International Civil Aviation Organization

MIDANPIRG AIM Sub-Group

Second Meeting (AIM SG/2)
(Kish Island, Iran, 31 August-2 September 2015)

Agenda Item 4: Performance Framework for AIM implementation in the MID Region

STATUS OF AIM IMPLEMENTATION IN THE MID REGION (B0-DTAM)

(Presented by the Secretariat)

SUMMARY

The aim of this paper is to review and update the status of AIM implementation (B0-DATM) in the MID Region.

Action by the meeting is at paragraph 3.

REFERENCES

- MIDANPIRG/15 Report
- MSG/4 Report

1. INTRODUCTION

1.1 States and planning and implementation regional groups (PIRGs) are transitioning to a performance-based approach to support their air navigation infrastructure planning.

1.2 Performance-Based Navigation (PBN), Continuous Descent Operations (CDO), Continuous Climb Operations (CCO), Aeronautical Information Management (AIM), Air Traffic Flow Management (ATFM) and estimated environmental benefits accrued from operational improvements have been identified as the global air navigation priorities.

2. DISCUSSION

2.1 The meeting may wish to note that, the MSG/4 meeting, as a follow-up action to the MIDANPIRG Conclusion 14/6, reviewed, updated and endorsed the MID Region Air Navigation Strategy based on the outcome of the different MIDANPIRG subsidiary bodies and other inputs from States and concerned International Organizations.

2.2 The meeting may wish to recall that, the MIDANPIRG/15 meeting endorsed a revised version of the MID Air Navigation Strategy to be published as MID Doc 002, as at **Appendix A**. Accordingly, the meeting agreed to the following Conclusion:

CONCLUSION 15/10: MID REGION AIR NAVIGATION STRATEGY

That,

a) the revised MID Region Air Navigation Strategy:

i. is endorsed as the framework identifying the regional air navigation priorities, performance indicators and targets; and

ii. be published as MID Doc 002

b) MID States be urged to:

i. develop their National Air Navigation Performance Framework, ensuring the alignment with and support to the MID Region Air Navigation Strategy; and

ii. provide the ICAO MID Regional Office, on an annual basis (by the end of November), with relevant data necessary for regional air navigation planning, reporting and monitoring.

2.3 Detailed information on the monitoring of certain ASBU modules has been included in Volume III of the MID eANP, in order to be used as planning tools for the measurement of the air navigation systems performance.

2.4 Extracts of the B0-DATM Elements/Indicators/Targets extracted from the MID Doc 002 and the B0-DATM monitoring Tables/Enablers from the MID eANP Volume III, are at **Appendix B** and **C**, respectively.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) review and update, as deemed necessary, the B0-DATM Elements, Indicators and Targets of the MID Air Navigation Strategy at **Appendix B**; and

b) review and update the status of implementation of B0-DATM Elements in the MID Region at **Appendix C**.

AIM SG/2-WP/6
APPENDIX A

MID DOC 002

INTERNATIONAL CIVIL AVIATION ORGANIZATION

MIDDLE EAST AIR NAVIGATION PLANNING AND IMPLEMENTATION REGIONAL GROUP (MIDANPIRG)

MID REGION

AIR NAVIGATION STRATEGY

EDITION JUNE, 2015

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MID REGION AIR NAVIGATION STRATEGY

1. Introduction

1.1 As traffic volume increases throughout the world, the demands on air navigation service providers in a given airspace increase, and air traffic management becomes more complex.

1.2 It is foreseen that the implementation of the components of the ATM operational concept will provide sufficient capacity to meet the growing demand, generating additional benefits in terms of more efficient flights and higher levels of safety. Nevertheless, the potential of new technologies to significantly reduce the cost of services will require the establishment of clear operational requirements.

1.3 Taking into account the benefits of the ATM operational concept, it is necessary to make many timely decisions for its implementation. An unprecedented cooperation and harmonization will be required at both global and regional level.

1.4 ICAO introduced the Aviation System Block Upgrades (ASBU) methodology as a systemic manner to achieve a harmonized implementation of the air navigation services. An ASBU designates a set of improvements that can be implemented globally from a defined point in time to enhance the performance of the ATM system.

1.5 Through Recommendation 6/1 - *Regional performance framework – planning methodologies and tools,* AN-Conf/12 urged States and PIRGs to harmonize the regional and national air navigation plans with the ASBU methodology in response to this, the MID region is developing MID Region Air Navigation Strategy that is aligned with the ASBU methodology.

1.6 Stakeholders including service providers, regulators, airspace users and manufacturers are facing increased levels of interaction as new, modernized ATM operations are implemented. The highly integrated nature of capabilities covered by the block upgrades requires a significant level of coordination and cooperation among all stakeholders. Working together is essential for achieving global harmonization and interoperability.

2. Strategic Air Navigation Capacity and Efficiency Objective

2.1 To realize sound and economically-viable civil aviation system in the MID Region that continuously increases in capacity and improves in efficiency with enhanced safety while minimizing the adverse environmental effects of civil aviation activities.

3. MID Air Navigation Objectives

3.1 The MID Region air navigation objectives are set in line with the global air navigation objectives and address specific air navigation operational improvements identified within the framework of the Middle East Regional Planning and Implementation Group (MIDANPIRG).

Near-term Objective (2013 - 2018): ASBU Block 0

3.2 Block ‘0’ features Modules characterized by operational improvements which have already been developed and implemented in many parts of the world today. It therefore has a near-term implementation period of 2013–2018. The MID Region near-term priorities are based on the implementation of an agreed set of Block 0 Modules as reflected in **Table 1** below.

3.3 The MID Region Air Navigation Strategy is aimed to maintain regional harmonisation. The States should develop their national performance framework, including action plans for the implementation of relevant priority 1 ASBU Modules and other modules according to the State operational requirements.

Mid-term Objective (2018 - 2023): ASBU Block 1

3.4 Blocks 1 through 3 are characterized by both existing and projected performance area solutions, with availability milestones beginning in 2018, 2023 and 2028, respectively. Associated timescales are intended to depict the initial deployment targets along with the readiness of all components needed for deployment.

Long-term Objective (2023 - 2028): ASBU Block 2

3.5 The Block Upgrades incorporate a long-term perspective matching that of the three companion ICAO Air Navigation planning documents. They coordinate clear aircraft- and ground-based operational objectives together with the avionics, data link and ATM system requirements needed to achieve them. The overall strategy serves to provide industry wide transparency and essential investment certainty for operators, equipment manufacturers and ANSPs.

4. MID Region ASBU Block 0 Modules Prioritization and Monitoring

4.1 On the basis of operational requirements and taking into consideration the associated benefits, **Table 1** below shows the priority for implementation of the 18 Block "0" Modules**,** as well as the MIDANPIRG subsidiary bodies that will be monitoring and supporting the implementation of the Modules:

Table 1. MID REGION ASBU BLOCK 0 MODULES PRIORITIZATION AND MONITORING

Module Code	Module Title	Priority	Monitoring		Remarks
			Main	Supporting	
Performance Improvement Areas (PIA) 1: **Airport Operations**					
B0-APTA	Optimization of Approach Procedures including vertical guidance	1	PBN SG	ATM SG, AIM SG, CNS SG	
B0-WAKE	Increased Runway Throughput through Optimized Wake Turbulence Separation	2			
B0-RSEQ	Improve Traffic flow through Runway Sequencing (AMAN/DMAN)	2			
B0-SURF	Safety and Efficiency of Surface Operations (A-SMGCS Level 1-2)	1	ANSIG	CNS SG	Coordination with RGS WG
B0-ACDM	Improved Airport Operations through Airport-CDM	1	ANSIG	CNS SG, AIM SG, ATM SG	Coordination with RGS WG
Performance Improvement Areas (PIA) 2 **Globally Interoperable Systems and Data Through Globally Interoperable System Wide Information Management**					
B0-FICE	Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration	1	CNS SG	ATM SG	
B0-DATM	Service Improvement through Digital Aeronautical Information Management	1	AIM SG	-	
B0-AMET	Meteorological information supporting enhanced operational efficiency and safety	1	MET SG	-	

Performance Improvement Areas (PIA) 3 **Optimum Capacity and Flexible Flights – Through Global Collaborative ATM**					
B0-FRTO	Improved Operations through Enhanced En-Route Trajectories	1	ATM SG		
B0-NOPS	Improved Flow Performance through Planning based on a Network-Wide view	1			
B0-ASUR	Initial capability for ground surveillance	2			
B0-ASEP	Air Traffic Situational Awareness (ATSA)	2			
B0-OPFL	Improved access to optimum flight levels through climb/descent procedures using ADS-B	2			
B0-ACAS	ACAS Improvements	1	CNS SG		
B0-SNET	Increased Effectiveness of Ground-Based Safety Nets	2			
Performance Improvement Areas (PIA) 4 **Efficient Flight Path – Through Trajectory-based Operations**					
B0-CDO	Improved Flexibility and Efficiency in Descent Profiles (CDO)	1	PBN SG		
B0-TBO	Improved Safety and Efficiency through the initial application of Data Link En-Route	2	ATM SG	CNS SG	
B0-CCO	Improved Flexibility and Efficiency Departure Profiles - Continuous Climb Operations (CCO)	1	PBN SG		

Priority 1: Modules that have the highest contribution to the improvement of air navigation safety and/or efficiency in the MID Region. These modules should be implemented where applicable and will be used for the purpose of regional air navigation monitoring and reporting for the period 2013-2014.

Priority 2: Modules recommended for implementation based on identified operational needs and benefits.

5. Measuring and monitoring air navigation performance

5.1 The monitoring of air navigation performance and its enhancement is achieved through identification of relevant air navigation Metrics and Indicators as well as the adoption and attainment of air navigation system Targets.

5.2 MIDANPIRG through its activities under the various subsidary bodies will continue to update and monitor the implementation of the ASBU Modules to achieve the air navigation targets.

5.3 The priority 1 Modules along with the associated elements, applicability, performance Indicators, supporting Metrics, and performance Targets are shown in the **Table 2** below.

Note*: The different elements supporting the implementation are explained in detail in the ASBU Document which is attached to the Global Plan (Doc 9750).*

6. Governance

6.1 Progress report on the status of implementation of the different priority 1 Modules should be developed by the Air Navigation System Implemenation Group (ANSIG) and presented to the MIDANPIRG Steering Group (MSG) and/or MIDANPIRG on regular basis.

6.2 The MIDANPIRG and its Steering Group (MSG) will be the governing body responsible for the review and update of the MID Region Air Navigation Strategy.

6.3 The MID Region Air Navigation Strategy will guide the work of MIDANPIRG and its subsidary bodies and all its member States and partners.

6.4 Progress on the implementation of the MID Region Air Navigation Strategy and the achievement of the agreed air navigation targets will be reported to the ICAO Air Navigation Commission (ANC), through the review of the MIDANPIRG reports; and to the stakeholders in the Region within the framework of MIDANPIRG.

Table 2. MONITORING THE IMPLEMENTATION OF THE ASBU BLOCK 0 MODULES IN THE MID REGION

B0 – APTA: Optimization of Approach Procedures including vertical guidance

Description and purpose

The use of performance-based navigation (PBN) and ground-based augmentation system (GBAS) landing system (GLS) procedures will enhance the reliability and predictability of approaches to runways, thus increasing safety, accessibility and efficiency. This is possible through the application of Basic global navigation satellite system (GNSS), Baro vertical navigation (VNAV), satellite-based augmentation system (SBAS) and GLS. The flexibility inherent in PBN approach design can be exploited to increase runway capacity.

Main performance impact:

KPA- 01 – Access and Equity	KPA-02 – Capacity	KPA-04 – Efficiency	KPA-05 – Environment	KPA-10 – Safety
Y	Y	Y	Y	Y

Applicability consideration:

This module is applicable to all instrument, and precision instrument runway ends, and to a limited extent, non-instrument runway ends.

B0 – APTA: Optimization of Approach Procedures including vertical guidance			
Elements	***Applicability***	***Performance Indicators/Supporting Metrics***	***Targets***
States' PBN Implementation Plans	All	Indicator: % of States that provided updated PBN implementation Plan Supporting metric: Number of States that provided updated PBN implementation Plan	80 % by Dec. 2014 100% by Dec. 2015
LNAV	All RWYs Ends at International Aerodromes	Indicator: % of runway ends at international aerodromes with RNAV(GNSS) Approach Procedures (LNAV) Supporting metric: Number of runway ends at international aerodromes with RNAV (GNSS) Approach Procedures (LNAV)	All runway ends at Int'l Aerodromes, either as the primary approach or as a back-up for precision approaches by Dec. 2016
LNAV/VNAV	All RWYs ENDs at International Aerodromes	Indicator: % of runways ends at international aerodromes provided with Baro-VNAV approach procedures (LNAV/VNAV) Supporting metric: Number of runways ends at international aerodromes provided with Baro-VNAV approach procedures (LNAV/VNAV)	All runway ends at Int'l Aerodromes, either as the primary approach or as a back-up for precision approaches by Dec. 2017

Module B0-SURF: Safety and Efficiency of Surface Operations (A-SMGCS Level 1-2)

Description and purpose

Basic A-SMGCS provides surveillance and alerting of movements of both aircraft and vehicles on the aerodrome thus improving runway/aerodrome safety. ADS-B information is used when available (ADS-B APT).

Main performance impact:

KPA- 01 – Access and Equity	KPA-02 – Capacity	KPA-04 – Efficiency	KPA-05 – Environment	KPA-10 – Safety
Y	Y	Y	Y	Y

Applicability consideration:

A-SMGCS is applicable to any aerodrome and all classes of aircraft/vehicles. Implementation is to be based on requirements stemming from individual aerodrome operational and cost-benefit assessments. ADS-B APT, when applied is an element of A-SMGCS, is designed to be applied at aerodromes with medium traffic complexity, having up to two active runways at a time and the runway width of minimum 45 m.

B0-SURF: Safety and Efficiency of Surface Operations (A-SMGCS Level 1-2)			
Elements	***Applicability***	**Performance Indicators/Supporting Metrics**	**Targets**
A-SMGCS Level 1*	OBBI, HECA, OIII, OKBK, OOMS, OTBD, OTHH, OEDF, OEJN, OERK, OMDB, OMAA, OMDW	Indicator: % of applicable international aerodromes having implemented A-SMGCS Level 1 Supporting Metric: Number of applicable international aerodromes having implemented A-SMGCS Level 1	70% by Dec. 2017
A-SMGCS Level 2*	OBBI, HECA, OIII, OKBK, OOMS, OTBD, OTHH, OEJN, OERK, OMDB, OMAA, OMDW	Indicator: % of applicable international aerodromes having implemented A-SMGCS Level 2 Supporting Metric: Number of applicable international aerodromes having implemented A-SMGCS Level 2	50% by Dec. 2017

**Reference: Eurocontrol Document – "Definition of A-SMGCS Implementation Levels, Edition 1.2, 2010".*

B0 – ACDM: Improved Airport Operations through Airport-CDM

Description and purpose

To implement collaborative applications that will allow the sharing of surface operations data among the different stakeholders on the airport. This will improve surface traffic management reducing delays on movement and manoeuvring areas and enhance safety, efficiency and situational awareness.

Main performance impact:

KPA- 01 – Access and Equity	KPA-02 – Capacity	KPA-04 – Efficiency	KPA-05 – Environment	KPA-10 – Safety
N	Y	Y	Y	N

Applicability consideration:

Local for equipped/capable fleets and already established airport surface infrastructure.

B0 – ACDM: Improved Airport Operations through Airport-CDM			
Elements	***Applicability***	***Performance Indicators/Supporting Metrics***	***Targets***
A-CDM	OBBI, HECA, OIII, OKBK, OOMS, OTBD, OTHH, OEJN, OERK, OMDB, OMAA, OMDW	Indicator: % of applicable international aerodromes having implemented improved airport operations through airport-CDM Supporting metric: Number of applicable international aerodromes having implemented improved airport operations through airport-CDM	40% by Dec. 2017

B0 – FICE: Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration

Description and purpose

To improve coordination between air traffic service units (ATSUs) by using ATS Interfacility Data Communication (AIDC) defined by the ICAO *Manual of Air Traffic Services Data Link Applications* (Doc 9694). The transfer of communication in a data link environment improves the efficiency of this process particularly for oceanic ATSUs.

Main performance impact:

KPA- 01 – Access and Equity	KPA-02 – Capacity	KPA-04 – Efficiency	KPA-05 – Environment	KPA-10 – Safety
N	Y	Y	N	Y

Applicability consideration:

Applicable to at least two area control centres (ACCs) dealing with enroute and/or terminal control area (TMA) airspace. A greater number of consecutive participating ACCs will increase the benefits.

B0 – FICE: Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration			
Elements	***Applicability***	***Performance Indicators/Supporting Metrics***	***Targets***
AMHS capability	*All States*	Indicator: % of States with AMHS capability Supporting metric: Number of States with AMHS capability	70% of States with AMHS capability by Dec. 2017
AMHS implementation /interconnection	*All States*	Indicator: % of States with AMHS implemented (interconnected with other States AMHS) Supporting metric: Number of States with AMHS implemented (interconnections with other States AMHS)	60% of States with AMHS interconnected by Dec. 2017
Implementation of AIDC/OLDI between adjacent ACCs	*All ACCs*	Indicator: % of FIRs within which all applicable ACCs have implemented at least one interface to use AIDC/OLDI with neighboring ACCs Supporting metric: Number of AIDC/OLDI interconnections implemented between adjacent ACCs	70% by Dec. 2017

B0 – DATM: Service Improvement through Digital Aeronautical Information Management

Description and purpose

The initial introduction of digital processing and management of information, through aeronautical information service (AIS)/aeronautical information management (AIM) implementation, use of aeronautical information exchange model (AIXM), migration to electronic aeronautical information publication (AIP) and better quality and availability of data

Main performance impact:

KPA- 01 – Access and Equity	KPA-02 – Capacity	KPA-04 – Efficiency	KPA-05 – Environment	KPA-10 – Safety
N	N	Y	Y	Y

Applicability consideration:

Applicable at State level, with increased benefits as more States participate

B0 – DATM: Service Improvement through Digital Aeronautical Information Management			
Elements	***Applicability***	***Performance Indicators/Supporting Metrics***	***Targets***
1- National AIM Implementation Plan/Roadmap	*All States*	Indicator: % of States that have National AIM Implementation Plan/Roadmap Supporting Metric: Number of States that have National AIM Implementation Plan/Roadmap	80% by Dec. 2016 90% by Dec. 2018
2-AIXM	*All States*	Indicator: % of States that have implemented an AIXM-based AIS database Supporting Metric: Number of States that have implemented an AIXM-based AIS database	60% by Dec. 2015 80% by Dec. 2017 100% by Dec. 2019
3-eAIP	*All States*	Indicator: % of States that have implemented an IAID driven AIP Production (eAIP) Supporting Metric: Number of States that have implemented an IAID driven AIP Production (eAIP)	60% by Dec. 2016 80% by Dec. 2018 100% by Dec. 2020
4-QMS	*All States*	Indicator: % of States that have implemented QMS for AIS/AIM Supporting Metric: Number of States that have implemented QMS for AIS/AIM	70% by Dec. 2016 90% by Dec. 2018
5-WGS-84	*All States*	Indicator: % of States that have implemented WGS-84 for horizontal plan (ENR, Terminal, AD) Supporting Metric: Number of States that have implemented WGS-84 for horizontal plan (ENR, Terminal, AD) Indicator: % of States that have implemented WGS-84 Geoid Undulation Supporting Metric: Number of States that have implemented WGS-84 Geoid Undulation	Horizontal: 100% by Dec. 2017 Vertical: 90% by Dec. 2018

6-eTOD	*All States*	Indicator: % of States that have implemented required Terrain datasets Supporting Metric: Number of States that have implemented required Terrain datasets Indicator: % of States that have implemented required Obstacle datasets Supporting Metric: Number of States that have implemented required Obstacle datasets	Area 1 : Terrain: 50% by Dec. 2015, 70% by Dec. 2018 Obstacles: 40% by Dec. 2015, 60% by Dec. 2018 Area 4: Terrain: 50% by Dec. 2015, 100% by Dec. 2018 Obstacles: 50% by Dec. 2015, 100% by Dec. 2018
7-Digital NOTAM*	*All States*	Indicator: % of States that have included the implementation of Digital NOTAM into their National Plan for the transition from AIS to AIM Supporting Metric: Number of States that have included the implementation of Digital NOTAM into their National Plan for the transition from AIS to AIM	80% by Dec. 2016 90% by Dec. 2018

B0 – AMET: Meteorological information supporting enhanced operational efficiency and safety

Description and purpose

Global, regional and local meteorological information:

a) forecasts provided by world area forecast centres (WAFC), volcanic ash advisory centres (VAAC) and tropical cyclone advisory centres (TCAC);
b) aerodrome warnings to give concise information of meteorological conditions that could adversely affect all aircraft at an aerodrome including wind shear; and
c) SIGMETs to provide information on occurrence or expected occurrence of specific en-route weather phenomena which may affect the safety of aircraft operations and other operational meteorological (OPMET) information, including METAR/SPECI and TAF, to provide routine and special observations and forecasts of meteorological conditions occurring or expected to occur at the aerodrome.

This module includes elements which should be viewed as a subset of all available meteorological information that can be used to support enhanced operational efficiency and safety.

Main performance impact:

KPA- 01 – Access and Equity	KPA-02 – Capacity	KPA-04 – Efficiency	KPA-05 – Environment	KPA-10 – Safety
N	Y	Y	Y	Y

Applicability consideration:

Applicable to traffic flow planning, and to all aircraft operations in all domains and flight phases, regardless of level of aircraft equipage.

B0 – AMET: Meteorological information supporting enhanced operational efficiency and safety			
Elements	***Applicability***	***Performance Indicators/Supporting Metrics***	***Targets***
SADIS 2G and Secure SADIS FTP	***All** States*	Indicator: % of States having implemented SADIS 2G satellite broadcast or Secure SADIS FTP service Supporting metric: number of States having implemented SADIS 2G satellite broadcast or Secure SADIS FTP service	90% by Dec. 2015 100% by Dec. 2017
QMS	***All** States*	Indicator: % of States having implemented QMS for MET Supporting metric: number of States having implemented QMS for MET	60% by Dec. 2015 80% by Dec. 2017

B0 – FRTO: Improved Operations through Enhanced En-Route Trajectories

Description and purpose

To allow the use of airspace which would otherwise be segregated (i.e. special use airspace) along with flexible routing adjusted for specific traffic patterns. This will allow greater routing possibilities, reducing potential congestion on trunk routes and busy crossing points, resulting in reduced flight length and fuel burn.

Main performance impact:

KPA- 01 – Access and Equity	KPA-02 – Capacity	KPA-04 – Efficiency	KPA-05 – Environment	KPA-10 – Safety
Y	Y	Y	Y	N/A

Applicability consideration:

Applicable to en-route and terminal airspace. Benefits can start locally. The larger the size of the concerned airspace the greater the benefits, in particular for flex track aspects. Benefits accrue to individual flights and flows. Application will naturally span over a long period as traffic develops. Its features can be introduced starting with the simplest ones.

B0 – FRTO: Improved Operations through Enhanced En-Route Trajectories			
Elements	***Applicability***	***Performance Indicators/Supporting Metrics***	***Targets***
Flexible use of airspace (FUA)	*All States*	Indicator: % of States that have implemented FUA Supporting metric*: number of States that have implemented FUA	40% by Dec. 2017
Flexible routing	*All States*	Indicator: % of required Routes that are not implemented due military restrictions (segregated areas) Supporting metric 1: total number of ATS Routes in the Mid Region Supporting metric 2*: number of required Routes that are not implemented due military restrictions (segregated areas)	60% by Dec. 2017

* *Implementation should be based on the published aeronautical information*

B0 – NOPS: Improved Flow Performance through Planning based on a Network-Wide view

Description and purpose

Air Traffic Flow Management (ATFM) is used to manage the flow of traffic in a way that minimizes delay and maximizes the use of the entire airspace. ATFM can regulate traffic flows involving departure slots, smooth flows and manage rates of entry into airspace along traffic axes, manage arrival time at waypoints or Flight Information Region (FIR)/sector boundaries and re-route traffic to avoid saturated areas. ATFM may also be used to address system disruptions including crisis caused by human or natural phenomena.

Experience clearly shows the benefits related to managing flows consistently and collaboratively over an area of a sufficient geographical size to take into account sufficiently well the network effects. The concept for ATFM and demand and capacity balancing (DCB) should be further exploited wherever possible. System improvements are also about better procedures in these domains, and creating instruments to allow collaboration among the different actors**.**

Guidance on the implementation of ATFM service are provided in the ICAO Doc 9971– Manual on Collaborative Air Traffic Flow Management

Main performance impact:

KPA- 01 – Access and Equity	KPA-02 – Capacity	KPA-04 – Efficiency	KPA-05 – Environment	KPA-10 – Safety
Y	Y	Y	Y	N/A

Applicability consideration:

Applicable to en-route and terminal airspace. Benefits can start locally. The larger the size of the concerned airspace the greater the benefits. Application will naturally span over a long period as traffic develops.

B0 – NOPS: Improved Flow Performance through Planning based on a Network-Wide view			
Elements	***Applicability***	***Performance Indicators/Supporting Metrics***	***Targets***
ATFM Measures implemented in collaborative manner	*All States*	Indicator: % of States that have established a mechanism for the implementation of ATFM Measures based on collaborative decision Supporting metric: number of States that have established a mechanism for the implementation of ATFM Measures based on collaborative decision	100% by Dec. 2017

B0 – ACAS: ACAS Improvements

Description and purpose

To provide short-term improvements to existing airborne collision avoidance systems (ACAS) to reduce nuisance alerts while maintaining existing levels of safety. This will reduce trajectory deviations and increase safety in cases where there is a breakdown of separation

Main performance impact:

KPA- 01 – Access and Equity	KPA-02 – Capacity	KPA-04 – Efficiency	KPA-05 – Environment	KPA-10 – Safety
N/A	N/A	Y	N/A	Y

Applicability consideration:

Safety and operational benefits increase with the proportion of equipped aircraft.

B0 – ACAS: ACAS Improvements			
Elements	***Applicability***	***Performance Indicators/Supporting Metrics***	***Targets***
Avionics	All States	Indicator: % of States requiring carriage of ACAS (TCAS v 7.1) for aircraft with a max certificated take-off mass greater than 5.7 tons Supporting metric: Number of States requiring carriage of ACAS (TCAS v 7.1) for aircraft with a max certificated take-off mass greater than 5.7 tons	80% by Dec. 2015 100% by Dec. 2016

B0 – CDO: Improved Flexibility and Efficiency in Descent Profiles (CDO)

Description and purpose

To use performance-based airspace and arrival procedures allowing aircraft to fly their optimum profile using continuous descent operations (CDOs). This will optimize throughput, allow fuel efficient descent profiles and increase capacity in terminal areas.

Main performance impact:

KPA- 01 – Access and Equity	KPA-02 – Capacity	KPA-04 – Efficiency	KPA-05 – Environment	KPA-10 – Safety
N	Y	Y	Y	Y

Applicability consideration:
Regions, States or individual locations most in need of these improvements. For simplicity and implementation success, complexity can be divided into three tiers:

a) least complex – regional/States/locations with some foundational PBN operational experience that could capitalize on near term enhancements, which include integrating procedures and optimizing performance;

b) more complex – regional/States/locations that may or may not possess PBN experience, but would benefit from introducing new or enhanced procedures. However, many of these locations may have environmental and operational challenges that will add to the complexities of procedure development and implementation; and

c) most complex – regional/States/locations in this tier will be the most challenging and complex to introduce integrated and optimized PBN operations. Traffic volume and airspace constraints are added complexities that must be confronted. Operational changes to these areas can have a profound effect on the entire State, region or location.

B0 – CDO: Improved Flexibility and Efficiency in Descent Profiles (CDO)			
Elements	***Applicability***	***Performance Indicators/Supporting Metrics***	***Targets***
PBN STARs	In accordance with States' implementation Plans	Indicator: % of International Aerodromes/TMA with PBN STAR implemented as required. Supporting Metric: Number of International Aerodromes/TMAs with PBN STAR implemented as required.	100% by Dec. 2016 for the identified Aerodromes/TMAs 100% by Dec. 2018 for all the International Aerodromes/TMAs
International aerodromes/TMAs with CDO	In accordance with States' implementation Plans	Indicator: % of International Aerodromes/TMA with CDO implemented as required. Supporting Metric: Number of International Aerodromes/TMAs with CDO implemented as required.	100% by Dec. 2018 for the identified Aerodromes/TMAs

Description and purpose

To implement continuous climb operations in conjunction with performance-based navigation (PBN) to provide opportunities to optimize throughput, improve flexibility, enable fuel-efficient climb profiles and increase capacity at congested terminal areas.

Main performance impact:

KPA- 01 – Access and Equity	KPA-02 – Capacity	KPA-04 – Efficiency	KPA-05 – Environment	KPA-10 – Safety
N/A	N/A	Y	Y	Y

Applicability consideration:

Regions, States or individual locations most in need of these improvements. For simplicity and implementation success, complexity can be divided into three tiers:

a) least complex: regional/States/locations with some foundational PBN operational experience that could capitalize on near-term enhancements, which include integrating procedures and optimizing performance;

b) more complex: regional/States/locations that may or may not possess PBN experience, but would benefit from introducing new or enhanced procedures. However, many of these locations may have environmental and operational challenges that will add to the complexities of procedure development and implementation; and

c) most complex: regional/States/locations in this tier will be the most challenging and complex to introduce integrated and optimized PBN operations. Traffic volume and airspace constraints are added complexities that must be confronted. Operational changes to these areas can have a profound effect on the entire State, region or location.

B0 – CCO: Improved Flexibility and Efficiency Departure Profiles - Continuous Climb Operations (CCO)			
Elements	***Applicability***	***Performance Indicators/Supporting Metrics***	***Targets***
PBN SIDs	in accordance with States' implementation Plans	Indicator: % of International Aerodromes/TMA with PBN SID implemented as required. Supporting Metric: Number of International Aerodromes/ TMAs with PBN SID implemented as required.	100% by Dec. 2016 for the identified Aerodromes/TMAs 100% by Dec. 2018 for all the International Aerodromes/TMAs
International aerodromes/TMAs with CCO	in accordance with States' implementation Plans	Indicator: % of International Aerodromes/TMA with CCO implemented as required. Supporting Metric: Number of International Aerodromes/TMAs with CCO implemented as required.	100% by Dec. 2018 for the identified Aerodromes/TMAs

- END -

APPENDIX B

B0-DATM IMPLEMENTATION ELEMENTS

B0 – DATM: Service Improvement through Digital Aeronautical Information Management					
Elements	**Applicability**	**Performance Indicators/Supporting Metrics**	**Targets**	**Status**	**Remarks**
1- National AIM Implementation Plan/Roadmap	*All States*	Indicator: % of States that have National AIM Implementation Plan/Roadmap Supporting Metric: Number of States that have National AIM Implementation Plan/Roadmap	80% by Dec. 2016 90% by Dec. 2018	80% (12 States)	AIM Sub-Group
2-AIXM	*All States*	Indicator: % of States that have implemented an AIXM-based AIS database Supporting Metric: Number of States that have implemented an AIXM-based AIS database	60% by Dec. 2015 80% by Dec. 2017 100% by Dec. 2019	47% (7 States)	Data Collection: MID eANP Table B0-DATM 3-1
3-eAIP	*All States*	Indicator: % of States that have implemented an IAID driven AIP Production (eAIP) Supporting Metric: Number of States that have implemented an IAID driven AIP Production (eAIP)	60% by Dec. 2016 80% by Dec. 2018 100% by Dec. 2020	27% (4 States)	Data Collection: MID eANP Table B0-DATM 3-1
4-QMS	*All States*	Indicator: % of States that have implemented QMS for AIS/AIM Supporting Metric: Number of States that have implemented QMS for AIS/AIM	70% by Dec. 2016 90% by Dec. 2018	53% (8 States)	Data Collection: MID eANP Table B0-DATM 3-2

5-WGS-84	*All States*	Indicator: % of States that have implemented WGS-84 for horizontal plan (ENR, Terminal, AD) Supporting Metric: Number of States that have implemented WGS-84 for horizontal plan (ENR, Terminal, AD) Indicator: % of States that have implemented WGS-84 Geoid Undulation Supporting Metric: Number of States that have implemented WGS-84 Geoid Undulation	Horizontal: 100% by Dec. 2017 Vertical: 90% by Dec. 2018	Horizontal*: 80% (12 States) Vertical**: 73% (11 States)	Data Collection: MID eANP Table B0-DATM 3-3 * Horizontal: ENR, Terminal and AD ** Vertical: Geoid Undulation
6-eTOD	*All States*	Indicator: % of States that have implemented required Terrain datasets Supporting Metric: Number of States that have implemented required Terrain datasets Indicator: % of States that have implemented required Obstacle datasets Supporting Metric: Number of States that have implemented required Obstacle datasets	Area 1 : Terrain: 50% by Dec. 2015, 70% by Dec. 2018 Obstacles: 40% by Dec. 2015, 60% by Dec. 2018 Area 4: Terrain: 50% by Dec. 2015, 100% by Dec. 2018 Obstacles: 50% by Dec. 2015, 100% by Dec. 2018	Area 1: Terrain: 40% (6 States) Obstacles: 33% (5 States) Area 4: Terrain: 47% (7 States) Obstacles: 40% (6 States)	Data Collection: MID eANP Table B0-DATM 3-4-1

7-Digital NOTAM*	*All States*	Indicator: % of States that have included the implementation of Digital NOTAM into their National Plan for the transition from AIS to AIM Supporting Metric: Number of States that have included the implementation of Digital NOTAM into their National Plan for the transition from AIS to AIM	80% by Dec. 2016 90% by Dec. 2018	80% (12 States)	Data Collection: AIM Sub-Group

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B0-DATM Enablers/Tables

In order to assist States in the planning for the transition from AIS to AIM in an expeditious manner, the following Tables, which provide more details than the standard ANRF, should be used:

1- **Table B0-DATM 3-1** sets out the requirements for the Provision of AIS/AIM products and services based on the Integrated Aeronautical Information Database (IAID). It reflects the transition from the current product centric AIS to data centric AIM. For the future digital environment it is important that the authoritative databases are clearly designated and such designation must be published for the users. This is achieved with the concept of the Integrated Aeronautical Information Database (IAID), a single access point for one or more authoritative databases (AIS, Terrain, Obstacles, AMDB, etc) for which the State is responsible. This Table will be used for the monitoring of the Key Performance Indicators (KPIs) related to elements Nr. 1 and 2 of the Module B0-DATM.

2- **Table B0-DATM 3-2** sets out the requirements for aeronautical data quality. It will be used for the monitoring of the Key Performance Indicators (KPIs) related to the element Nr. 3 of the Module B0-DATM.

3- **Table B0-DATM 3-3** sets out the requirements for the implementation of the World Geodetic System – 1984 (WGS-84).The requirement to use a common geodetic system remains essential to facilitate the exchange of data between different systems. The expression of all coordinates in the AIP and charts using WGS-84 is an important first step for the transition to AIM. This Table will be used for the monitoring of the Key Performance Indicators (KPIs) related to the element Nr. 4 of the Module B0-DATM.

4- **Table B0-DATM 3-4-1** sets out the requirements for the provision of Terrain and Obstacle data sets for Area 1 and Area 4. It will be used for the monitoring of the Key Performance Indicators (KPIs) related to the element Nr. 5 of the Module B0-DATM.

5- **Table B0-DATM 3-4-2** sets out the requirements for the provision of Terrain and Obstacle data sets for Area 2. It will be used for the monitoring of the Key Performance Indicators (KPIs) related to the element Nr. 5 of the Module B0-DATM.

6- **Table B0-DATM 3-4-3** sets out the requirements for the provision of Terrain and Obstacle data sets for Area 3 and implementation of Airport Mapping Databases (AMDB). It will be used for the monitoring of the Key Performance Indicators (KPIs) related to the element Nr. 5 of the Module B0-DATM.

Table B0-DATM 3-1

Provision of AIS/AIM products and services based on the Integrated Aeronautical Information Database (IAID)

EXPLANATION OF THE TABLE

Column:

1 Name of the State or territory for which the provision of AIS/AIM products and services based on the IAID is required.

2 Requirement for the implementation and designation of the authoritative IAID, shown by:
FI – Fully Implemented
PI – Partially Implemented
NI – Not Implemented

Note 1 — The IAID of a State is a single access point for one or more databases (AIS, Terrain, Obstacles, AMDB, etc). The minimum set of databases which should be integrated is defined in Annex 15.

Note 2 — Information providing detail of "PI" should be given in the Remarks column (the implemented components of the IAID).

Note 3 — The information related to the designation of the authoritative IAID should be published in the AIP (GEN 3.1)

3 Requirement for an IAID driven AIP production, shown by:
FC – Fully compliant (eAIP: Text, Tables and Charts)
PC – Partially compliant
NC – Not compliant

Note 4 — AIP production includes, production of AIP, AIP Amendments and AIP Supplements

4 Requirement for an IAID driven NOTAM production, shown by:
FC – Fully Compliant
NC – Not compliant

5 Requirement for an IAID driven SNOWTAM production, shown by:
FC – Fully Compliant
NC – Not compliant

6 Requirement for an IAID driven PIB production, shown by:
FC – Fully compliant
NC – Not compliant

7 Requirement for Charting systems to be interoperable with the IAID, shown by:
FC – Fully compliant
PC – Partially compliant
NC – Not compliant

8 Requirement for Procedure design systems to be interoperable with the IAID, shown by:
FI – Fully Implemented
PI – Partially Implemented
NI – Not Implemented

Note 5 — full implementation includes the use of the IAID for the design of the procedures and for the storage of the encoded procedures in the IAID

9 Requirement for ATS systems to be interoperable with the IAID, shown by:

FI – Fully Implemented

PI – Partially Implemented

NI – Not Implemented

10 Action Plan — short description of the State's Action Plan with regard to the provision of AIM products and services based on the IAID, especially for items with a "PC", "PI", "NC" or "NI" status, including planned date(s) of full compliance, as appropriate.

11 Remarks — additional information, including detail of "PC", "NC", "PI" and "NI", as appropriate.

TABLE B0-DATM-3-1

Provision of AIS/AIM products and services based on the Integrated Aeronautical Information Database (IAID)

State	IAID	AIP	NOTAM	SNOWTAM	PIB	Charting	Procedure Design	ATS	Action Plan	Remarks
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*
BAHARAIN	PI	FC	FC	-	FC	FC	PI	FI	Bahrain AIM Roadmap & Strategy (2014)	AIXM: 4.5 (5.1 by Dec. 2015)
EGYPT	FI	PC	NC	NC	FC	NC	NI	PI	National Roadmap AIM (2015)	AIXM: 4.5 3 by 2015, 4-9 by 2016
IRAN, ISLAMIC REPUBLIC OF	NI	NC	NC	NC	NC	NC	NI	NI	AIM National Plan (2009) / Roadmap Template (2014)	AIXM: NI
IRAQ	NI	NC	NC	-	NC	NC	NI	NI	Roadmap Template (2014)	AIXM: NI
JORDAN	PI	NC	FC	-	FC	PC	NI	NI	Roadmap Template (2014)	AIXM: Database via EAD
KUWAIT	PI	NC	FC	-	PC	NC	NI	NI	AIS to AIM Roadmap (2009)	AIXM: NI (5.1 by Dec. 2015)
LEBANON	NI	NC	NC	NC	NC	NC	NI	NI	Roadmap Template (2014)	AIXM: 4.5
LIBYA	NI	NC	NC	-	NC	NC	NI	NI	No Action Plan	AIXM: NI
OMAN	NI	NC	NC	-	NC	NC	NI	NI	Roadmap Template (2014)	AIXM: NI
QATAR	PI	PC	FC	-	FC	PC	PI	NI	Roadmap transition AIS to AIM (2015) / Roadmap Template (2015)	AIXM: 5.1
SAUDI ARABIA	FI	FC	FC	-	FC	FC	FI	FI		AIXM: 4.5
SUDAN	PI	NC	FC	FC	FC	PC	PI	PI	National AIM Plan (2014) / Roadmap Template (2014)	AIXM: NI 1.AIS DB integrated with MET & ATM 2. Contract Signed for eAIP, AIXM connected with Charting SYS. 7. Contract signed. 8. Ongoing project
SYRIAN ARAB REPUBLIC	NI	NC	NC	-	NC	NC	NI	NI	No Action Plan	AIXM:NI
UNITED ARAB	PI	FC	NC	-	PC	PC	NI	PI	Transition AIS to AIM (2011) / Roadmap Template (2014)	AIXM: 5.1 AMDB: 2016-2021 eTOD integration: 2016

EMIRATES										PIB: AVBL at OMMA, OMDB, OMDW; other ADs 2020 Charing: 2016 Procedure Design 2020 ATS: ACC AVBL, ADs 2020 Digital NOTAM 2016-2021
YEMEN	NI	NC	NC	-	NC	NC	NI	NI	No Action Plan	AIXM:NI

Table B0-DATM-3-2
Aeronautical Data Quality

EXPLANATION OF THE TABLE

Column:

1 Name of the State or territory.

2 Compliance with the requirement for implementation of QMS for Aeronautical Information Services including safety and security objectives, shown by:

FC – Fully compliant

PC – Partially compliant

NC – Not compliant

3 Compliance with the requirement for the establishment of formal arrangements with approved data originators concerning aeronautical data quality, shown by:

FC – Fully compliant

PC – Partially compliant

NC – Not compliant

4 Implementation of digital data exchange with originators, shown by:

FI – Implemented

PI – Partially Implemented

NI – Not implemented

Note 1 — Information providing detail of "PI" and "NI" should be given in the Remarks column (percentage of implementation).

5 Compliance with the requirement for metadata, shown by:

FC – Fully compliant

PC – Partially compliant

NC – Not compliant

6 Compliance with the requirements related to aeronautical data quality monitoring (accuracy, resolution, timeliness, completeness), shown by:

FC – Fully compliant

PC – Partially compliant

NC – Not compliant

7 Compliance with the requirements related to aeronautical data integrity monitoring, shown by:

FC – Fully compliant

PC – Partially compliant

NC – Not compliant

8 Compliance with the requirements related to the AIRAC adherence, shown by:

FC – Fully compliant

PC – Partially compliant

NC – Not compliant

9 Action Plan — short description of the State's Action Plan with regard to aeronautical data quality requirements implementation, especially for items with a "PC", "PI", "NC" or "NI" status, including planned date(s) of full compliance, as appropriate.

10 Remarks — additional information, including detail of "PC", "NC", "PI" and "NI", as appropriate.

TABLE B0-DATM-3-2
Aeronautical Data Quality

State	QMS	Establishment of formal agreements	Digital data exchange with originators	Metadata	Data quality monitoring	Data integrity monitoring	AIRAC adherence	Action Plan	Remarks
1	2	3	4	5	6	7	8	9	10
BAHARAIN	FC	FC	PI	PC	PC	PC	FC	Bahrain AIM Roadmap & Strategy (2014)	
EGYPT	FC	PC	PI	FC	PC	PC	FC	National Roadmap AIM (2015)	3, 4, 6 and 7 by 2016
IRAN, ISLAMIC REPUBLIC OF	FC	PC	NI	NC	NC	NC	FC	AIM National Plan (2009) / Roadmap Template (2014)	
IRAQ	NC	NC	NI	NC	NC	NC	FC	Roadmap Template (2014)	
JORDAN	FC	NC	NI	PC	FC	FC	FC	Roadmap Template (2014)	
KUWAIT	FC	PC	NI	NC	NC	NC	FC	AIS to AIM Roadmap (2009)	
LEBANON	NC	NC	NI	NC	NC	NC	FC	Roadmap Template (2014)	
LIBYA	NC	NC	NI	NC	NC	NC	NC	No Action Plan	
OMAN	PC	NC	NI	NC	NC	NC	FC	Roadmap Template (2014)	
QATAR	FC	PC	PI	FC	PC	PC	FC	Roadmap transition AIS to AIM (2015) / Roadmap Template (2015)	SLA with MIL in progress
SAUDI ARABIA	FC	PC	NI	FC	FC	FC	FC	Roadmap transition AIS to AIM (2014) / Roadmap Template (2014)	SLA will be completed end 2015
SUDAN	NC	FC	NI	NC	FC	FC	FC	National AIM Plan (2014) / Roadmap Template (2014)	
SYRIAN ARAB REPUBLIC	NC	NC	NI	NC	NC	NC	NC	No Action Plan	
UNITED ARAB EMIRATES	FC	PC	NI	FC	FC	FC	FC	Transition AIS to AIM (2011) / Roadmap Template (2014)	Digital data exchange with originator: planned (2016-2021) CAAP 56 details of agreements
YEMEN	NC	NC	NI	PC	NC	NC	NC	No Action Plan	

Table B0-DATM-3-3

World Geodetic System-1984 (WGS-84)

EXPLANATION OF THE TABLE

Column:

1 Name of the State or territory for which implementation of WGS-84 is required.

2 Compliance with the requirements for implementation of WGS-84 for FIR and Enroute points, shown by:

FC – Fully compliant

PC – Partially compliant

NC – Not compliant

3 Compliance with the requirements for implementation of WGS-84 for Terminal Areas (arrival, departure and instrument approach procedures), shown by:

FC – Fully compliant

PC – Partially compliant

NC – Not compliant

4 Compliance with the requirements for implementation of WGS-84 for Aerodrome, shown by:

FC – Fully compliant

PC – Partially compliant

NC – Not compliant

5 Compliance with the requirements for implementation of Geoid Undulation, shown by:

FC – Fully compliant

PC – Partially compliant

NC – Not compliant

6 Action Plan — short description of the State's Action Plan with regard to WGS-84 implementation, especially for items with a "PC", "PI", "NC" or "NI" status, including planned date(s) of full compliance, as appropriate.

7 Remarks — additional information, including detail of "PC" and "NC", as appropriate.

TABLE B0-DATM-3-3
World Geodetic System-1984 (WGS-84)

State	FIR/ENR	Terminal	AD	GUND	Action Plan	Remarks
1	2	3	4	5	6	7
BAHARAIN	FC	FC	FC	FC		Plan to be updated by 2016
EGYPT	FC	FC	FC	FC		
IRAN, ISLAMIC REPUBLIC OF	FC	NC	FC	FC	AIM National Plan (2009) / Roadmap Template (2014)	
IRAQ	PC	PC	PC	NC	Roadmap Template (2014)	
JORDAN	FC	FC	FC	FC		
KUWAIT	FC	FC	FC	FC		Last survey FEB 2015
LEBANON	FC	FC	FC	NC	Roadmap Template (2014)	
LIBYA	PC	PC	NC	NC	No Action Plan	
OMAN	FC	FC	FC	FC		
QATAR	FC	FC	FC	FC		Annual Validation/Survey Updates planned up to 2017
SAUDI ARABIA	FC	FC	FC	FC		
SUDAN	FC	FC	FC	FC		
SYRIAN ARAB REPUBLIC	FC	FC	FC	NC	No Action Plan	
UNITED ARAB EMIRATES	FC	FC	FC	FC		
YEMEN	FC	FC	FC	FC		

Table B0-DATM-3-4-1
Provision of Terrain and Obstacle data sets for Areas 1 and 4

EXPLANATION OF THE TABLE

Column

1 Name of the State or territory for which Terrain and Obstacle data sets for Areas 1 and 4 are required.

2 Compliance with requirement for the provision of Terrain data sets for Area 1, shown by:
FC – Fully Compliant
PC – Partially Compliant
NC – Not Compliant

3 Compliance with requirement for the provision of Terrain data sets for Area 4, shown by:
FC – Fully Compliant
PC – Partially Compliant
NC – Not Compliant

4 Compliance with requirement for the provision of Obstacle data sets for Area 1, shown by:
FC – Fully Compliant
PC – Partially Compliant
NC – Not Compliant

5 Compliance with requirement for the provision of Obstacle data sets for Area 4, shown by:
FC – Fully Compliant
PC – Partially Compliant
NC – Not Compliant

6 Action plan — short description of the State's Action Plan with regard to compliance with the requirements for provision of Terrain and Obstacle data sets for Areas 1 and 4, especially for items with a "PC" or "NC" status, including planned date(s) of full compliance, as appropriate.

7 Remarks— additional information, including detail of "PC" and "NC", as appropriate.

TABLE B0-DATM-3-4-1

Provision of Terrain and Obstacle data sets for Areas 1 and 4

State	Terrain data sets		Obstacle data sets		Action Plan	Remarks
	Area 1	Area 4	Area 1	Area 4		
1	2	3	4	5	6	7
BAHARAIN	FC	FC	FC	FC		
EGYPT	FC	FC	PC	PC	National Roadmap AIM (2015)	
IRAN, ISLAMIC REPUBLIC OF	FC	FC	FC	FC		
IRAQ	NC	NC	NC	NC	Roadmap Template (2014)	
JORDAN	NC	NC	NC	NC	Roadmap Template (2014)	
KUWAIT	FC	FC	FC	FC		
LEBANON	NC	NC	NC	NC	Roadmap Template (2014)	
LIBYA	NC	NC	NC	NC	No Action Plan	
OMAN	NC	NC	NC	NC	Roadmap Template (2014)	
QATAR	FC	FC	FC	FC		
SAUDI ARABIA	FC	FC	FC	FC		
SUDAN	NC	NC	NC	NC	National AIM Plan (2014) / Roadmap Template (2014)	
SYRIAN ARAB REPUBLIC	NC	NC	NC	NC	No Action Plan	
UNITED ARAB EMIRATES	PC	FC	PC	FC		
YEMEN	NC	NC	NC	NC	No Action Plan	

Table B0-DATM-3-4-2
Provision of Terrain and Obstacle data sets for Area 2

EXPLANATION OF THE TABLE

Column

1 Name of the State or territory for which Terrain and Obstacle data sets for Area 2 are required.

2 Compliance with requirement for the provision of Terrain data sets for Area 2a, shown by:
FC – Fully Compliant
PC – Partially Compliant
NC – Not Compliant

3 Compliance with requirement for the provision of Terrain data sets for Area 2b, shown by:
FI – Fully Implemented
PI – Partially Implemented
NI – Not implemented
N/A – Not Applicable

4 Compliance with requirement for the provision of Terrain data sets for Area 2c, shown by:
FI – Fully Implemented
PI – Partially Implemented
NI – Not Implemented
N/A – Not Applicable

5 Compliance with requirement for the provision of Terrain data sets for Area 2d, shown by:
FI – Fully Implemented
PI – Partially Implemented
NI – Not Implemented
N/A – Not Applicable

6 Compliance with requirement for the provision of Obstacle data sets for Area 2a, shown by:
FC – Fully Compliant
PC – Partially Compliant
NC – Not Compliant

7 Compliance with requirement for the provision of Obstacle data sets for Area 2b, shown by:
FI – Fully Implemented
PI – Partially Implemented
NI – Not implemented
N/A – Not Applicable

8 Compliance with requirement for the provision of Obstacle data sets for Area 2c, shown by:
FI – Fully Implemented

PI – Partially Implemented
NI – Not Implemented
N/A – Not Applicable

9 Compliance with requirement for the provision of Obstacle data sets for Area 2d, shown by:

FI – Fully Implemented
PI – Partially Implemented
NI – Not Implemented
N/A – Not Applicable

10 Action plan — short description of the State's Action Plan with regard to compliance with the requirements for provision of Terrain and Obstacle data sets for Area 2, especially for items with a "PC", "PI", "NC" or "NI" status.

11 Remarks— additional information, including detail of "PC", "PI" and "NC", "NI", as appropriate.

TABLE B0-DATM-3-4-2

Provision of Terrain and Obstacle data sets for Area 2

State	Terrain data sets				Obstacle data sets				Action Plan	Remarks
	Area 2a	Area 2b	Area 2c	Area 2d	Area 2a	Area 2b	Area 2c	Area 2d		
1	2	3	4	5	6	7	8	9	10	11
BAHARAIN	NC	NI	NI	NI	NC	NI	NI	NI	Bahrain AIM Roadmap & Strategy (2014)	
EGYPT	PC	PI	PI	PI	NC	NI	NI	NI	National Roadmap AIM (2015)	
IRAN, ISLAMIC REPUBLIC OF	NC	NI	NI	NI	NC	NI	NI	NI	AIM National Plan (2009) / Roadmap Template (2014)	
IRAQ	NC	NI	NI	NI	NC	NI	NI	NI	Roadmap Template (2014)	
JORDAN	NC	NI	NI	NI	NC	NI	NI	NI	Roadmap Template (2014)	
KUWAIT	NC	NI	NI	NI	NC	NI	NI	NI	AIS to AIM Roadmap (2009)	
LEBANON	NC	NI	NI	NI	NC	NI	NI	NI	Roadmap Template (2014)	
LIBYA	NC	NI	NI	NI	NC	NI	NI	NI	No Action Plan	
OMAN	NC	NI	NI	NI	NC	NI	NI	NI	Roadmap Template (2014)	
QATAR	FC	FI	FI	FI	FC	FI	FI	FI	Roadmap transition AIS to AIM (2015) / Roadmap Template (2015)	
SAUDI ARABIA	NC	NI	NI	NI	NC	NI	NI	NI	Roadmap transition AIS to AIM (2014) / Roadmap Template (2014)	
SUDAN	NC	NI	NI	NI	NC	NI	NI	NI	National AIM Plan (2014) / Roadmap Template (2014)	
SYRIAN ARAB REPUBLIC	NC	NI	NI	NI	NC	NI	NI	NI	No Action Plan	
UNITED ARAB EMIRATES	NC	NI	NI	NI	NC	NI	NI	NI	Transition AIS to AIM (2011) / Roadmap Template (2014)	
YEMEN	NC	NI	NI	NI	NC	NI	NI	NI	No Action Plan	

Table B0-DATM-3-4-3
Provision of Terrain and Obstacle data sets for Area 3 and Airport Mapping Databases (AMDB)

EXPLANATION OF THE TABLE

Column

1 Name of the State or territory for which Terrain and Obstacle data sets for Area 3 and AMDB are required.

2 Compliance with requirement for the provision of Terrain data sets for Area 3, shown by:
FI – Fully Implemented
PI – Partially Implemented
NI – Not Implemented
N/A – Not Applicable

3 Compliance with requirement for the provision of Obstacle data sets for Area 3, shown by:
FI – Fully Implemented
PI – Partially Implemented
NI – Not Implemented
N/A – Not Applicable

4 Implementation of AMDB, shown by:
FI – Fully Implemented
PI – Partially Implemented
NI – Not Implemented
N/A – Not Applicable

5 Action plan — short description of the State's Action Plan with regard to compliance with the requirements for provision of Terrain and Obstacle data sets for Area 3 and AMDB implementation, especially for items with a "PC", "PI", "NC" or "NI" status.

6 Remarks— additional information, including detail of "PI" and "NI", as appropriate.

TABLE B0-DATM-3-4

Provision of Terrain and Obstacle data sets for Area 3 and Airport Mapping Databases (AMDB)

State	Terrain data sets (Area 3)	Obstacle data sets (Area 3)	AMDB	Action Plan	Remarks
1	2	3	4	5	6
BAHARAIN	NI	NI	NI	Bahrain AIM Roadmap & Strategy (2014)	
EGYPT	NI	NI	NI	National Roadmap AIM (2015)	
IRAN, ISLAMIC REPUBLIC OF	NI	NI	NI	AIM National Plan (2009) / Roadmap Template (2014)	
IRAQ	NI	NI	NI	Roadmap Template (2014)	
JORDAN	NI	NI	NI	Roadmap Template (2014)	
KUWAIT	FI	FI	NI	AIS to AIM Roadmap (2009)	
LEBANON	NI	NI	NI	Roadmap Template (2014)	
LIBYA	NI	NI	NI	No Action Plan	
OMAN	NI	NI	NI	Roadmap Template (2014)	
QATAR	NI	FI	NI	Roadmap transition AIS to AIM (2015) / Roadmap Template (2015)	AMDB to be implemented last quarter of 2015
SAUDI ARABIA	NI	NI	NI	Roadmap transition AIS to AIM (2014) / Roadmap Template (2014)	
SUDAN	NI	NI	NI	National AIM Plan (2014) / Roadmap Template (2014)	
SYRIAN ARAB REPUBLIC	NI	NI	NI	No Action Plan	
UNITED ARAB EMIRATES	NI	NI	NI	Transition AIS to AIM (2011) / Roadmap Template (2014)	
YEMEN	NI	NI	NI	No Action Plan	

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