International Civil Aviation Organization

Sixth Meeting of the Aerodrome Safety, Planning & Implementation Group

(ASPIG/6) (Muscat, Oman, 27 – 29 May 2024)

Agenda Item 3: Regional Performance Framework for Aerodrome Capacity and Efficiency

OUTCOMES OF THE RANP/NANP TF/1

(Presented by the Secretariat)

SUMMARY

This paper presents the outcome of the first meeting of RANP/NAPT task force.

Action by the meeting is at paragraph 3.

Reference
- MIDANPIRG/20 and RASG-MID/10 Meetings Report *(Muscat, Oman, 14 – 17 May 2023)*   - RANP/NANP TF/1 Meeting Report *(Cairo, Egypt, 19-22 February 2024)*   - MIDANPIG/21 and RASGA-MID/11 Meeting Report *(Abu Dhabi, UAE, 4 – 8 March 2024)*

1. **INTRODUCTION**

1.1   The Global Air Navigation Plan (Doc 9750) is the ICAO's highest air navigation strategic document and the plan to drive the evolution of the global air navigation system, in line with the Global Air Traffic Management Operational Concept (GATMOC, Doc 9854) and the Manual on Air Traffic Management System Requirements (Doc 9882). Developed in collaboration with and for the benefit of stakeholders, the GANP is a key contributor to the achievement of ICAO's Strategic Objectives and has an important role to play in supporting the United Nations 2030 Agenda for Sustainable Development.

1.2   The content of the GANP is organized into a multilayer structure with each layer tailored to different audiences. This allows for better communication with both high-level and technical managers with the objective that no State or stakeholder is left behind. The four-layer structure is made up of global (strategic and technical), regional and national levels, and provides a framework for alignment of regional, sub-regional and national plans.

1.3   The meeting may wish to note that minor changes are introduced in the GANP every three (3) years and major changes every six (6) years. Therefore, reviewing and updating the MID Region Air Navigation Strategy and MID ANP, Vol III, would be required to be done regularly by

experts' group.

1.4   Based on the above, MIDANPIRG/20, through Decision 20/12 established the RANP/NANP Task Force to ensure alignment of the MID Region Air Navigation Strategy and MID ANP Vol III with the latest edition of the GANP and assist States developing NANPs:

> *MIDANPIRG DECISION 20/12: RANP/NANP TASK FORCE*
>
> *That,*
>
> a) *RANP/NANP Task Force be established to ensure alignment of the MID Region Air Navigation Strategy and MID ANP Vol III with the latest edition of the GANP and assist States developing NANPs;*
>
> b) *the terms of reference of the RANP/NANP Task Force be developed during the first meeting of RANP/NANP Task Force; and*
>
> c) *States support the RANP/NANP Task Force through:*
>
>> i. *assignment of Focal Point to contribute to the work of the Task Force; and*
>>
>> ii. *sharing states' experience and provision of required data in timely manner.*

2.   DISCUSSION

2.1   The meeting may wish to note that the first meeting of the RANP/NANP TF/1 was held in Cairo, Egypt, 19-22 February 2024, which was attended by 55 participants from 10 States and 2 international organizations. The meeting unanimously elected Mr. Nasser Al-Khalaf, Air Traffic Controller & ANS Advisor, Qatar Civil Aviation Authority (QCAA) as the Chairperson and Mr. Abdullah M. Albathi, Director of Air Navigation Safety Systems, Saudi Arabia General Authority of Civil Aviation Authority (GACA), as the Vice Chairperson of the RANP/NANP TF.

2.2   The meeting may wish to recall that RANP/NANP TF/1 meeting:

- reviewed and agreed to the Terms of Reference (ToRs) of the RANP/NANP Task.
- reviewed and endorsed the draft of new edition of the MID Air Navigation Strategy (ICAO MID Doc 002) at **Appendix A,**

2.3   The meeting may wish to underline that Subgroups including the **ASPIG** were requested to allocate enough time in their agenda for the detailed discussion of the ASBU Threads relevant to their technical areas, including the identification of priorities, definition of applicability areas, performance indicators, metrics, targets, etc.

2.4   In this regard, the meeting may wish to review and update the extracted table of the SURF Thread/elements at **Appendix B** and provide f its revised version to the RANP/NANP TF/2 Meeting for validation.

2.5   The meeting may wish to note that MDANPIRG/21 Meeting thanked Kuwait, Qatar, Saudi Arabia and UAE for sharing their experience in the development of National Air Navigation Plan (NANP).

2.6   The meeting may wish to recall that the MIDANPIRG/21 meeting agreed to the following Conclusions:

MIDANPIRG CONCLUSION 21/1:   RANP/NANP TASK FORCE TOR

That, the RANP/NANP Task Force Terms of Reference (ToR) at Appendix A are endorsed.

and

MIDANPIRG CONCLUSION 21/2:   MID REGION AIR NAVIGATION STRATEGY, EDITION, FEBRUARY 2024

That, the MID Region Air Navigation Strategy, Edition February 2024 (ICAO MID DOC 002), is endorsed and be published by the ICAO MID Office.

and

MIDANPIRG CONCLUSION 21/3:   NATIONAL AIR NAVIGATION PLAN (NANP)

That, the MID States, with support of ICAO MID Office, develop their National Air Navigation Plan (NANP) by end of December 2024.

3.   ACTION BY THE MEETING

3.1   The meeting is invited to:

a) note the outcomes of the RANP/NANP TF/1 meeting;

b) review and update the extracted table of the SURF Thread/elements at **Appendix B**, and

c) consequently, review and update the MID Doc 002 - MID Air Navigation Strategy at **Appendix A** and provide the revised version to the RANP/NANP TF/2 Meeting for validation.

INTERNATIONAL CIVIL AVIATION ORGANIZATION

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

MID REGION

AIR NAVIGATION STRATEGY

EDITION MARCH, 2024

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AIR NAVIGATION PRIORITIES AND MONITORING OF THE STATUS OF IMPLEMENTATION

AIR NAVIGATION PRIORITIES AND MONITORING OF THE STATUS OF IMPLEMENTATION

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) framework 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   In accordance, with the Resolutions of the 40th Session of the ICAO Assembly, particularly Resolution A40-1 "ICAO global planning for safety and air navigation", the ICAO Assembly urged States and PIRGs to utilize the guidance provided in the GANP for planning and implementation activities which establish priorities, targets and indicators consistent with globally-harmonized objectives, taking into account operational needs. In response to this, the MID Region developed the MID Region Air Navigation Strategy – Part 1, which is aligned with the GANP and ASBU Framework.

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   The Strategic Objective related to Air Navigation Capacity and Efficiency is 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).

3.2   Blocks '0' and "1" feature Elements are characterized by operational improvements, which have already been developed and implemented in many parts of the world. The MID Region priority 1 Block 0 & 1 Elements are reflected in **Table 1** below.

3.3   The MID Region Air Navigation Strategy aims to maintain regional harmonisation. The States should develop their National Air Navigation Plan (NANP), including action plans for the implementation of relevant priority 1 ASBU Elements and other ASBU elements or non ASBU solutions based on the States' operational requirements and cost benefits analysis.

3.4   The implementation of the ASBU Block 0 Elements in the MID Region started before 2013 and is continuing. For the short and medium term, the MID Region priorities include identified ASBU Elements from Block 0 and Block 1.

4. MID Region ASBU Threads/Elements Prioritization and Monitoring

4.1 On the basis of operational requirements and taking into consideration the associated benefits, **Table 1** below shows the priority associated for each ASBU element from Block 0 and Block 1, as well as the MIDANPIRG subsidiary bodies that will be monitoring and supporting the implementation of these Threads/Elements:

Priority 1 ASBU Element: Elements that have the highest contribution to the improvement of air navigation safety and/or efficiency in the MID Region. These Elements should be implemented where applicable and will be used for the purpose of regional air navigation monitoring and reporting.

Priority 2 ASBU Element: Elements recommended for implementation based on identified operational needs and benefits by States.

Priority 1 Thread: Any Thread with at least one priority 1 element

Table 1. MID REGION ASBU THREADS & ELEMENTS (BLOCK 0 & 1) PRIORITIZATION AND MONITORING

Thread	Element code	Title	Priority	Start Date	Monitoring		Remarks
					Main	**Supporting**	
Information Threads							
DAIM							
DAIM	**B1/1**	Provision of quality-assured aeronautical data and information	**1**	2021	AIM SG	RANP/ NANP TF	
	B1/2	Provision of digital Aeronautical Information Publication (AIP) data sets	2				
	B1/3	Provision of digital terrain data sets	**1**	2021	AIM SG	RANP/ NANP TF	
	B1/4	Provision of digital obstacle data sets	**1**	2021	AIM SG	RANP/ NANP TF	
	B1/5	Provision of digital aerodrome mapping data sets	2				
	B1/6	Provision of digital instrument flight procedure data sets	2				
	B1/7	NOTAM improvements	2				
AMET							
AMET	**B0/1**	Meteorological observations products	**1**	2014	MET SG	RANP/ NANP TF	
	B0/2	Meteorological forecast and warning products	**1**	2014	MET SG	RANP/ NANP TF	
	B0/3	Climatological and historical meteorological products	**1**	2014	MET SG	RANP/ NANP TF	

Thread	Element code	Title	Priority	Start Date	Monitoring Main	Monitoring Supporting	Remarks
	B0/4	Dissemination of meteorological products	1	2014	MET SG	CNS SG RANP/ NANP TF	
	B1/1	Meteorological observations information	2				
	B1/2	Meteorological forecast and warning information	2				
	B1/3	Climatological and historical meteorological information	2				
	B1/4	Dissemination of meteorological information	2				
FICE							
FICE	B0/1	Automated basic inter facility data exchange (AIDC)	1	2014	CNS SG ATM SG	RANP/ NANP TF	
Operational Threads							
APTA							
APTA	B0/1	PBN Approaches (with basic capabilities)	1	2014	PBN SG	ATM SG AIM SG CNS SG RANP/ NANP TF	
	B0/2	PBN SID and STAR procedures (with basic capabilities)	1	2014	PBN SG	ATM SG AIM SG RANP/ NANP TF	
	B0/3	SBAS/GBAS CAT I precision approach procedures	2				
	B0/4	CDO (Basic)	1	2014	PBN SG	ATM SG RANP/ NANP TF	
	B0/5	CCO (Basic)	1	2014	PBN SG	ATM SG RANP/ NANP TF	
	B0/6	PBN Helicopter Point in Space (PinS) Operations	2				
	B0/7	Performance based aerodrome operating minima – Advanced aircraft	1	2021	PBN SG	AIM SG CNS SG e RANP/ NANP TF	
	B0/8	Performance based aerodrome operating minima – Basic aircraft	2				

Thread	Element code	Title	Priority	Start Date	Monitoring		Remarks
					Main	**Supporting**	
	B1/1	PBN Approaches (with advanced capabilities)	2				
	B1/2	PBN SID and STAR procedures (with advanced capabilities)	2				
	B1/4	CDO (Advanced)	2				
	B1/5	CCO (Advanced)	2				
FRTO							
FRTO	**B0/1**	Direct routing (DCT)	2				
	B0/2	Airspace planning and Flexible Use of Airspace (FUA)	**1**	2014	ATM SG	RANP/ NANP TF	
	B0/3	Pre-validated and coordinated ATS routes to support flight and flow	2				
	B0/4	Basic conflict detection and conformance monitoring	**1**	2014	ATM SG	CNS SG RANP/ NANP TF	
	B1/1	Free Route Airspace (FRA)	2				
	B1/2	Required Navigation Performance (RNP) routes	2				
	B1/3	Advanced Flexible Use of Airspace (FUA) and management of real time airspace data	2				
	B1/4	Dynamic sectorization	2				
	B1/5	Enhanced Conflict Detection Tools and Conformance Monitoring	2				
	B1/6	Multi-Sector Planning	2				
	B1/7	Trajectory Options Set (TOS)	2				
NOPS							
NOPS	**B0/1**	Initial integration of collaborative airspace management with air traffic flow management	**1**	2015	ATM SG	RANP/ NANP TF	
	B0/2	Collaborative Network Flight Updates	2				
	B0/3	Network Operation Planning basic features	2				

Thread	Element code	Title	Priority	Start Date	Monitoring		Remarks
					Main	**Supporting**	
	B0/4	Initial Airport/ATFM slots and A-CDM Network Interface	2				
	B0/5	Dynamic ATFM slot allocation	2				
	B1/1	Short Term ATFM measures	2				
	B1/2	Enhanced Network Operations Planning	2				
	B1/3	Enhanced integration of Airport operations planning with network operations planning	2				
	B1/4	Dynamic Traffic Complexity Management	2				
	B1/5	Full integration of airspace management with air traffic flow management	2				
	B1/6	Initial Dynamic Airspace configurations	2				
	B1/7	Enhanced ATFM slot swapping	2				
	B1/8	Extended Arrival Management supported by the ATM Network function	2				
	B1/9	Target Times for ATFM purposes	2				
	B1/10	Collaborative Trajectory Options Program (CTOP)	2				
ACAS							
ACAS	**B1/1**	ACAS Improvements	**1**	2014	ATM SG CNS SG	RANP/ NANP TF	
SNET							
SNET	**B0/1**	Short Term Conflict Alert (STCA)	**1**	2017	ATM SG	CNS SG RANP/ NANP TF	
	B0/2	Minimum Safe Altitude Warning (MSAW)	**1**	2017	ATM SG	CNS SG RANP/ NANP TF	
	B0/3	Area Proximity Warning (APW)	**1**	2020	ATM SG	CNS SG RANP/ NANP TF	
	B0/4	Approach Path Monitoring (APM)	2				
	B1/1	Enhanced STCA with aircraft parameters	2				
	B1/2	Enhanced STCA in complex TMA	2				
GADS							

Thread	Element code	Title	Priority	Start Date	Monitoring		Remarks
					Main	Supporting	
GADS	B1/1	Aircraft Tracking	2				
	B1/2	Operational Control Directory	1	2021	ATM SG	RANP/ NANP TF	
RSEQ							
RSEQ	B0/1	Arrival Management	1	2021	ATM SG	CNS SG ASPIG RANP/ NANP TF	
	B0/2	Departure Management	2				
	B0/3	Point merge	2				
	B1/1	Extended arrival metering	2				
SURF							
SURF	B0/1	Basic ATCO tools to manage traffic during ground operations	1	2014	ASPIG	ATM SG CNS SG RANP/ NANP TF	
	B0/2	Comprehensive situational awareness of surface operations	1	2014	ASPIG	ATM SG CNS SG RANP/ NANP TF	
	B0/3	Initial ATCO alerting service for surface operations	1	2021	ASPIG	ATM SG CNS SG RANP/ NANP TF	
	B1/1	Advanced features using visual aids to support traffic management during ground operations	2				
	B1/2	Comprehensive pilot situational awareness on the airport surface	2				
	B1/3	Enhanced ATCO alerting service for surface operations	2				
	B1/4	Routing service to support ATCO surface operations management	2				
	B1/5	Enhanced vision systems for taxi operations	2				
ACDM							
ACDM	B0/1	Airport CDM Information Sharing (ACIS)	1	2014	ASPIG	CNS SG, AIM SG, ATM SG, RANP/ NANP TF	
	B0/2	Integration with ATM Network function	1	2014	ASPIG	CNS SG, AIM SG, ATM SG, RANP/ NANP TF	

Thread	Element code	Title	Priority	Start Date	Monitoring		Remarks
					Main	**Supporting**	
CSEP	B1/1	Basic airborne situational awareness during flight operations (AIRB)	2				
	B1/2	Visual Separation on Approach (VSA)	2				
	B1/3	Performance Based Longitudinal Separation Minima	2				
	B1/4	Performance Based Lateral Separation Minima	2				
DATS	B1/1	Remotely Operated Aerodrome Air Traffic Services	2				
OPFL	B0/1	In Trail Procedure (ITP)	2				
	B1/1	Climb and Descend Procedure (CDP)	2				
TBO	B0/1	Introduction of time-based management within a flow centric approach	2				
	B1/1	Initial Integration of time-based decision making processes	2				
Technology Threads							
ASUR							
ASUR	B0/1	Automatic Dependent Surveillance – Broadcast (ADS-B)	1	2021	CNS SG	ATM SG, ASPIG, RANP/ NANP TF	
	B0/2	Multilateration cooperative surveillance systems (MLAT)	1	2021	CNS SG	ATM SG, ASPIG, RANP/NA NP TF	
	B0/3	Cooperative Surveillance Radar Downlink of Aircraft Parameters (SSR-DAPS)	1	2021	CNS SG	ATM SG, ASPIG, RANP/ NANP TF	
	B1/1	Reception of aircraft ADS-B signals from space (SB ADS-B)	2				
NAVS							
NAVS	B0/1	Ground Based Augmentation Systems (GBAS)	2				
	B0/2	Satellite Based Augmentation Systems (SBAS)	2				
	B0/3	Aircraft Based Augmentation Systems (ABAS)	1	2021	CNS SG	PBN SG, ATM SG, AIM SG,	

Thread	Element code	Title	Priority	Start Date	Monitoring		Remarks
					Main	**Supporting**	
						RANP/ NANP TF	
	B0/4	Navigation Minimal Operating Networks (Nav. MON)	**1**	2021	CNS SG	PBN SG, RANP/ NANP TF	
	B1/1	Extended GBAS	2				
COMI							
COMI	B0/1	Aircraft Communication Addressing and Reporting System (ACARS)	2				
	B0/2	Aeronautical Telecommunication Network/Open System Interconnection (ATN/OSI)	2				
	B0/3	VHF Data Link (VDL) Mode 0/A	2				
	B0/4	VHF Data Link (VDL) Mode 2 Basic	2				
	B0/5	Satellite communications (SATCOM) Class C Data	2				
	B0/6	High Frequency Data Link (HFDL)	2				
	B0/7	AMHS	**1**	2014	CNS SG	RANP/ NANP TF	
	B1/1	Ground-Ground Aeronautical Telecommunication Network/Internet Protocol Suite (ATN/IPS)	**1**	2021	CNS SG	RANP/ NANP TF	
	B1/2	VHF Data Link (VDL) Mode 2 Multi-Frequency	2				
	B1/3	SATCOM Class B Voice and Data	2				
	B1/4	Aeronautical Mobile Airport Communication System (AeroMACS) Ground-Ground	2				
COMS							
COMS	B0/1	CPDLC (FANS 1/A & ATN B1) for domestic and procedural airspace	2				

Thread	Element code	Title	Priority	Start Date	Monitoring		Remarks
					Main	**Supporting**	
	B0/2	ADS-C (FANS 1/A) for procedural airspace	2				
	B1/1	PBCS approved CPDLC (FANS 1/A+) for domestic and procedural airspace	2				
	B1/2	PBCS approved ADS-C (FANS 1/A+) for procedural airspace	2				
	B1/3	SATVOICE (incl. routine communications) for procedural airspace	2				

5. Implementation and Monitoring of the priority 1 ASBU Elements

5.1 The monitoring of air navigation performance and its enhancement is achieved, inter-alia, through identification of relevant air navigation Metrics and Indicators as well as the adoption and attainment of air navigation system Targets. The monitoring of the priority 1 ASBU Threads/Elements is carried out through the MID eANP Volume III.

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

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

Note: Further details on the ASBU elements objectives, description, implementation requirements and performance impact assessment can be found on the ICAO GANP Portal https://www4.icao.int/ganpportal/ASBU

6. Governance

6.1 Progress report on the status of implementation of the different priority 1 Threads/Elements should be developed by MIDANPIRG Subsidary bodies. A consolidated MID Air Navigation Report showing the status of implementation of the different priority 1 ASBU Elements by Thread will be developed by the RANP/NANP TF on annual basis and presented to MIDANPIRG for endorsement.

6.2 The MIDANPIRG 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, MID Air Navigation Reports, etc.; and to the stakeholders in the Region within the framework of MIDANPIRG.

Table 2. MONITORING THE IMPLEMENTATION OF THE PRIORITY 1 ASBU THREADS/ELEMENTS (Block 0 & 1) IN THE MID REGION

Element	Applicability	Performance Indicators/ Supporting Metrics	Baseline	Target	Timeline	KPA/ KPI
Information Threads						
DAIM						
DAIM B1/1	All States	Indicator*: Regional average implementation status of DAIM B1/1 (provision of quality-assured aeronautical data and information). Supporting Metrics: 1. Number of States that have implemented an AIXM-based AIS database (AIXM V5.1+) 2. Number of States that have established formal arrangements with at least 50% of their AIS data originators.	(2023) 53%	80%	Dec 2024	N/A
DAIM B1/3	All States	Indicator*: Regional average implementation status of DAIM B1/3(Provision of Terrain digital datasets). Supporting Metric: Number of States that provide required Terrain digital datasets.	(2022) 35%	60%	Dec 2024	N/A
DAIM B1/4	All States	Indicator*: Regional average implementation status of DAIM B1/4(Provision of obstacle digital datasets). Supporting Metric: Number of States that provide required obstacle digital datasets.	(2022) 35%	60 %	Dec 2024	N/A
AMET						
AMET B0/1	All states	Indicator*: Regional average implementation status of B0/1 (Meteorological observations products). Supporting Metrics: Number of States that provide the following Meteorological observations products, as required: 1. Automatic Weather Observation System (AWOS) information	(2022) 65%	80%	Dec 2021	N/A

	Element	Applicability	Performance Indicators/ Supporting Metrics	Baseline	Target	Timeline	KPA/ KPI
			(including real-time exchange of wind and RVR data) 2. Local reports (MET REPORT/SPECIAL) 3. Aerodrome reports (METAR/SPECI) 4. Lightning Information 5. Ground-based weather radar information. 6. Meteorological satellite imagery 7. Aircraft meteorological report (ie. ADS-B, AIREP, etc.) 8. Vertical wind and temperature profiles 9. Wind shear alerts				
AMET B0/2	Meteorological forecast and warning products	All states	Indicator*: Regional average implementation status of B0/2 (Meteorological forecasts and warning products) Supporting Metrics: Number of States that provides the following Meteorological forecast and warning products, as required: 1. World Area Forecast System (WAFS) gridded products. 2. Significant Weather (SIGWX) 3. Aerodrome Forecast (TAF) 4. Trend Forecast (TREND) 5. Take-off Forecast 6. SIGMET 7. Aerodrome Warning 8. Wind Shear Warning	(2022) 60%	90%	Dec 2021	N/A
AMET B0/3	Climatological and historical meteorological products	All states	Indicator: % of States that provide Climatological and historical meteorological products, as required. Supporting Metric: Number of States that provide Climatological and historical meteorological products, as required.	(2022) 60%	85%	Dec 2021	N/A
AMET B0/4	Dissemination of meteorological products	All states	Indicator: % of States disseminating Meteorological products using a variety of formats and means (TAC, Gridded, Graphical, BUFR code, IWXXM)	(2022) 60%	85%	Dec 2021	N/A

	Element	Applicability	Performance Indicators/ Supporting Metrics	Baseline	Target	Timeline	KPA/ KPI
			Supporting Metric: Number of States disseminating Meteorological products using a variety of formats and means (TAC, Gridded, Graphical, BUFR code, IWXXM)				

FICE

	Element	Applicability	Performance Indicators/ Supporting Metrics	Baseline	Target	Timeline	KPA/ KPI
FICE B0/1	Automated basic inter facility data exchange (AIDC)	According to the MID Region AIDC/OLDI Priority 1 Applicability Area	Indicator*: % of priority 1 AIDC/OLDI Interconnection have been implemented. Supporting metric: Number of AIDC/OLDI interconnections implemented between adjacent ACCs.	(2023) 26%	70%	Dec 2026	N/A

Operational Threads

APTA

	Element	Applicability	Performance Indicators/ Supporting Metrics	Baseline	Target	Timeline	KPA/ KPI
APTA B0/1	PBN Approaches (with basic capabilities)	All RWYs ENDs at International Aerodromes	Indicator: % of Runway ends at international aerodromes served by PBN approach procedures with basic functionalities - down to LNAV or LNAV/VNAV minima. Supporting metric: Number of Runways ends at international aerodromes served by PBN approach procedures with basic functionalities - down to LNAV or LNAV/VNAV minima.	(2017) 46.7%	100%	Dec 2018	Capacity/ KPI 10
APTA B0/2	PBN SID and STAR procedures (with basic capabilities)	All RWYs ENDs at International Aerodromes	Indicator: % of Runway ends at international aerodromes provided with PBN SID and STAR (basic capabilities). Supporting Metric: Number of Runway ends at international aerodromes provided with PBN SID and STAR (basic capabilities).	(2022) 55%	70%	Dec 2022	Efficiency Capacity/ KPI 10 KPI 11 KPI 17 KPI 19/
APTA B0/4	CDO (Basic)	OBBI, OIIE, OIKB, OIFM, OJAI, OLBA, OOMS, OTHH, TBD, OEJN, EMA, OEDF, ERK, HSSK,	Indicator*: % of International Aerodromes with CDO implemented and published as required. Supporting Metric: Number of International Aerodromes with CDO implemented and published as required.	(2022) 65%	100%	Dec 2022	Efficiency/ KPI 19

	Element	Applicability	Performance Indicators/ Supporting Metrics	Baseline	Target	Timeline	KPA/ KPI
		HSPN, OMAA, MAL, OMAD, DW, OMDB, MSJ, OMRK and OMFJ	*As per the applicability area				
APTA B0/5	CCO (Basic)	OBBI, OIIE, OIKB, OIFM, OJAI, OLBA, OOMS, OTHH, TBD, OEJN, EMA, OEDF, ERK, HSSK, HSPN, OMAA, MAL, OMAD,MDW, OMDB, MSJ, OMRK and OMFJ	Indicator*: % of International Aerodromes with CCO implemented and published as required. Supporting Metric: Number of International Aerodromes with CCO implemented and published as required. *As per the applicability area	(2022) 65%	100%	Dec 2022	Efficiency/ KPI 17
APTA B0/7	Performance based aerodrome operating minima – Advanced aircraft	All States	Indicator: % of States authorizing Performance-based Aerodrome Operating Minima for Air operators operating Advanced aircraft. Supporting Metric: Number of States 1- having provisions for operational credits to enable lower minima based on advanced aircraft capabilities. (Reference: Annex 6 Part I para. 4.2.8.2.1) 2- Number of States Putting in place an approval process for the operational credit to Aircraft operator conducting PBAOM operations for low visibility operations (Reference: Doc 9365 (AWO Manual)), as applicable.	(2022) 50%	80%	Dec 2025	Capacity/ KPI 10
FRTO							
FRTO B0/2	Airspace planning and Flexible Use of Airspace (FUA)	Bahrain, Egypt, Jordan, Qatar, Saudi Arabia (2 ACCs), Sudan, UAE	Indicator*: % of ACCs using and implementing appropriate means (procedures and tools (automation)) to support Airspace planning and FUA and improve data exchange between Civil and Military to improve efficiency of Airspace. Supporting metric: Number of ACCs using and implementing appropriate means (procedures and tools (automation)) to support Airspace planning and FUA and improve data exchange	(2022) 63%	70%	Dec 2022	Efficiency Access and equity/ KPI 04 KPI 05 KPI 17 KPI 18/ KPI 19

	Element	Applicability	Performance Indicators/ Supporting Metrics	Baseline	Target	Timeline	KPA/ KPI
			between Civil and Military to improve efficiency of Airspace. * As per the applicability area				
FRTO B0/4	Basic conflict detection and conformance monitoring	Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia (2 ACCs), Sudan, UAE	Indicator*: % States that implemented MTCD and MONA, for ACCs, as required. Supporting metric: The number of States that implemented MTCD and MONA for ACCs, as required. * As per the applicability area	(2022) 63%	100%	Dec 2022	Capacity/ KPI 06 Safety/ KPI 20 KPI 23
NOPS							
NOPS B0/1	Initial integration of collaborative airspace management with air traffic flow management	Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Sudan, UAE	Indicator*: % of States implementing ASM/ATFM techniques, procedures and tools for the initial establishment of an integrated collaborative airspace management and air traffic flow and capacity management process. Supporting metric: number of States implementing ASM/ATFM techniques, procedures and tools for the initial establishment of an integrated collaborative airspace management and air traffic flow and capacity management process. * As per the applicability area	(2022) 42%	70%	Dec 2022	Efficiency Capacity/ KPI 04 KPI 05 KPI 17 KPI 18 KPI 19/
ACAS							
ACAS B1/1	ACAS Improvements Operational	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	(2022) 87%	100%	Dec 2024	Safety/ KPI 20 KPI 23
SNET							
SNET B0/1	Short Term Conflict Alert (STCA)	Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman,	Indicator*: % of States that have implemented Short-term conflict alert (STCA)	(2018) 100%	100%	Dec 2018	Safety/ KPI 20 KPI 23

	Element	Applicability	Performance Indicators/ Supporting Metrics	Baseline	Target	Timeline	KPA/ KPI
		Qatar, Saudi Arabia, Sudan, UAE	Supporting metric: number of States that have implemented Short-term conflict alert (STCA) * As per the applicability area				
SNET B0/2	Minimum Safe Altitude Warning (MSAW)	Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Sudan, UAE	Indicator*: % of States that have implemented Minimum safe altitude warning (MSAW) Supporting metric: number of States that have implemented Minimum safe altitude warning (MSAW) * As per the applicability area	(2018) 100%	100%	Dec 2018	Safety/ KPI 20
SNET B0/3	Area Proximity Warning (APW)	Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Sudan, UAE	Indicator*: % of States that have implemented Area Proximity Warning (APW) for ACCs, as required. Supporting metric: number of States that have Implemented Area Proximity Warning (APW) for ACCs, as required. * As per the applicability area	(2022) 67%	100%	Dec 2022	Safety/ KPI 20
GADS							
GADS B1/2	Operational Control Directory	All States	Indicator: % of States that provided GADSS Point of Contact (PoC) information Supporting Metric: Number of States that provided GADSS Point of Contact (PoC) information.	(2022) 73%	100%	Dec 2022	N/A
RSEQ							
RSEQ B0/1	Arrival Management	OBBI, HECA, EBA, HELX, HESN, HESH, OTBD, THH, OEJN, OEDF, OEMA, ERK OMDB, MAA	Indicator*: % of Aerodromes that have implemented arrival manager (AMAN), where required/applicable. Supporting Metric: Number of Aerodrome that have implemented arrival manager (AMAN), where required/ applicable. * As per the applicability area	(2022) 36%	80%	Dec 2024	Capacity Efficiency/ KPI 08 KPI 10 KPI 11 KPI 14/
SURF							
SURF-B0/1	**Basic ATCO tools to manage traffic during ground operations**	**All International Aerodromes**	**Indicator: % of Aerodromes having implemented Basic ATCO tools to manage traffic during ground operations**	**(2022) 90%**	**100%**	**Dec 2024**	**Efficiency/ KPI 02 KPI 13**

	Element	Applicability	Performance Indicators/ Supporting Metrics	Baseline	Target	Timeline	KPA/ KPI
			Supporting metric: Number of Aerodromes having implemented Basic ATCO tools to manage traffic during ground operations				Safety/ KPI 20 KPI 21
SURF-B0/2	Comprehensive situational awareness of surface operations	OBBI, HECA, OIII, OOMS, OTBD, THH, OEDF, OEJN, OERK, EMA, OMDB, MAA.	Indicator*: % of Airports having implemented the surveillance service of A-SMGCS

Supporting metric: Number of Airports having implemented the surveillance service of A-SMGCS

* As per the applicability area | (2022) 61% | 80% | Dec 2022 | Safety/ KPI 20 KPI 21 |
| SURF-B0/3 | Initial ATCO alerting service for surface operations | OBBI, HECA, OIII, OOMS, OTBD, OTHH, OEDF, OEJN, OERK, OEMA, OMDB, OMAA. | Indicator*: % of Airports having implemented the A-SMGCS alerting service.

Supporting metric: Number of Airports having implemented the A-SMGCS alerting service.

* As per the applicability area | (2022) 74% | 80% | Dec 2022 | Safety/ KPI 20 |
| **ACDM** | | | | | | | |
| ACDM B0/1 | Airport CDM Information Sharing (ACIS) | HECA, OBBI, OIII, OKKK, OOMS, OTHH, OEJN, OERK, OMDB, OMAA | Indicator*: % of Airports having implemented ACIS.

Supporting metric: number of Airports having implemented ACIS.

* As per the applicability area | (2022) 75% | 90% | Dec 2024 | N/A |
| ACDM B0/2 | Integration with ATM Network function | HECA, OBBI, OIII, OKKK, OOMS, OTHH, OEJN, OERK, OMDB, OMAA. | Indicator*: % of Airports having integrated ACDM with the ATM Network function.

Supporting metric: Number of Airports having integrated ACDM with the ATM Network function

* As per the applicability area | (2022) 25% | 50% | Dec 2024 | N/A |
Technology Threads							
ASUR							
ASUR B0/1	Automatic Dependent Surveillance – Broadcast (ADS-B)	Bahrain, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi	Indicator*: % of States that have implemented ADS-B to improve surveillance coverage/capabilities for provision of ATS.	(2022) 60%	80%	Dec 2022	N/A

	Element	Applicability	Performance Indicators/ Supporting Metrics	Baseline	Target	Timeline	KPA/ KPI
		Arabia, , Sudan, UAE	Supporting Metric: Number of States that have implemented ADS-B to improve surveillance coverage/capabilities for provision of ATS. * As per the applicability area				
ASUR B0/2	Multilateration cooperative surveillance systems (MLAT)	Bahrain, , Kuwait, Oman, Qatar, Saudi Arabia, UAE	Indicator*: % of States that have implemented Multi-lateration (M-LAT) for provision of ATS. Supporting Metric: Number of States that have implemented Multi-lateration (M-LAT) for provision of ATS. Indicator*: % of States that have implemented ADS-B to improve surveillance coverage/capabilities for provision of ATS. Supporting Metric: Number of States that have implemented ADS-B to improve surveillance coverage/capabilities for provision of ATS. * As per the applicability area	(2022) 63%	80%	Dec 2022	N/A
ASUR B0/3	Cooperative Surveillance Radar Downlink of Aircraft Parameters (SSR-DAPS)	Bahrain, Egypt, Iran, Iraq, Kuwait, Lebanon, Jordan, Oman, Qatar, Saudi Arabia, Sudan and UAE	Indicator*: % of States that have implemented Downlink of Aircraft Parameters (SSR-DAPS) Supporting Metric: Number of States that have implemented Downlink of Aircraft Parameters (SSR-DAPS) * As per the applicability area	(2022) 83%	90%	Dec 2023	N/A
NAVS							
NAVS B0/3	Aircraft Based Augmentation Systems (ABAS)	All States	Indicator: % of States requiring Aircraft Based Augmentation System (ABAS) equipage for aircraft with a max certificated take-off mass greater than 5,700 Kg to enable PBN Operations Supporting metric: Number of States requiring Aircraft Based Augmentation System (ABAS) equipage for aircraft with a max certificated take-off mass greater than 5,700 Kg to enable PBN Operations	(2022) 40%	70%	Dec 2022	N/A

	Element	Applicability	Performance Indicators/ Supporting Metrics	Baseline	Target	Timeline	KPA/ KPI
NAVS B0/4	Navigation Minimal Operating Networks (Nav. MON)	All States	Indicator: % of States that have developed a plan of rationalized conventional NAVAIDS network to ensure the necessary levels of resilience for navigation Supporting metric: Number of States that have developed a plan of rationalized conventional NAVAIDS network to ensure the necessary levels of resilience for navigation.	(2022) 47%	70%	Dec 2022	N/A
COMI							
COMI B0/7	ATS Message Handling System (AMHS)	All States	Indicator: % of States that have established AMHS interconnections with adjacent COM Centres Supporting metric: Number of States that have established AMHS interconnections with adjacent COM Centres	(2022) 73%	90%	Dec 2022	N/A
COMI B1/1	Ground-Ground Aeronautical Telecommunication Network/Internet Protocol Suite (ATN/IPS)	All States	Indicator: % of States that have established National IP Network for voice and data communication Supporting metric: Number of States that have established National IP Network for voice and data communication	(2022) 60%	80%	Dec 2022	N/A

Extracted Table of the AOP SURF Thread of the MID RANP

Thread	Element code	Title	Priority	Start Date	Monitoring Main	Monitoring Supporting	Service
SURF							
SURF	**B0/1**	Basic ATCO tools to manage traffic during ground operations	**1**	2014	ASPIG	ATM SG CNS SG RANP/ NANP TF	Guidance and Routing Services
	B0/2	Comprehensive situational awareness of surface operations	**1**	2014	ASPIG	ATM SG CNS SG RANP/ NANP TF	Surveillance Service
	B0/3	Initial ATCO alerting service for surface operations	1	2021	ASPIG	ATM SG CNS SG RANP/ NANP TF	Airport Safety Support Service : RMCA
	B1/1	Advanced features using visual aids to support traffic management during ground operations	2				
	B1/2	Comprehensive pilot situational awareness on the airport surface	2				
	B1/3	Enhanced ATCO alerting service for surface operations	2̶1				Airport Safety Support Service : CATC + CMAC
	B1/4	Routing service to support ATCO surface operations management	2̶ 1				Routing Service
	B1/5	Enhanced vision systems for taxi operations	2				

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