	18	30
3	Political Issues	1	1	3	5	6	6	6	18	30
4	Agreement on the Location	1	5	3	5	6	6	30	18	30
5	Funds required as a regional project (Centre) (cost)	3	1	2	5	6	18	6	12	30
6	Manpower (Centre)	3	5	1	5	4	12	20	4	20
7	Harmonized ATFM National procedures	5	3	4	3	3	15	9	12	9
8	Centralized Decision Making	5	5	4	2	3	15	15	12	6
9	Regional and cross regional coordination	5	5	4	2	3	15	15	12	6
10	Data Consistency/availability	5	5	4	3	3	15	15	12	9
11	Time needed for establishing the ATFM Framework	2	5	3	5	4	8	20	12	20
12	Third party could provide the service	5	5	5	0	2	10	10	10	0
13	Single system supplier and maintenance	5	2	3	0	2	10	4	6	0
14	Evolution process	5	3	4	3	2	10	6	8	6
15	Concentrated Team	5	5	3	2	2	10	10	6	4
16	Crisis management	5	5	4	4	2	10	10	8	8
17	Effective Airspace Management	5	5	3	2	2	10	10	6	4
18	Integration with regional IFPS	5	5	4	2	2	10	10	8	4
19	Stakeholders simplicity	5	5	3	2	3	15	15	9	6
20	Data collection that would be used by States	5	5	4	2	2	10	10	8	4
21	Centralized Post Assessment process	5	5	4	2	2	10	10	8	4
22	Support optimization of the use of the MID Region available airspace	5	3	4	3	2	10	6	8	6
23	Research and Development at regional level	5	5	5	2	2	10	10	10	4
24	States' willingness for Data Sharing with the ATFM Regional Centre(s) including Military Flights	2	2	2	5	6	12	12	12	30
25	Contingency Operations	1	5	5	5	3	3	15	15	15
26	local customization and integration systems	1	3	2	5	1	1	3	2	5
27	Common ATFM Messages Format	5	5	4	2	2	10	10	8	4
28	Compliance with ATFM Measures	5	5	3	2	2	10	10	6	4
29	Possibility of successful implementation	1	2	3	5	6	6	12	18	30
30	Timeframe to start operation	1	3	3	4	5	5	15	15	20
		306	354	325	378	100	306	354	325	378

Legend:



LIST OF PARTICIPANTS

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