



International Civil Aviation Organization

MIDANPIRG RANP/NANP Task Force

Second Meeting (RANPNANP TF/2)
(Cairo, Egypt, 17 – 19 February 2025)

Agenda Item 4: Review and update MID Air Navigation Strategy

REVIEW AND UPDATE THE MID AIR NAVIGATION STRATEGY (ICAO MID Doc 002)

(Presented by the Secretariat)

SUMMARY

This paper presents a Draft Revised MID Air Navigation Strategy (ICAO MID Doc 002) for review by the meeting.

Action by the meeting is at paragraph 3.

REFERENCES

- GANP 7th edition;
- MID Air Navigation Strategy Plan (ICAO MID Doc 002);
- MIDANPIRG/21 (Abu Dhabi, UAE, 4 – 8 March 2024);
- AIM SG/11 (22-23 January 2025, Amman, Jordan);
- ATM SG/10 (20-23 October 2024, Jeddah, Saudi Arabia);
- CNS SG/13 (20-23 October 2024, Jeddah, Saudi Arabia);
- PBN SG/9 (9-11 December 2024, Doha, Qatar);
- MET SG/12 (12-13 November 2024, Virtual);
- ASPIG/6 (27-29 May 2024, Muscat, Oman).

1. INTRODUCTION

1.1 The Assembly, through Resolution A41-6, endorsed the 2023-2025 edition of the Global Air Navigation Plan (GANP) as the global strategic directions for safety and the evolution of the air navigation system.

1.2 Furthermore, the Assembly 41 resolved that these global plans shall provide the frameworks in which regional, sub-regional and national plans will be developed and implemented, thus ensuring consistency, harmonization and coordination of efforts aimed at improving international civil aviation safety, capacity and efficiency.

1.3 The MIDANPIRG/21 meeting underlined the need for the MIDANPIRG Sub Groups to allocate enough time in their agenda for the detailed discussion of the ASBU Threads/Elements relevant to their technical areas, including the identification of priorities, definition of applicability areas, performance indicators, metrics, targets, etc.

2. DISCUSSION

2.1 Based on inputs from the different MIDANPIRG subsidiary bodies, a Draft revised version of the MID Region Air Navigation Strategy, including minor changes has been consolidated as at **Appendix A**. It is to be noted that major changes will be included in the next Edition of the Strategy (to be presented to MIDANPIRG/23 for endorsement), which will be aligned with the 8th Edition of the

GANP and include additional priority 1 ASBU elements from Block 0, Block 1 and Block 2 (WP/9 refers).

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) review the Draft revised version of the MID Region Air Navigation Strategy (MID Doc. 002) at **Appendix A**;
- b) agree on necessary amendments to keep pace with the developments; and
- c) agree on the following Draft Conclusion:

DRAFT CONCLUSION 2/1: REVISED MID AIR NAVIGATION STRATEGY

That, the Revised MID Air Navigation Strategy (ICAO MID DOC 002, Edition March 2024, Revision February 2025) is endorsed and be published by the ICAO MID Office.



MID Doc 002

INTERNATIONAL CIVIL AVIATION ORGANIZATION

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

**MID REGION
AIR NAVIGATION STRATEGY**

EDITION MARCH, 2024 - REVISION FEBRUARY 2025

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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 and AIMDP TF | 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 and AIMDP TF | RANP/ NANP TF | |
| | B1/4 | Provision of digital obstacle data sets | 1 | 2021 | AIM SG and AIMDP TF | 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 | |

| Thread | Element code | Title | Priority | Start Date | Monitoring | | Remarks |
|---------------------|--------------|--|----------|------------|------------------|--|---------|
| | | | | | Main | Supporting | |
| | B0/3 | Climatological and historical meteorological products | 1 | 2014 | MET SG | RANP/ NANP TF | |
| | 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 ASPIG RANP/ NANP TF | |

| Thread | Element code | Title | Priority | Start Date | Monitoring | | Remarks |
|--------|--------------|---|----------|------------|-------------------|----------------------|---------|
| | | | | | Main | Supporting | |
| | B0/8 | Performance based aerodrome operating minima – Basic aircraft | 2 | | | | |
| | 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 and ASM WG | 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 ATFM TF | RANP/ NANP TF | |
| | B0/2 | Collaborative Network Flight Updates | 2 | | | | |

| Thread | Element code | Title | Priority | Start Date | Monitoring | | Remarks |
|--------|--------------|--|----------|------------|------------------|----------------------------|---------|
| | | | | | Main | Supporting | |
| | B0/3 | Network Operation Planning basic features | 2 | | | | |
| | 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 | | | | |

| Thread | Element code | Title | Priority | Start Date | Monitoring | | Remarks |
|--------|--------------|--|----------|------------|-----------------------------------|---|---------|
| | | | | | Main | Supporting | |
| | B1/2 | Enhanced STCA in complex TMA | 2 | | | | |
| GADS | | | | | | | |
| 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 ATFM TF | 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 | |

| Thread | Element code | Title | Priority | Start Date | Monitoring | | Remarks |
|--------------------|--------------|---|----------|------------|------------|---------------------------------------|---------|
| | | | | | Main | Supporting | |
| | B0/2 | Integration with ATM Network function | 1 | 2014 | ASPIG | CNS SG, AIM SG, ATM SG, RANP/ NANP TF | |
| 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 | | | | |

| Thread | Element code | Title | Priority | Start Date | Monitoring | | Remarks |
|-------------|--------------|--|----------|------------|------------|---------------------------------------|---------|
| | | | | | Main | Supporting | |
| | 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, 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 | | | | | | | |

| Thread | Element code | Title | Priority | Start Date | Monitoring | | Remarks |
|--------|--------------|--|----------|------------|------------|------------|---------|
| | | | | | Main | Supporting | |
| COMS | B0/1 | CPDLC (FANS 1/A & ATN B1) for domestic and procedural airspace | 2 | | | | |
| | 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 subsidiary 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/ganportal/ASBU>

6. Governance

6.1 Progress report on the status of implementation of the different priority 1 Threads/Elements should be developed by MIDANPIRG Subsidiary 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 subsidiary 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 | Provision of quality-assured aeronautical data and information | All States | Indicator*: Regional average implementation status of DAIM B1/1 (provision of quality-assured aeronautical data and information). Supporting Metrics: <u>1. Number of States that have migrated to AIM automated data-centric environment based on (AIXM V5.1+)</u> Number of States that have implemented an AIXM-based AIS database (AIXM V5.1+) <u>2. Number of States Implementing Quality Assurance and Quality Control (QA/QC) Processes</u> <u>+</u> <u>2-3. Number of States</u> that have established formal arrangements with at least 50% of their AIS data originators. | (2023) 53% | 80% | Dec 2024 | N/A |
| DAIM B1/3 | Provision of digital terrain data sets | 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 | Provision of digital obstacle data sets | 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 | | | | | | | |

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| Element | Applicability | Performance Indicators/ Supporting Metrics | Baseline | Target | Timeline | KPA/ KPI | |
|--------------|--|---|--|------------|----------|-------------|-----|
| AMET B0/1 | Meteorological observations products | 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: <div><div>1.</div><div>Automatic Weather Observation System (AWOS) information (including real-time exchange of wind and RVR data)</div></div> <div><div>2.</div><div>Local reports (MET REPORT/SPECIAL)</div></div> <div><div>3.</div><div>Aerodrome reports (METAR/SPECI)</div></div> <div><div>4.</div><div>Lightning Information</div></div> <div><div>5.</div><div>Ground-based weather radar information.</div></div> <div><div>6.</div><div>Meteorological satellite imagery</div></div> <div><div>7.</div><div>Aircraft meteorological report (ie. ADS-B, AIREP, etc.)</div></div> <div><div>8.</div><div>Vertical wind and temperature profiles</div></div> <div><div>9.</div><div>Wind shear alerts</div></div> | (2022) 65% | 80% | Dec 2021 | N/A |
| 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: <div><div>1.</div><div>World Area Forecast System (WAFS) gridded products.</div></div> <div><div>2.</div><div>Significant Weather (SIGWX)</div></div> <div><div>3.</div><div>Aerodrome Forecast (TAF)</div></div> <div><div>4.</div><div>Trend Forecast (TREND)</div></div> <div><div>5.</div><div>Take-off Forecast</div></div> <div><div>6.</div><div>SIGMET</div></div> <div><div>7.</div><div>Aerodrome Warning</div></div> <div><div>8.</div><div>Wind Shear Warning</div></div> | (2022) 60% | 90% | Dec 2021 | N/A |
| AMET B0/3 | Climatological and historical | All states | Indicator: % of States that provide Climatological and historical meteorological | (2022) 60% | 85% | Dec 2021 | N/A |

| Element | | Applicability | Performance Indicators/ Supporting Metrics | Baseline | Target | Timeline | KPA/ KPI |
|----------------------------|---|---|--|--------------|--------|----------|---------------------|
| | meteorological products | | products, as required. Supporting Metric: Number of States that provide Climatological and historical meteorological products, as required. | | | | |
| 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) Supporting Metric: Number 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 |
| FICE | | | | | | | |
| 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 | | | | | | | |
| 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 |

| Element | | Applicability | Performance Indicators/ Supporting Metrics | Baseline | Target | Timeline | KPA/ KPI |
|------------------|--|---|--|---------------|--------|----------|--|
| 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, OTBD , OEJN , OEMA , OEDF , OERK , HSSK, HSPN, OMAA, OMAL , OMAD, OMDW , OMDB, OMSJ , OMRK and OMFJ | Indicator*: % of International Aerodromes with CDO implemented and published as required. Supporting Metric: Number of International Aerodromes with CDO implemented and published as required. *As per the applicability area | (2022) 65% | 100% | Dec 2022 | Efficiency/ KPI 19 |
| APTA B0/5 | CCO (Basic) | OBBI, OIIE, OIKB, OIFM, OJAI, OLBA, OOMS, OTHH, OTBD , OEJN , OEMA , OEDF , OERK , HSSK, HSPN, OMAA, OMAL , OMAD, OMDW , OMDB, OMSJ , 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 | (2022) 50% | 80% | Dec 2025 | Capacity/ KPI 10 |

| Element | Applicability | Performance Indicators/ Supporting Metrics | Baseline | Target | Timeline | KPA/ KPI |
|------------------|---|--|---------------|--------|----------|---|
| | | 9365 (AWO Manual)), as applicable. | | | | |
| FRTO | | | | | | |
| FRTO B0/2 | Airspace planning and Flexible Use of Airspace (FUA) | Bahrain, Egypt, Iran , Iraq , Jordan , Kuwait , Oman , 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 between Civil and Military to improve efficiency of Airspace. * As per the applicability area | (2022) 63% | 70% | Dec 2022 | Efficiency Access and equity/ KPI 04 KPI 05 KPI 17 KPI 18/ KPI 19 |
| 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/ |

| Element | | Applicability | Performance Indicators/ Supporting Metrics | Baseline | Target | Timeline | KPA/ KPI |
|----------------------|--|--|--|----------------|--------|-------------|---------------------------------|
| 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, Qatar, Saudi Arabia, Sudan, UAE | Indicator*: % of States that have implemented Short-term conflict alert (STCA) Supporting metric: number of States that have implemented Short-term conflict alert (STCA) * As per the applicability area | (2018) 100% | 100% | Dec 2018 | Safety/ KPI 20 KPI 23 |
| 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 |

| Element | Applicability | Performance Indicators/ Supporting Metrics | Baseline | Target | Timeline | KPA/ KPI | |
|---------------|--|--|--|---------------|----------|-------------|--|
| RSEQ | | | | | | | |
| RSEQ B0/1 | Arrival Management | OBBI, HECA, HEBA , HELX, HESN, HESH, OTBD, OTHH , OEJN, OEDF, OEMA, OERK OMDB, OMAA | 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 Supporting metric: Number of Aerodromes having implemented Basic ATCO tools to manage traffic during ground operations | (2022) 90% | 100% | Dec 2022 | Efficiency/ KPI 02 KPI 13 Safety/ KPI 20 KPI 21 |
| SURF- B0/2 | Comprehensive situational awareness of surface operations | OBBI, HECA, OIII, OOMS, OTBD, OTHH , OEDF, OEJN, OERK, OEMA , OMDB, OMAA . | 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 |

| Element | Applicability | Performance Indicators/ Supporting Metrics | Baseline | Target | Timeline | KPA/ KPI |
|---------------------------|---|--|---------------|--------|----------|-------------|
| 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, Egypt , Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, , Sudan, UAE 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) 60% | 80% | Dec 2022 | N/A |
| 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 Indicator*: % of States that have implemented Downlink of Aircraft Parameters (SSR-DAPS) | (2022) 83% | 90% | Dec 2023 | N/A |

| Element | | Applicability | Performance Indicators/ Supporting Metrics | Baseline | Target | Timeline | KPA/ KPI |
|------------------|--|-----------------------|---|---------------|--------|----------|-------------|
| | | Arabia, Sudan and UAE | Supporting Metric: Number of States that have implemented Downlink of Aircraft Parameters (SSR-DAPS) * As per the applicability area | | | | |
| 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 |
| 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 | (2022) 60% | 80% | Dec 2022 | N/A |

| Element | | Applicability | Performance Indicators/ Supporting Metrics | Baseline | Target | Timeline | KPA/ KPI |
|---------|--|---------------|--|----------|--------|----------|-------------|
| | | | Supporting metric: Number of States that have established National IP Network for voice and data communication | | | | |

- END -