INTERNATIONAL CIVIL AVIATION ORGANIZATION

REPORT OF THE EIGHTH MEETING OF THE AIM SUB-GROUP AND SIXTH MEETING OF THE MID REGION AIM DATABASE TASK FORCE

(AIM SG/8 & MIDAD TF/6)

(Virtual Meetings, 13 – 15 September 2021)

The views expressed in this Report should be taken as those of the MIDANPIRG AIM Sub-Group and not of the Organization. This Report will, however, be submitted to the MIDANPIRG and any formal action taken will be published in due course as a Supplement to the Report

Approved by the Meeting
and published by authority of the Secretary General

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PART I - HISTORY OF THE MEETING

1. DURATION

1.1 The Eighth Meeting of the MIDANPIRG AIM Sub-Group (AIM SG/8) and the Sixth Meeting of the MIDAD Task Force (MIDAD TF/6) were successfully held virtually from 13 to 15 September 2021 from 09:00 to 11:30 UTC, using MS Teams.

2. OPENING

2.1 The meeting was opened by the Chairman of the AIM SG, Mr. Abdalla Al Rashidi, Director AIM, GCAA, United Arab Emirates, who welcomed the participants and wished them a successful and fruitful meeting.

2.2 Mr. Mohamed Smaoui, Acting Regional Director, Middle East Office, welcomed all participants to the AIM SG/8 and MIDAD TF/6 meetings and recalled that, an EAD-MIDAD Workshop was conducted at the EUROCONTROL premises in Brussels from 5 to 6 October 2017. The EAD-MIDAD Workshop proposed a way forward for the implementation of the MIDAD Project in three Phases: A) Individual migration of MID States to EAD; B) Set-up of MIDAD Manager; and C) Implementation of MIDAD system and service. The proposed way forward was further agreed by the DGCA-MID/4 meeting (in Muscat, Oman, 17-19 October 2017). MIDANPIRG/17 and DGCA-MID/5 meetings agreed also that the development of a detailed action plan for the implementation of the MIDAD Project Phase B should be initiated when at least 7 States individually complete their migration to EAD.

2.3 Mr. Smaoui pointed out that considering the low progress achieved in the migration to EAD by States, which was reported to be due mainly to financial reasons, the MIDANPIRG/18 meeting held virtually, 15-22 February 2021, agreed, through Conclusion 18/18, that the ICAO MID Office, with the support of concerned Sates, initiate discussions with EUROCONTROL/EAD, in order to reconsider the charging mechanism to add a lower/upper limit for charging States that are willing to migrate to EAD. As a follow-up action, EAD-MIDAD Coordination Meeting was held on 27 April 2021. He highlighted that the outcomes of that meeting will be presented during the AIM SG/8 and MIDAD TF/6 meeting.

2.4 Mr. Smaoui provided the meeting with an overview of the subjects that will be addressed during the meeting and highlighted the main expected outcomes. In this respect, he thanked those States that have prepared presentations to share with the meeting their status of implementation, best practices, success stories, challenges and recommendations to improve AIM implementation in the Region.

2.5 In closing, Mr. Smaoui thanked all participants, and in particular Eurocontrol/EAD team, Mrs. Roberta LUCCIOLI (European Aeronautical Information Service Manager) and Mr. Emmanuel DETTWILLER (EAD Customer Manager) for their support and cooperation, and the MID Region NOTAM Go-Team for their efforts in supporting the NOTAM2021 campaign .

2.6 Mr. Smaoui wished the meeting every success in its deliberations.

3. ATTENDANCE

3.1 The meeting was attended by a total of sixty-five (65) participants from sixteen (16) States (Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Oman, Qatar, Saudi Arabia,

Sudan, Syria, UAE, USA and Yemen) and five (5) Organizations (AACO, EUROCONTROL, IATA, IFALPA and ICAO). The list of participants is at **Attachment A.**

4. OFFICERS AND SECRETARIAT

4.1 The MIDAD TF/6 meeting was chaired by Mr. Imed Ben Saad, AIS/AIM Expert, GACA, Saudi Arabia, and the AIM SG/8 meeting was chaired by Mr. Abdalla Al Rashidi, Director AIM, GCAA, UAE. Mr. Radhouan Aissaoui, Regional Officer, Information Management was the Secretary of the meeting.

5. LANGUAGE

5.1 The discussions were conducted in English. Documentation was issued in English.

6. AGENDA

6.1 The following Agenda was adopted:

Agenda Item 1: Adoption of the Provisional Agenda

Agenda Item 2: Follow-up on DGCA-MID/5 and MIDANPIRG/18 Conclusions/ Decisions relevant to AIM and MIDAD

Agenda Item 3: MID Region AIM Database (MIDAD) Project

Agenda Item 4: Global/Regional developments related to AIM and SWIM

Agenda Item 5: AIM Planning and Implementation in the MID Region

Agenda Item 6: Review of Air Navigation Deficiencies in the MID Region

Agenda Item 7: Future Work Programme

Agenda Item 8: Any other Business

7. CONCLUSIONS AND DECISIONS – DEFINITION

7.1 The MIDANPIRG records its actions in the form of Conclusions and Decisions with the following significance:

a) **Conclusions** deal with matters that, according to the Group's terms of reference, merit directly the attention of States, or on which further action will be initiated by the Secretary in accordance with established procedures; and

b) **Decisions** relate solely to matters dealing with the internal working arrangements of the Group and its Sub-Groups

8. LIST OF CONCLUSIONS AND DECISIONS

DRAFT CONCLUSION 8/1: MID REGION AIM DATABASE (MIDAD)

DRAFT CONCLUSION 8/2: AIM CAPACITY-BUILDING ACTIVITIES IN 2022-2023

DRAFT CONCLUSION 8/3: UPDATED GUIDANCE FOR AIM PLANNING AND IMPLEMENTATION IN THE MID REGION (MID DOC 008)

PART II: REPORT ON AGENDA ITEMS

REPORT ON AGENDA ITEM 1: ADOPTION OF THE PROVISIONAL AGENDA

1.1 The meeting reviewed and adopted the Agenda as at Para.6 of the History of the Meeting.

REPORT ON AGENDA ITEM 2: FOLLOW-UP ON DGCA-MID/5 AND MIDANPIRG/18 CONCLUSIONS AND DECISIONS RELEVANT TO AIM AND MIDAD

2.1 The subject was addressed in PPT/2 presented by the Secretariat. The meeting noted the status of the DGCA-MID/5 AND MIDANPIRG/18 Conclusions and Decisions relevant to AIM and the follow-up actions taken by concerned parties as at **Appendix 2A**.

REPORT ON AGENDA ITEM 3: MID REGION AIM DATABASE (MIDAD) PROJECT DEVELOPMENTS

Agenda Item 3.1: outcomes of EAD-MIDAD Coordination Meeting (27 April 2021)

3.1 The subject was addressed in WP/3 presented by the Secretariat.

3.2 The meeting was apprised of the outcome of the EAD-MIDAD coordination meeting which took place on 27 April 2021.

3.3 The meeting recalled that the MIDANPIRG/18 meeting held virtually, 15-22 February 2021, agreed through Conclusion 18/18 that the ICAO MID Office, with the support of concerned Sates, initiate discussions with EUROCONTROL/EAD, in order to reconsider the charging mechanism to add a lower/upper limit for charging States that are willing to migrate to EAD.

3.4 Therefore, a coordination meeting was held to explore the possibilities to review and reconsider the charging mechanism to encourage a bigger number of MID States (at least 7) to migrate to EAD.

3.5 The meeting noted that Eurocontrol provided an overview of the EAD charging mechanism and explained that Member states entrusted Eurocontrol for the development and the operations of the EAD on their behalf and as per the Decision of the EUROCONTROL Permanent Commission N°83 and Decision N° 101 of 25 November 2003 governing the provision of aeronautical information to and by Eurocontrol for the operation of the European AIS Database (EAD) there are copyright and service charging policies.

3.6 With regard to charging and cost of service provision, the meeting noted that non Eurocontrol member States maybe charged for EAD user service that are provided. The amount of service charges shall be proportional to service provided. For doing these clients are divided in three categories:

- Type 1 Clients Clients contributing either directly or indirectly to the budget of EUROCONTROL (principally ANSPs from Eurocontrol States and aircraft operators liable for air navigation charges).
- Type 2 Clients, potentially MID States, who are not contributors to the budget of EUROCONTROL and consequently are subject to the payment of EAD services.
- Type 3 Clients who are making business out of using information provided by the EAD. This may include Software applications using EAD data, Consultancy or software development services based on or using EAD data or any other service using the data.

3.7 In particular, the meeting specifically noted that MIDAD States are type 2 clients.

3.8 It was stressed that, the applicable charging scheme is described in Annex 5, Attachment C of the EAD agreement. This scheme provides a unique and standard way of a fair, equitable and transparent charging mechanism defined and agreed by the EAD Service and Royalties Charging Work Group composed of representatives from the EUROCONTROL Member States.

3.9 It was also pointed out that for the establishment of the EAD Charges, the following information is needed: the cost base for the provision of air traffic services financed through various invoicing mechanism, e.g. En-route air navigation charges for ANSPs and CAA, Terminal Air Navigation Charges or fees for airports, other specific fees or charges.

3.10 Furthermore, the meeting was informed that the above cost base would be used for

simulation of the overall contribution as if the State (and related ANSP) would be a member State of EUROCONTROL. To be able to do this, the cost base for Year – 2 will be used to obtain the State's contribution to the EUROCONTROL budget as if this State would become a Eurocontrol member State. The derived EAD global contribution is subsequently split according to service that are provided, as follows:

- International NOTAM operations (INO): 15 %
- Briefing and flight planning (BF & FPL): 10 %
- Aeronautical data maintenance operations (SDO/SDD): 65 %
- Published aeronautical information publication management service (PAMS): 10 %

- It was further highlighted that :
- The use of the BF service implies the mandatory use of INO.
- If one service only is used, a surcharge of 30% will apply.
- If two services are used, a surcharge of 15% will apply.

3.11 It was worth noted that if a State elects to be a data provider, a discount of 50% would be applied to the service as an incentive for the data provision. It was also worth mentioned that, in any case, the maximum yearly cost would not exceed 300.000 Euros.

3.12 It was pointed out that Eurocontrol is a non-profit organization and not a business-oriented organization. EAD charges consequently cover exclusively the costs incurred for the provision of the services to the customers, i.e. without any financial profit for the organization.

Agenda Item 3.2: European Aeronautical Information Services Database (EAD) status and evolution

3.13 The subject was addressed in PPT/3 presented by the Eurocontrol.

3.14 The meeting was appraised of the EAD services and functions, including:

- International NOTAM operations (INO);
- Flight planning and briefing service (FPL&BF);
- Aeronautical data management (SDO/SDD);
- Published AIP management System (PAMS);
- Electronic AIP generation tool (eAIP);
- Charting tool (CHT); and
- Service desk.

3.15 The meeting was informed that the EAD has been providing AIS services for over 15 years. As of January 2021, 59 States worldwide, including 43 ECAC States, are using EAD services as data providers and some 150 are using the services as data users.

3.16 The meeting noted that the European aeronautical information services database (EAD) is a centralized reference database of quality-assured aeronautical information that enables users to retrieve and download AIS data in real time. The EAD is a full aeronautical information management (AIM) system compliant with latest ICAO SARPs, ISO certified, has a business continuity process (yearly availability of 99.975%) which provides access to worldwide data set and has one of the best flight briefing system available in the market. The EAD ensures service availability 24h per day, 7 days per week.

3.17 The meeting was appraised of the future developments of EAD including the deployment of the new SNOWTAM format, Improvements related to SDD services (AIXM 5.1),

Transition of Data Providers to AIXM 5.1 (SDD service), Implementation of the Digital Data Set Service (DDS) and Implementation of Digital NOTAM.

Agenda Item 3.3: States' Plan and Progress for the Migration to EAD : Status and way forward

3.18 The subject was addressed in PPT/3 presented by the Secretariat.

3.19 It was recalled that EAD-MIDAD coordination meeting, which took place on 27 April 2021, agreed that some follow-up actions should be taken between the ICAO MID, in coordination with AIM SG, MIDAD TF, and EAD in order to collect maximum information about the subject through questionnaire to be issued by ICAO MID office.

3.20 The meeting noted that a SL ref ME 3/2.5.1 – 21/123 dated 25 July 2021 was issued and circulated to the MID States for further feedback. The Survey consisted of 7 questions, covering the state of play regarding the deployment of an AIM automated system, State's intention to upgrade/purchase AIM system, states' plan and progress for the migration to EAD, types of EAD service agreements (system-to-system connections (B2B) or; system-to-client connections (B2C)), State's willingness to provide EUROCONTROL with the financial information required for the establishment of the EAD Charges and Challenges facing in migrating to EAD.

3.21 The meeting reviewed and updated the status of State's plan and progress related to the MIDAD Project Phase A, as at **Appendix 3A**.

3.22 The meeting noted that the number of States that initiated the process of migration to EAD is still too low to launch the phase B of MIDAD project. Accordingly, the meeting agreed that the way forward is:

- ICAO MID and AIM SG continue to monitor the States' status of EAD migration and other related issued and provide an update on yearly basis to MIDANPIRG and DGCA MID.
- MIDAD TF is put on hold until the finalisation of Phase A (at least seven States migrate to EAD)
- MID States are encouraged to develop their business case/cost-benefit analysis related to the transition from AIS to AIM in accordance with the GAN 6th edition, MID Air Navigation Strategy and MID Region AIM roadmap with the possible scenarios/options including the migration to EAD;
- States considering the migration to EAD as one of the options to support the transition from AIS to AIM/SWIM to engage directly with Eurocontrol (EAD) for the completion of the cost-benefit analysis; and
- States that have not yet established an automated AIM system are strongly encouraged to migrate to EAD.

3.23 Based on the above, the meeting agreed to the following Draft Conclusion that is proposed to replace and supersede the MIDANPIRG Conclusion 17/1:

DRAFT CONCLUSION 8/1: MID REGION AIM DATABASE (MIDAD)

That:

a) the ICAO MID and AIM SG continue to monitor the States' status of EAD migration and other related issues and provide regular updates to MIDANPIRG and DGCA-MID meetings.

b) the activities of the MIDAD TF will not be resumed until the finalization of Phase

A of the MIDAD Project (at least 7 States complete their migration to EAD);

c) *States are encouraged to develop their business case/cost-benefit analysis related to the transition from AIS to AIM, in accordance with the GANP 6th edition, MID Air Navigation Strategy and MID Region AIM Roadmap;*

d) *States considering the migration to EAD as one of the options to support the transition from AIS to AIM/SWIM to engage directly with Eurocontrol (EAD) for the completion of the cost-benefit analysis; and*

e) *States that have not yet established an automated AIM system are strongly encouraged to migrate to EAD.*

REPORT ON AGENDA ITEM 4: GLOBAL/REGIONAL DEVELOPMENTS RELATED TO AIM

4.1 The subject was addressed in PPT/4 presented by the Secretariat.

Update on IMP activities

4.2 The meeting was apprised of the activities of the Information Management Panel (IMP). It was noted that the IMP carries out its tasks through four working groups: WG-I (Information Architecture & Management), WG-S (Information Services under SWIM), WG-G (SWIM Governance) and WG-A (Aeronautical Information Management).

4.3 The meeting was informed of the outcome of the IMP/WG-A/5, 6, 7 and 8 AIM meetings held virtually from 09 to 11 November 2020, from 15 to 18 March 2021, from 12 to 15 July 2021 and the last meeting was held on 11 August 2021. The meeting noted that the WG-A addressed many development related to Annex 4, Annex 15, PANS-AIM, PANS-ABC and consequential amendments, including Proposal for Amendment (PfA) of ANNEX 4 relating to Aircraft With Folding Wing Tips, PfA of ANNEX 15 and PANS-AIM on CBTA Training Methodology, PfA PANS-AIM dealing with the processing of multi-part NOTAM, PfA of PANS ABC on NOTAM code for hang gliding and paragliding activities and NOTAM code and selection criteria and PfA of Annex 15, PANS-AIM (Doc10066) and AIS Manual (Doc 8126) concerning general specification on AIP Amendment serial number allocation.

ICAO DOC 8126 – AIS MANUAL

4.4 The Secretariat provided information introducing the updated version of ICAO Doc 8126 – Aeronautical Information Services Manual. The work on the updated version by the Aeronautical Information Management Working Group of the ICAO Information Management Panel (IMP/AIMWG) had been completed, and the document, the AIM Manual Seventh Edition 2021, had been made available through the ICAO Secure Portal.

4.5 The current version of the document was subject to a disclaimer, stating that it was an unedited advance version approved in principle by the Secretary General, and that it may undergo alterations in the process of editing.

4.6 The document was structured in three parts:

- Part I Regulatory Framework for Aeronautical Information Services
- Part II Processing Aeronautical Data
- Part III Aeronautical Information in a Standardized Presentation and Related Services

4.7 Part IV – Digital Aeronautical Information Products and Related Services - remained under development.

SNOWTAM Applicability and Guidance

4.8 The Secretariat provided updated information on the applicability of changes to SNOWTAM to include all elements of runway condition reported under the Global Reporting Format (GRF) for runway surface condition reporting. ICAO State Letter 2020/73 dated 30/07/2020 had notified ICAO Member States that the ICAO Council had, on 19 June 2020 adopted amendments on the postponement of the applicability date, from 05 November 2020 to 04 November 2021, for provisions related to the enhanced GRF for assessing and reporting runway surface conditions as

contained in Annexes 3, 6, 8, 14 and 15, and in PANS-ATM, PANS-Aerodromes, and PANS-AIM.

4.9 The GRF concept involves assessment of the runway condition by the aerodrome operator using a standardised methodology, and provision of relevant information to the Air Traffic Services (ATS) unit, as well as to the relevant Aeronautical Information Services (AIS) unit, in order to promulgate it to the flight crews, to enable more accurate performance calculations and therefore safe operations.

4.10 Therefore, a SNOWTAM may be originated by an aerodrome operator and subsequently issued by an AIS provider, only if the conditions described in the relevant regulatory framework are met.

4.11 Moreover, it was reminded that the origination and issuance of SNOWTAMs, when the conditions for their issuance are not met, unnecessarily impacts the overall NOTAM system, as it leads to NOTAM proliferation, and may also affect flight crew preparation, which ICAO is already trying to address through a Global campaign on NOTAM improvement.

4.12 The meeting noted that the effective implementation of SNOWTAM requires detailed planning and scheduling. The Implementation task list includes:

a) AIS providers: to review, in coordination with the respective aerodrome operator, their procedures regarding SNOWTAM issuance and ensure that they contain clear and unambiguous information on when a SNOWTAM is to be issued in the context of the GRF implementation, and that procedures are consistent with those of the relevant aerodrome operators, regarding SNOWTAM origination.
b) Aerodrome operators and AIS providers: to review and update, as necessary, their arrangements to appropriately address the case of SNOWTAM origination and issuance, in the context of the GRF implementation and to ensure that their responsible personnel are duly informed about the application of such procedures, and that relevant training is provided, where necessary.
c) State’s regulator: to take the above into account in the context of their safety oversight activities.

High Level Conference on COVID-19

4.13 The meeting was informed of ICAO State Letter 2021/40 dated 20 May 2021, which circulated the invitation to attend the High-level Conference on COVID19 (HLCC 2021), which will be held in October 2021.

ICAO/ACI Obstacle Limitation Surfaces Symposium (OLSS 2021)

4.14 The meeting was apprised of the joint International Civil Aviation Organization (ICAO)/Airports Council International (ACI) Obstacle Limitation Surfaces Symposium (OLSS 2021), which will be held as a virtual event from 8 to 10 December 2021 and that Additional information regarding the meeting and online registration will be available on the event website at https://www.icao.int/Meetings/OLSS2021 .

Air Transportation Information Exchange Conference (ATIEC) 2021

4.15 The Meeting was informed that Air Transportation Information Exchange Conference (ATIEC) 2021is being held as a virtual event from 13 to 16 September. The ATIEC Conference is a

forum to discuss and exchange concepts and practices related to major global changes in information management, focusing on information in operation, information services, information exchanges and information security.

NOTAM iPack

4.16 The meeting was briefed on the ICAO new iPack on Improving the Quality of NOTAM for safe Flight Operations (under development). The goal of this iPack is to facilitate and guide CAAs in efficiently managing aeronautical information through education and raising awareness. It emphasizes the importance of promulgating current and valid NOTAM information of operational significance for pilots, dispatchers and aircraft operators.

4.17 The Meeting noted that the NOTAM iPack will probably be available in Q3 2021 and ready for deployment by States.

4.18 The Meeting noted also that NOTAM SMEs are needed for the deployment of the NOTAM iPack and and invited SMEs from MID region to register online with the new E-recruiter system in order to place their name in the electronic roster of experts within the Technical Cooperation Bureau.

COVID-19 Publication

4.19 The subject was addressed in WP/4 and PPT/5 presented by the by RPTF WS4 AIM Team.

4.20 The Meeting noted that, much improvement has been noted in the quality of COVID publications in MID region over the past 18 months. This can be attributed to several activities and interventions:

- implementation of the NOTAM templates and aeronautical information publication guidance;
- collaborative engagement through the MID AIM Forum;
- conduct of a Webinar on QMS implementation in aeronautical information management;
- direct state engagement in the form of AIM Panels facilitated by the MID AIM Go-team.

4.21 Few shortcomings, however, still remain that need to be addressed to ensure that aeronautical information that is published supports and enables safe, efficient, and sustainable flight operations. These include:

- many states do not publish the COVID requirements and restrictions in Aeronautical Information, but rather issue government and/or safety notices or updated regulations. These are unfortunately not always known or visible to the airspace user. As there is no reference to these notices or regulations in the aeronautical information it appears that no requirements or restrictions are in place;
- among those States who have published NOTAM with restrictions and requirements, containing extended text, and in many cases, this text is ambiguous or even contradictory. This can impact safety, efficiency, and cost effectiveness of the flight;
- due to the protracted timeframe of the COVID pandemic, the standard validity period for NOTAM and, other aeronautical publications, has been “conveniently”

unheeded. Estimate NOTAM have been repeatedly replaced to extend the validity period instead of being taken up into a more "permanent" publication. This creates uncertainty in the system and hinders longer term planning.

NOTAM Proliferation Analysis and NOTAM Improvements

4.22 The Meeting recalled that, ICAO launched the Global Campaign on NOTAM Improvement (NOTAM2021) with a virtual webinar on 8 April 2021. The campaign aims to reduce the number of old and very old NOTAM and enhance the effectiveness, usefulness, and reliability of NOTAM globally. To support States in achieving the aim of the NOTAM2021 campaign and to monitor progress, ICAO will host a series of bi-monthly global progress webinars.

4.23 The Meeting noted that, the NOTAM2021 Global Campaign is supplemented by a series of regional activities during 2021 with the aim of raising awareness to improve the quality of NOTAM, monitoring progress in eliminating the old NOTAM and sharing experiences and lessons learned. The overall schedule for these regional webinars is:1 June 2021; 16 August 2021; and 15 December 2021. Ref ICAO MID SL AN 8/2.1 – 21/068 dated 9 May 2021.

4.24 The Meeting noted also that, the web-based NOTAMeter tool has been rolled out by ICAO to keep track of the campaign's progress. The NOTAMeter provides estimated statistics of the absolute and relative numbers of current, old, and very old NOTAM. The NOTAMeter data is sourced from the U.S. Defense Internet NOTAM Service (DINS) and updated on a monthly basis (DINS https://www.notams.faa.gov/dinsQueryWeb/) as a primary source. DINS is valuable source of worldwide NOTAMs. However, sometimes it contains some NOTAMs that are no longer current, due to reasons such as NOTAM Offices not consistently distributing their NOTAMs (NOTAMR, NOTAMC or NOTAM Checklist) to DINS.

4.25 The figures below show the status of old and very old NOTAM for the MID region as of 01 September 2021 and the progress made to date in eradicating old and very old NOTAM. The figures have been extracted from https://www.icao.int/airnavigation/information-management/Pages/NOTAMeter.aspx

4.26 Figure 1 illustrates MID NOTAM statistics since June 2020. As of 1st September 2021, a total 1011 NOTAMs were active in the MID Region. 53 (5.2%) of these current NOTAMs were old and 119 (11.8%) were very old NOTAMs.

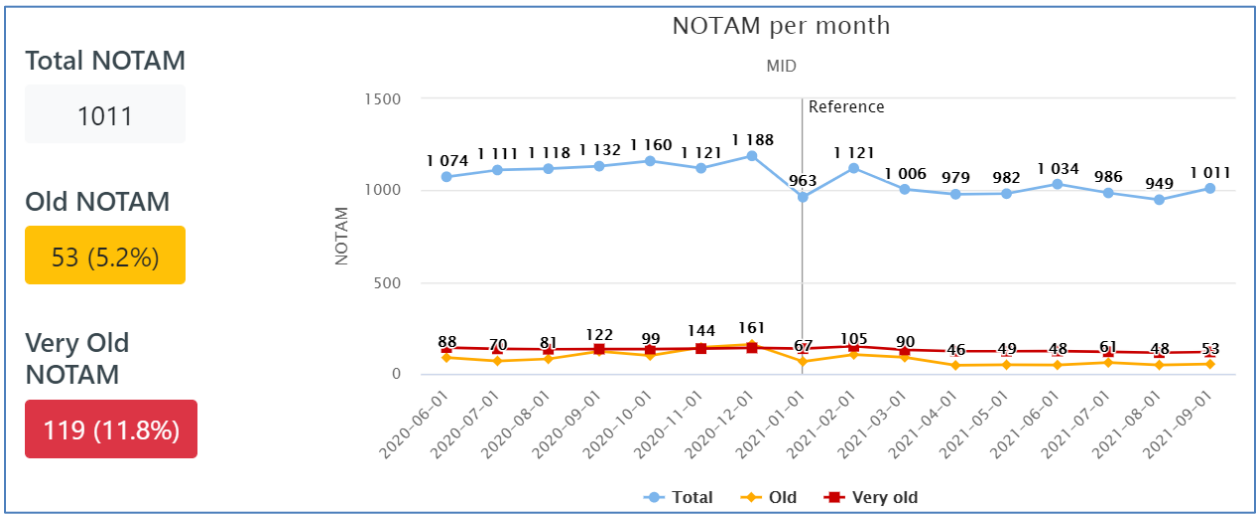


Figure 1: MID region NOTAM Statistics (Total, old and very old) – 01 September 2021

4.27 Figure 2 shows that, MID Region had a good downtrend for both old and very old NOTAMs. However, the downtrend for old/very old NOTAM reversed in September. As of 1st September, the numbers of old and very old NOTAM have slightly increased from their lowest level in August 2021.

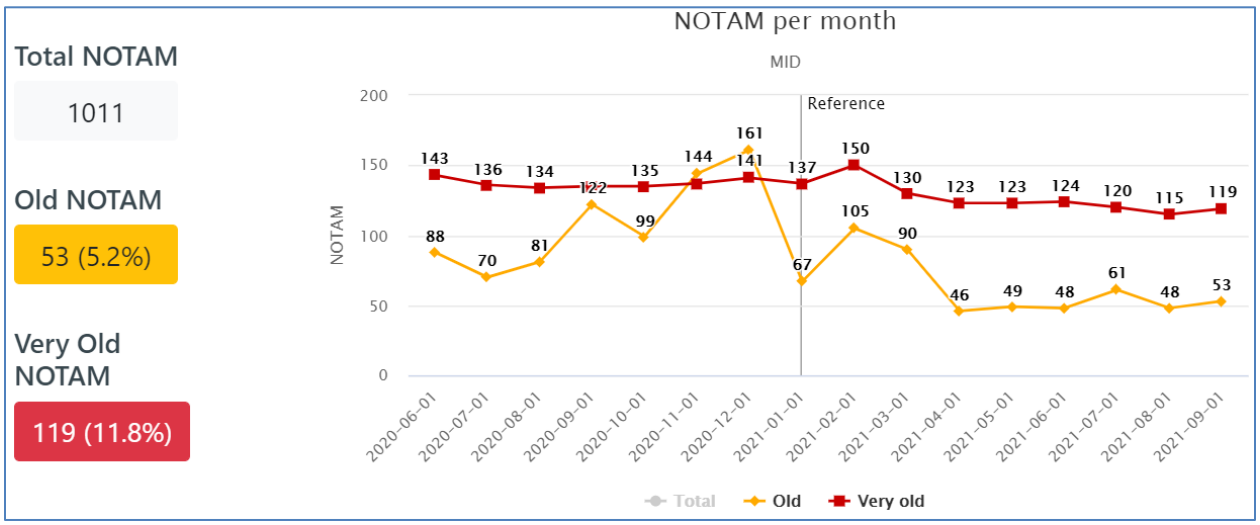


Figure 2: MID region NOTAM Statistics (old and very old) – 01 September 2021

4.28 The Meeting noted with appreciation the indication that excellent performance has been achieved by Iraq, Qatar, Saudi Arabia and UAE with ZERO old and very old NOTAM.

4.29 Moreover, still mindful of the overall objective of the campaign, the MID AIM go-team proposed two KPIs to monitor progress in reducing/eliminating the number of old/very old NOTAM.

4.30 Following consideration of the content of presentation and the working paper, the meeting recommended that:

a) States (NOF) include the FAA NOTAM system address (KDZZNAXX) in their NOTAM collective/distribution address lists.

b) States and Aeronautical Information Service providers should review and correct COVID NOTAM and publications Encourage States to engage and educate originators of the Aeronautical Information publication requirements

c) States requiring assistance should make their need known to the Aeronautical Information "go-team" through the ICAO MID Regional office

d) States should develop and implement processes within the aeronautical information data chain to ensure the effective implementation of quality management.

e) States should report PERM NOTAM status in the following reporting templates.

– For KPI #1 List PERM NOTAM issued before year 2021

NOTAM Number	Issued Date	Included/Cancelled/Reporting date

- For KPI #2 List PERM NOTAM issued in year 2021

NOTAM Number	Issued Date	Included/Cancelled/Reporting date

4.31 Finally, the meeting encouraged States and Aeronautical Information Service Providers to further engage collaboratively by active participation in the MID AIM Forum to exchange information and best practices when needed to support the improvement of NOTAM quality and aeronautical information publications.

New SNOWTAM Format Implementation in UAE (IP/11)

4.32 The subject was addressed in IP/2 presented by the GCAA UAE.

4.33 GCAA UAE informed the meeting of preparations and progress towards the implementation of the new SNOWTAM format to support the GRF. It was highlighted, in particular, that :

- Coordination between all stakeholders was achieved. A detailed SNOWTAM workshop with all stakeholders was held and feedback consolidated;
- Service Level Agreements (SLAs) with the stakeholders were discussed and revised to include new SNOWTAM requirements and procedures;
- Data Originator and UAE NOF Procedures were updated to include new SNOWTAM requirements in coordination with the state regulator;
- System capabilities were evaluated and coordination was done with system suppliers for the required system updates;
- Transmission of SNOWTAM Message was tested and verified with EAD and locally. GCAA received a confirmation message that the TEST was successful and the FORMAT is correct.

MID Region ICARD Status and 5LNC Duplicate Resolution

4.34 The subject was addressed in WP/5 presented by the secretariat.

4.35 The meeting was updated on the use of the ICAO International Codes and Route Designators (ICARD) application in the MID Region and the resolution status of 5-letter name code (5LNC) duplicates.

4.36 The meeting noted that all States/Organisations with any responsibility for or involvement in the design, implementation and/or regulation of ATS routes and instrument flight procedures must have suitable personnel registered in ICARD. In all cases where any personnel of a State Regulator or Air Navigation Service Provider are responsible for the allocation of 5LNC for ATS routes, Standard Instrument Departures (SIDs), Standard Terminal Arrival Routes (STARS) or Instrument Approach Procedures (IAP), at least one person, and preferably two, must be registered as an ICARD_5LNC_PLANNER to ensure compliance with Annex 11 requirements. The List of ICARD Planners in MID Region is provided in **Appendix 4A**.

4.37 The meeting invited MID States to clean up the list of people who has access to the ICARD website as state user and notify ICAO MID office to remove those who do not currently use ICARD.

4.38 The meeting noted also that, several States/Organisations do not currently have any registered ICARD_5LNC_PLANNER. If these States/Organisations allocate 5LNC outside the ICARD system, they are not compliant with the requirements of Annex 11.

4.39 The Meeting recalled that, ICAO State Letter AN 11/45.5-17/101 dated 11 August 2017 has identified a number of issues related to the five-letter name-code (5LNC) uniqueness, continuing to create difficulties causing potential safety-related issues, which include:

a) Significant number of duplicated codes,
b) Similar sounding codes in close proximity or on the same flight plan route,
c) Differences between 5LNC data registered in ICARD and published in national Aeronautical Information Publications (AIPs).

4.40 The meeting noted that, ICAO HQ compiled a full list of global 5LNC duplication in 2018. There were 3905 duplicated 5LNCs worldwide, in which 113 were in MID region. ICAO and States/Administrations need to work together to resolve this issue on a case-by-case basis.

4.41 The compiled a list of duplicated 5LNC for MID region is provided at **Appendix 4B**. The MID 5LNC Status' contains following information for each States:

a) Total number of duplicated 5LNCs;
b) 5LNCs for which priority is allocated;
c) 5LNCs for which priority is allocated to other States or Administrations; and
d) 5LNCs for which priority to be determined by duplicate resolution rules.

4.42 The meeting invited States to clean up the list of people who has access to the ICARD website as state user and notify ICAO MID office to remove those who do not currently use ICARD, whilst ensuring that each Administration has at least 1, and preferably 2, registered ICARD 5LNC users;

4.43 The meeting urged States to clear up duplicates 5LNCs as per the action plan at the **Appendix 4B.**

4.44 The meeting asked the ICAO MID to conduct a webinar to introduce ICARD capability and functions to all MID States and organization.

REPORT ON AGENDA ITEM 5: AIM PLANNING AND IMPLEMENTATION IN THE MID REGION

MID Region AIM Implementation Roadmap

5.1 The subject was addressed in PPT/5 presented by the Secretariat.

5.2 The meeting recalled that AIM SG/7 meeting reviewed and updated the MID Region AIM Implementation Roadmap. Consequently, the MIDANPIRG/18 endorsed the MID Region AIM Implementation Roadmap through Conclusion 18/19 and considering the major changes of the MID Region AIM Implementation Roadmap, urged States to provide the ICAO MID Office with their updated National AIM Implementation Roadmap, using a standard Template.

5.3 As a follow-up, ICAO MID issued a SL File Ref : AN 8/4 – 21/071 dated 19 May 2021 requesting member States to provide the ICAO MID Office with updated National AIM Implementation Roadmap.

5.4 The meeting noted that all MID States provided their updated National AIM Implementation Roadmap except, Iraq, Lebanon, Syria and Yemen. The meeting urged those States to submit their updated National AIM Implementation Roadmap without delay.

5.5 The meeting was provided with a snapshot of the status of transition from AIS to AIM in MID region and noted that many States are generally behind schedule in the implementation of the AIS-AIM Roadmap steps.

5.6 Moreover, fully noting the significant challenges that States are facing in the transition process, the *meeting* proposed to conduct a range of AIS-related workshops and webinars, in collaboration with champion States and International Organizations, in particular:

- AIM/SWIM workshop;
- transition from AIS to AIM Workshop (pending the issuance of the revised global roadmap);
- workshop on Building Effective Safety Oversight of Aeronautical Information Services (AIS) and Aeronautical Information Management (AIM);
- webinar on the provision of Terrain and Obstacle (TOD) and AIP Datasets.

5.7 Based on the above, the meeting agreed to the following Draft Conclusion :

DRAFT CONCLUSION 8/2: AIM CAPACITY-BUILDING ACTIVITIES IN 2022-2023

That, the following AIM-related workshops and webinars, be organized in 2022-2023,

a) transition from AIS to AIM Workshop (pending the issuance of the revised global roadmap);

b) workshop on Building Effective Safety Oversight of Aeronautical Information Services (AIS) and Aeronautical Information Management (AIM); and

c) Webinar(s) on the provision of Terrain and Obstacle (TOD) and AIP Datasets.

Digital Datasets implementation planning:

5.8 The subject was addressed in WP/6 presented by the Secretariat. The meeting recalled that the MIDANPIRG/16 meeting, through Decision 18/17, that the Digital Datasets Ad-hoc Working Group (DDI Ad-hoc WG) is tasked to develop a detailed Regional Implementation Plan for Digital Datasets and update the MID Doc 008.

5.9 The meeting was appraised of the outcomes of the Digital Datasets Ad-hoc Working Group (DDI Ad-hoc WG) kickoff meeting held virtually on 25 August 2021 and noted the updates on its activities.

5.10 The meeting noted also that the DDI Ad-hoc WG developed a questionnaire concerning the intentions and plans of the Member States for the provision of the Digital AIS Data Sets specified in the Annex 15 (16th Edition) to ensure a coordinated deployment of the Digital AIS Data Sets in the MID region. The questionnaire is provided at **Appendix 5A.**

5.11 in order to give the chance to airspace users to reaching the technical capability for handling digital datasets and to evaluate their readiness for using digital data sets instead of AIP tables, the meeting agreed to use the survey results of the European AIS clients and their readiness for using digital data sets instead of AIP tables in order to make best use of available resources to save a lot of time and to avoid duplication of efforts. The survey results of the European AIS clients is provided in **Appendix 5B**.

5.12 The meeting noted that The DDI Ad-hoc WG updated the MID Doc 008 - Guidance for AIM Planning and Impl in MID to ensure its alignment with the GANP 6th edition as well as taking into account the revised MID Air Navigation Strategy (Doc002) and the updated MID Region AIM Implementation Roadmap. An updated version of the MID Doc 008 is at **Appendix 5C.**

5.13 Based on the above, the meeting agreed to the following Draft Conclusion:

DRAFT CONCLUSION 8/3: UPDATED GUIDANCE FOR AIM PLANNING AND IMPLEMENTATION IN THE MID REGION (MID DOC 008)

That:

*a) States be urged to review the MID Doc 008 at **Appendix 5C** and inform the ICAO MID Office of any additional guidance that needs to be included in the document; and*

b) the revised version of MID Doc 008 be presented to MIDANPIRG/19 for endorsement.

MID Air Navigation Report-2021

5.14 The subject was addressed in WP/8 presented by the Secretariat. The meeting recalled that the MIDANPIRG/18 meeting endorsed the Revised MID Region Air Navigation Strategy (ICAO MID Doc 002) and its alignment with the 6th edition of the GANP, , which is available is available at: *https://www.icao.int/MID/MIDANPIRG/Documents/eDocuments/MID%20Doc%20002%20-%20MID%20Air%20Navigation%20Strategy%20-%20Feb%202021.pdf*

5.15 The meeting recalled that the MIDANPIRG/18 meeting, through Conclusion 18/10, urged States to provide the ICAO MID Office, with necessary data by 1 of December 2021 for the development of the MID Region Air Navigation Report - 2021.

5.16 Moreover, the meeting reminded States to provide ICAO MID office with the level of implementation of the elements related to the DAIM thread priority 1 elements, by 1 of December 2021, as per the updated method for estimating actual level of implementation.

MID eANP Volume III

5.17 The meeting reviewed and updated the MID eANP Volume III (DAIM Tables), as at **Appendix 5D**.

UAE AIP Dataset Implementation plan

5.18 The subject was addressed in WP/7 presented by the GCAA UAE. The meeting was appraised of UAE AIM high-level plan with the main activities to set up the stage for the operational and technical implementation of ICAO Digital Datasets as part of the strategic GCAA plan for enhancing AIM system capabilities.

5.19 The meeting noted that UAE GCAA issued a regulation that the UAE Airports are responsible for collecting/provision of entire Area 2 i.e. sub-area 2a, 2b, 2c and 2d (2d with Area 1 requirements). This national requirement extends the UAE ANSPs and Airport Authorities accountability for TOD Area 2 data provision beyond the minimum dataset required by ICAO. The remaining Digital Datasets i.e. AMDB (B1/5), IFPD (B1/6) as well as NOTAM Improvements (B1/7) were considered for a later stage.

5.20 The UAE AIP datasets is envisaged for implementation in two (2) phases:
(1) Set the stage phase (one year) – including detailed Implementation Plan, Operational and Technical Specifications, adapting data capture process for temporary information (AIP SUPPs), SWIM Service definition, mapping AIP to PANS-AIM, test sample file and full file testing;
(2) Operational phase (SWIM Service) - including a Transition Period i.e. co-existence of full AIP electronic format together with digital files.

5.21 The meeting noted with appreciation UAE experiences and AIP Dataset implementation plan to comply with the new requirements specified in Annex 15 and Doc 10066 PANS-AIM and invited States to cconsider UAE experience while preparing their own plans, as appropriate.

REPORT ON AGENDA ITEM 6: REVIEW OF AIR NAVIGATION DEFICIENCIES IN THE AIM FIELD

6.1 The subject was addressed in PPT/6 6 presented by the Secretariat.

6.2 AIM-related Air Navigation Deficiencies as identified/agreed by MIDANPIRG/18 were provided for review and update by the meeting.

6.3 The total number of AIM deficiencies is fifty-two (52); forty (46) priority "A" and six (6) priority "B", broken down as follows:

- non provision of TOD (Terrain 12 States and Obstacle 12 States);
- Quality Management System not implemented (6 States);
- AIXM (5 States);
- non-production of World. Aeronautical Chart WAC (6 States);
- non provision of pre-flight information services (3 States);
- lack of consistency in AIP information and lack of regular and effective updating of the AIP and aeronautical chart(3 States);
- non-adherence with the AIRAC provisions (3 States);
- WGS-84 not implemented (2 States).

6.4 The meeting recalled that, the MIDANPIRG/15, through Conclusion 15/35, urged States to use the MID Air Navigation Deficiency Database (MANDD) for the submission of requests for addition, update, and elimination of Air Navigation Deficiencies. It was underlined that specific Corrective Action Plan (CAP) should be submitted for each deficiency; and the elimination of deficiency(ies) should be supported by a Formal Letter to the ICAO MID Office containing the evidence(s) that mitigation measures have been implemented.

6.5 The meeting urged States to implement the provisions of MIDANPIRG Conclusion 15/35 related to the elimination of Air Navigation Deficiencies, in particular, the submission of a specific Corrective Action Plan (CAP) for each deficiency.

6.6 The meeting was informed that, the Sultanate of Oman have completed the work necessary to eliminate the deficiency related to QMS implementation and that an official letter was sent to ICAO MID office in this regard.

6.7 No new deficiencies had been added since MIDANPIRG/18, and no other States had provided evidence of compliance sufficient to warrant the removal of a recorded deficiency.

6.8 The meeting reviewed and updated the list of deficiencies in the AIM field as at **Appendix 6A**.

REPORT ON AGENDA ITEM 7: FUTURE WORK PROGRAMME

7.1 The subject was addressed in PPT/7 presented by the Secretariat.

7.2 The meeting reviewed the AIM SG Terms of References (TORs) and agreed that they are still valid and current.

7.3 The meeting also reviewed the TORs of the MIDAD Task Force and agreed to revisit it once it resumes its activities.

7.4 Taking into consideration, the planned ICAO MID Regional events, which are of relevance to the activity of the AIM Sub-Group, in particular the Interregional AIM/SWIM Seminar/Workshop in 2022, it was agreed that the AIM SG/9 meeting be held, virtually, during the fourth quarter of 2022.

REPORT ON AGENDA ITEM 8: ANY OTHER BUSINESS

8.1 Nothing has been discussed under this agenda item.

APPENDICES

APPENDIX 2A

FOLLOW-UP ACTION PLAN ON MIDANPIRG/17 AND 18 CONCLUSIONS & DECISIONS

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
C. 17/14	**INTERREGIONAL WORKSHOP/SEMINAR ON AIM/SWIM** That, an Interregional Workshop/Seminar on AIM/SWIM be organized in 2020-2021.	To review the latest developments related to AIM/SWIM	Workshop/ Seminar	ICAO	2020-2021	**Ongoing** Planned for 2022
C. 17/ 1	**MID REGION AIM DATABASE (MIDAD)** That: a) the status of individual migration by MID States to EAD (MIDAD Project Phase A) be monitored by the AIM Sub-Group; and b) the development of a detailed action plan for the implementation of the MIDAD Project Phase B (set-up of MIDAD Manager) be initiated when at least 7 States complete their migration to EAD.	Stepwise approach for the implementation of Regional/Sub-Regional AIM Database	Status of migration to EAD Action Plan for set-up of MIDAD Manager	AIM SG MIDAD TF	Continuous TBD	**Ongoing** Jordan migrated to EAD and Iraq, Kuwait, Lebanon, Oman, Qatar and UAE have plan to migrate to EAD.
C. 18/8	**MIDANPIRG CART IMPLEMENTATION "PLAN OF ACTIONS"** That, in order to ensure States' ANS and related services provisions continuity and the preparedness for the recovery phases: a) the MIDANPIRG CART Implementation "Plan of Actions" at Appendix 5.1A is endorsed; and b) States, ANSPs, Airspace users, airport operators and all concerned stakeholders are urged to support the implementation of the Plan of Actions at Appendix 5.1A, and exchange relevant operational data.	Support States' ANS and related services provisions continuity, and the preparedness for the recovery phases				**Ongoing**

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
C. 18/10	**THE MID REGION AIR NAVIGATION REPORT – 2021** That, States be urged to provide the ICAO MID Office, with relevant data necessary for the development of the MID Region Air Navigation Report – 2021, by 30 December 2021.	Monitoring and Reporting of ASBU implementation in the MID Region	State Letter Data for AN Report 2021 Air Navigation Report (2021)	ICAO States	Dec. 2021	**Ongoing**
D. 18/17	**DIGITAL DATASETS IMPLEMENTATION AD-HOC WORKING GROUP (DDI-AD-HOC WG)** That, the Digital Datasets Ad-hoc Working Group (DDI Ad-hoc WG): a) is tasked to develop a detailed Regional Implementation Plan for Digital Datasets and update the MID Doc 008, for review by the AIM SG; and b) be composed of: Abdulla Hasan AlQadhi (Bahrain), Moataz Abdel Aziz Ahmed (Egypt), Rouhalah Salehi (Iran), Mohammad Hussien Al Anezi (Kuwait), Bassem Ali Nasser (Lebanon), Faisal Al Busaidi (Oman), Pamela Erice (Qatar), Hind A. Almohaimeed (Saudi Arabia), Maram Khaled and Syed Samiullah (UAE) ; and ICAO MID Office.	Development of a Regional Implementation Plan for Digital Datasets Update the MID Doc 008 - Guidance for AIM Planning and Impl in MID	Regional Digital Datasets Implementation Plan; and MID Doc 008 - Guidance for AIM Planning and Impl in MID	MIDANPIRG/18	Dec. 2022	**Ongoing** Outcome of the DDI Ad-hoc WG was presented to the AIM SG/8
C.18/18	**EAD CHARGING MECHANISM** That, the ICAO MID Office, with the support of concerned Sates, initiate discussions with EUROCONTROL/EAD, in order to reconsider the charging mechanism to add a lower/upper limit for charging States that are willing to migrate to EAD.	Reconsideration of the charging mechanism to add a lower/upper limit for charging States that are willing to migrate to EAD	SoD ICAO MID-Eurocontrol EAD	ICAO	April 2021	**Completed**

No.	CONCLUSIONS AND DECISIONS	CONCERNS/ CHALLENGES (RATIONALE)	DELIVERABLE/ TO BE INITIATED BY		TARGET DATE	STATUS/REMARKS
C.18/19	**MID REGION AIM IMPLEMENTATION ROADMAP** That, a) the MID Region AIM Implementation Roadmap be updated, as at Appendix 5.2H; and b) States be urged to provide the ICAO MID Office with their updated National AIM Implementation Roadmap, using the Template at Appendix 5.2I.	Planning for AIM implementation in the MID Region	MID Region AIM Implementation Roadmap	MIDANPIRG/18	June 2021	**Completed**
C.18/20	**AIR NAVIGATION DEFICIENCY RELATED TO NONIMPLEMENTATION OF TOD AREA 2A/TOFP AND OLS** That, States that have not yet provided Terrain and Obstacle Data (TOD) for area 2a, the take-off flight path area and the area bounded by the lateral extent of the aerodrome obstacle limitation surfaces (OLS) at International Aerodromes, be included in the List of Air Navigation Deficiencies.	updated list of deficiencies in the AIM field	MID Air Navigation Deficiency Database (MANDD)	MIDANPIRG/18	February 2021	**Completed**
C.18/21	**AIM WEBINARS** That, Webinars on the NOTAM proliferation and needs for improvement, as well as on the AIM/QMS Functions Systems and Processes be organized in 2021.	Raising awareness on QMS in AIM and reduction of the old/very old NOTAM.	Webinars on the NOTAM improvement and QMS in AIM	MIDANPIRG/18	2021	**Ongoing**
D.18/53	**TERMS OF REFERENCE OF THE AIM SG** That, the Terms of Reference of the AIM SG be updated as at Appendix 5.4C.	updated ToRs of the AIM SG	ToRs of the AIM SG	MIDANPIRG/18	Feb. 2021	**Completed** Endorsed by the MIDANPIRG/18 meeting.

STATES' PLAN AND PROGRESS FOR THE MIDAD PROJECT PHASE A
(MIGRATION TO EAD)

States	AIS automated system	AIS system that complies with the latest information technology standards	AIS system that complies with the applicable regulatory requirements	AIS system that uses aeronautical information/data exchange models designed to be globally interoperable	AIS automated system planning				Status of migration to EAD								EAD system connection		States willing to provide financial information required for the establishment of the EAD Charges	challenges	Remarks
									Planning *[estimated date to start]*	In Progress					Migration Completed	Intention to migrate					
					To purchase	To upgrade	Estimated date to start	Approximate cost		*Provided AN Charges figures/Letter of Intent to EAD*	*Received estimation of service costs*	*EAD agreement signed*	*Migration & Transition Plan finalised*	*Migration started*			My EAD - B2B	EAD PRO - B2C			
Bahrain	Yes	Yes	Yes	Yes	-	-	-	-	-	-	-	-	-	-	-	Under consideration	-	-	No	Financial	Bahrain raised concern on the financial contribution mechanism is a major challenge that necessitates careful consideration. Uncertainty from project reward cost-benefit perspectives.
Egypt	Yes	No	No	No	Yes	No	Jan 2022	-	-	-	-	-	-	-	-	No	-	-	No	Legal	NANSC started migration negotiation since2007 and migration failed.
Iran	No	No	No	No	-	-	-	-	-	-	-	-	-	-	-	No	-	-	No	Technical	Due to SANCTION, it is not possible to use the EAD service.
Iraq	No	No	No	No	-	-	-	-	Yes , 12/2023	-	-	-	-	-	-	Yes	-	-	Yes	Technical And Lack of information and resources	Iraq would like to have clear information about EAD services and costs to determine which service/s they need to use
Jordan	Yes	Yes	Yes	Yes	-	-	-	-	-	-	-	-	-	-	Yes	-	-	Yes	-	-	
Kuwait																					
Lebanon	Yes	Yes	Yes	Yes	Yes	No	-	-	-	Yes	-	-	-	-	-	Yes	-	-	Yes	Others	Intent letter sent on October 11, 2017 to EAD and waiting EAD offer.
Libya	No	-	-	-	Yes	-	June 2022	-	Yes Dec 2022	-	-	-	-	-	-	Yes	-	Yes	Yes	Regulatory, Technical, Financial And Lack of information and resources	-
Oman	Yes	Yes	Yes	Yes	No	No	-	-	Yes	No	-	-	-	-	-	Yes	Yes	No	No	Others	AIP Data Migration project has not completed yet due to the pandemic
Qatar	Yes	Yes	Yes	Yes	No	No	-	-	Yes	Yes	Yes	No	No	No	No	Yes	Yes	No	Yes	Others	High cost
Saudi Arabia	Yes	Yes	Yes	Yes	No	No	-	-	-	-	-	-	-	-	-	No	-	-	-	-	-
Sudan																					
Syria	Yes	No	No	No	Yes	No	2023	-	Yes 2023	-	-	-	-	-	-	Yes	-	-	Yes	Technical, Financial and Lack of information and resources	The economic sanctions and international embargo constitute an insurmountable

																				obstacle to have the latest information and communications technology in civil aviation.
UAE	Yes	Yes	Yes	Yes	No	No	-	-	Yes	-	-	-	-	-	-	Yes	Yes	No	Yes	Technical and Financial	-
Yemen																					

MID ICARD PLANNERS

COUNTRY	NUMBER OF ICARD PLANNERS PER STATE	FIRST_NAME	LAST_NAME	ORGANIZATION	EMAIL	TEL NUMBER
BAHRAIN	1	Abdulla	Al Qadhi	CAA	aalqadhi@mtt.gov.bh	+97317321180
EGYPT	1	Ehab	Raslan	NANSC	Ehab.rasslan@gmail.com	+201126990000
IRAN	3	IRAN pashaei Majid	AIM javad Rezaei	Iran Airport Company	ais_iran@airport.ir ja_pashaei@yahoo.com majidre@yahoo.com	+98 2166025108 +98-21-66025108
IRAQ	3	Ali Walid Hassan	Ibrahim Ali Laith Jabbar	Iraqi CAA	alikhalil@iraqcaa.com aliwalid23@yahoo.com	+9647901568252
JORDAN	1	Tamer	Alnabelsi	CARC	Tamer.Al-Nabulsi@CARC.GOV.JO	00962799154030
KUWAIT	1	abdullah	aladwani	DGCA Kuwait	abm.aladwani@dgca.gov.kw	+965 2476 25 31
LEBANON	1	Bassem	Nasser	DGCA	bnasser@beirutairport.gov.lb	+9613242187
LIBYA	0					
OMAN	1	NASSER	ALTUWAIYA	Oman CAA	nass2008@paca.gov.om	+96824354768
QATAR	1	Faisal	Alqahtani	Qatar CAA	faisal.alqahtani@caa.gov.qa	+974 44705888
SAUDI ARABIA	3	Hamad KSA-GACA AIS MOHAMED	Alaufi SAHLI	GACA SANS	hmalaufi@gaca.gov.sa aim@sans.com.sa msahli@gaca.gov.sa	+966 555611136 +966126290564
SUDAN	2	Bushara abdalla	nasr bushara yasir		 yassir7676@yahoo.com	
SYRIA	0					
UAE	3	Talal Abdalla Roberts	Hammadi Al Rashidi Alan		thammadi@szc.gcaa.ae akaabi@szc.gcaa.ae	 +971 2 599 6891
YEMEN		hashed	abdulwasaa	CAMA	hashedkamel@hotmail.com	771-707-019

MID REGION DUPLICATED 5LNCs REPORT

	Status	Number of Duplicates	States	Priority	Action	Champion	Supported by	Report to
1.	Duplication of 5LNC "**ALAMA**" FIR boundary	2	France, Oman/India	France	Remove duplication	Oman	ICAO APAC ICAO MID	AIM SG ATM SG
2.	Duplication of 5LNC "**ALPOT**" on airway M691 & P559	2	Saudi Arabia, Bahrain	Saudi Arabia	Remove duplication	Bahrain	ICAO MID	AIM SG ATM SG
3.	Duplication of 5LNC "**ALSAN**" on airway G667	2	Republic of Korea, Kuwait/Iraq (FIR boundary)	Kuwait	Remove duplication	ICAO MID	ICAO APAC	AIM SG ATM SG
4.	Duplication of 5LNC "**ALSIR**" on airway P752 & Q624	2	Canada, Yemen/India	Canada	Remove duplication	ICAO MID	ICAO NACC	AIM SG ATM SG
5.	Duplication of 5LNC "**ALTEP**" on airway B544	2	UAE/Saudi Arabia	UAE	Remove duplication	Saudi Arabia	ICAO MID	AIM SG ATM SG
6.	Duplication of 5LNC "**AMATO**" on airway A727	2	Haiti, Sudan/Ethiopia	Haiti	Remove duplication	Sudan	ICAO ESAF ICAO MID	AIM SG ATM SG
7.	Duplication of 5LNC "**AMBAL**" on airway L425	2	Colombia, Saudi Arabia	KSA	Remove duplication	ICAO MID	SAM	AIM SG ATM SG
8.	Duplication of 5LNC "**AMBOD**" on airway P312 & P751	2	Yemen, Madagascar/Mauritius (FIR boundary)	Yemen	Remove duplication	ICAO MID	ESAF	AIM SG ATM SG
9.	Duplication of 5LNC "**ANVIX**" on airway L223	2	United Arab Emirates/Oman (FIR boundary), Seychelles	UAE	Remove duplication	ICAO MID	ESAF	AIM SG ATM SG

10.	Duplication of 5LNC "**ASKOL**" on airway M863	2	Sudan/Chad, Russian Federation	Sudan/Chad	Remove duplication	ICAO MID	ICAO EUR/NAT	AIM SG ATM SG
11.	Duplication of 5LNC "**ASPEL**" on airway G669	2	Kuwait, Japan	Kuwait	Remove duplication	ICAO MID	ICAO APAC	AIM SG ATM SG
12.	Duplication of 5LNC "**BAKIR**" on airway R652	2	Turkey, Jordan	Turkey	Remove duplication	Jordan	ICAO MID	AIM SG ATM SG
13.	Duplication of 5LNC "**BALMA**" on airway L620 & R655	2	Cyprus/Lebanon (FIR boundary), Indonesia	Lebanon	Remove duplication	ICAO MID	APAC	AIM SG ATM SG
14.	Duplication of 5LNC "**BASEM**" on airway R785	3	Republic of Korea, Syrian Arab Republic, Australia	Republic of Korea	Remove duplication	Syria	ICAO MID	AIM SG ATM SG
15.	Duplication of 5LNC "**BAYAN**" on airway P430	4	Bahrain/Qatar, Mongolia, Philippines	Mongolia	Remove duplication	Bahrain/Qatar	ICAO MID	AIM SG ATM SG
16.	Duplication of 5LNC "**BOGUM**" on airway G660	2	Sudan, Taiwan	Sudan	Remove duplication	ICAO MID	ICAO APAC	AIM SG ATM SG
17.	Duplication of 5LNC "**BOMIX**" on airway B403	2	Yemen/Somalia, India	Yemen/Somalia	Remove duplication	ICAO MID	ICAO APAC	AIM SG ATM SG
18.	Duplication of 5LNC "**BONAR**" on airway M620, M980, M9, M7	2	Libya/Malta (FIR boundary), Indonesia	Libya	Remove duplication	ICAO MID	APAC	AIM SG ATM SG
19.	Duplication of 5LNC "**BRAVO**" on airway L513 & R785	4	China (Taiwan), India, Syrian Arab Republic, Brazil	Brazil	Remove duplication	Syria	ICAO MID	AIM SG ATM SG
20.	Duplication of 5LNC "**CEDAR**" on airway R655	6	Brazil, United Kingdom, Lebanon, Japan, Australia, China (Hong Kong)	UK	Remove duplication	Lebanon	ICAO MID	AIM SG ATM SG

21.	Duplication of 5LNC "**CLAMS**" on airway A411	2	United States of America, Libya	USA	Remove duplication	Libya	ICAO MID	AIM SG ATM SG
22.	Duplication of 5LNC "**DANAL**" on airway P975	2	Kuwait, Australia	Kuwait	Remove duplication	ICAO MID	APAC	AIM SG ATM SG
23.	Duplication of 5LNC "**DANAN**" on airway B526 & R674	2	Yemen, Republic of Korea	Yemen	Remove duplication	ICAO MID	APAC	AIM SG ATM SG
24.	Duplication of 5LNC "**DEKIL**" on airway M731, M727, G858, G727	2	Libya/Chad, Republic of Korea	To be determined by the 5LNC Duplicate Resolution Rules				
25.	Duplication of 5LNC "**DEKUM**" on airway B12, M568	2	South Sudan/Democratic Republic of the Congo (FIR boundary), United States of America	Sudan	Remove duplication	ICAO MID	FAA	AIM SG ATM SG
26.	Duplication of 5LNC "**DELAM**" on airway B612, P324, P566, P313, L320	2	Russian Federation, Sudan	Russian Federation	Remove duplication	Sudan	ICAO MID	AIM SG ATM SG
27.	Duplication of 5LNC "**DELTA**" on airway R785	7	Suriname, Japan, Vanuatu, Syrian Arab Republic, Bhutan, Liberia, Lao People's Democratic Republic, India	Suriname	Remove duplication	Syria	ICAO MID	AIM SG ATM SG
28.	Duplication of 5LNC "**DENSA**" on airway M561	2	Iran (Islamic Republic of), Japan	Iran	Remove duplication	ICAO MID	APAC	AIM SG ATM SG
29.	Duplication of 5LNC "**DOLFI**" on airway R401	3	Peru, Libya, Oman	To be determined by the 5LNC Duplicate Resolution Rules				

30.	Duplication of 5LNC "**ELELI**" on airway M999	2	Egypt, Indonesia	Egypt	Remove duplication	ICAO MID	APAC	AIM SG ATM SG
31.	Duplication of 5LNC "**ENADA**" FIR boundary	2	Jordan, Oman/UAE	Jordan	Remove duplication	Oman/UAE	ICAO MID	AIM SG ATM SG
32.	Duplication of 5LNC "**FARES**" on airway B526, G665, M731, G13	3	Libya/Tunisia (FIR boundary), United States of America, Yemen/Eritrea (FIR boundary)	Libya	Remove duplication	ICAO MID Yemen	FAA ESAF	AIM SG ATM SG
33.	Duplication of 5LNC "**GASSI**" on airway P559	3	Philippines, United States of America, Bahrain	USA	Remove duplication	Bahrain	ICAO MID	AIM SG ATM SG
34.	Duplication of 5LNC "**GETUP**" on airway M449 & A412	2	Jordan, United States of America	Jordan	Remove duplication	ICAO MID	FAA	AIM SG ATM SG
35.	Duplication of 5LNC "**GIBAX**" on airway G652	2	Yemen, Ethiopia	Yemen	Remove duplication	ICAO MID	ICAO ESAF	AIM SG ATM SG
36.	Duplication of 5LNC "**GOMRI**" on airway B413 & L314	2	Yemen, Algeria	Yemen	Remove duplication	ICAO MID	ICAO EUR NAT	AIM SG ATM SG
37.	Duplication of 5LNC "**HAMED**" on airway A424	2	Yemen, Saudi Arabia	Yemen	Remove duplication	Saudi Arabia	ICAO MID	AIM SG ATM SG
38.	Duplication of 5LNC "**ITGEV**" on airway B525	2	Sudan/Ethiopia	To be determined by the 5LNC Duplicate Resolution Rules				
39.	Duplication of 5LNC "**KABAN**" on airway L718	2	Turkey/Iraq (FIR boundary), Philippines	Iraq	Remove duplication	ICAO MID	APAC	AIM SG ATM SG

40.	Duplication of 5LNC "**KAMAR**" on airway G202	2	Afghanistan/Iran (Islamic Republic of) [FIR boundary], Japan	Iran	Remove duplication	ICAO MID	APAC	AIM SG ATM SG
41.	Duplication of 5LNC "**KAMEL**" on airway Q52	2	Jordan/Syria, Colombia	To be determined by the 5LNC Duplicate Resolution Rules				
42.	Duplication of 5LNC "**KANOK**" FIR boundary	2	Iraq/Syria, India	Iraq/Syria	Remove duplication	ICAO MID	ICAO APAC	AIM SG ATM SG
43.	Duplication of 5LNC "**KAROX**" on airway B407	2	Sudan/Saudi Arabia, UAE	Sudan/Saudi Arabia	Remove duplication	UAE	ICAO MID	AIM SG ATM SG
44.	Duplication of 5LNC "**KARUB**" on airway M999	2	Indonesia, Libya	To be determined by the 5LNC Duplicate Resolution Rules				
45.	Duplication of 5LNC "**KASOL**" on airway B535 & N303	3	Iran (Islamic Republic of), Indonesia, Djibouti	Iran	Remove duplication	ICAO MID	APAC ESAF	AIM SG ATM SG
46.	Duplication of 5LNC "**KATAK**" on airway R401	3	Oman, Indonesia, Zimbabwe/Mozambique (FIR boundary)	To be determined by the 5LNC Duplicate Resolution Rules				
47.	Duplication of 5LNC "**KATAN**" on airway B535	2	Yemen, Indonesia	Yemen	Remove duplication	ICAO MID	APAC	AIM SG ATM SG
48.	Duplication of 5LNC "**KAVIL**" on airway G665	2	Iran, Philippine	Iran	Remove duplication	ICAO MID	ICAO APAC	AIM SG ATM SG
49.	Duplication of 5LNC "**KEPOS**" on airway M999	2	Madagascar, Libya	Madagascar	Remove duplication	Libya	ICAO MID	AIM SG ATM SG
50.	Duplication of 5LNC "**KILIS**" on airway B544	2	Brazil, Turkey/Syrian Arab Republic (FIR boundary)	Brazil	Remove duplication	Syria	ICAO MID	AIM SG ATM SG

51.	Duplication of 5LNC "**KISAL**" on airway N320, L320, P562	2	Central African Republic/Sudan (FIR boundary), Russian Federation	Sudan	Remove duplication	ICAO MID	EUR NAT	AIM SG ATM SG
52.	Duplication of 5LNC "**KITUB**" on airway G667	2	Saudi Arabia, Canada	Canada	Remove duplication	KSA	ICAO MID	AIM SG ATM SG
53.	Duplication of 5LNC "**KOBAS**" on airway B413	2	Eritrea/Saudi Arabia, Indonesia	Eritrea/Saudi Arabia	Remove duplication	ICAO MID	ICAO APAC	AIM SG ATM SG
54.	Duplication of 5LNC "**KORAB**" on airway M651	2	France, Yemen	France	Remove duplication	Yemen	ICAO MID	AIM SG ATM SG
55.	Duplication of 5LNC "**KUNDO**" on airway P699	2	Bahrain, Indonesia	Bahrain	Remove duplication	ICAO MID	ICAO APAC	AIM SG ATM SG
56.	Duplication of 5LNC "**KUMLA**" on airway P559	2	Bahrain, Sweden	Bahrain	Remove duplication	ICAO MID	ICAO EUR/NAT	AIM SG ATM SG
57.	Duplication of 5LNC "**LABAD**" on airway B544	2	Saudi Arabia, Indonesia	Saudi Arabia	Remove duplication	ICAO MID	APAC	AIM SG ATM SG
58.	Duplication of 5LNC "**LABNA**" on airway L604	2	Egypt, Indonesia	Egypt	Remove duplication	ICAO MID	ICAO APAC	AIM SG ATM SG
59.	Duplication of 5LNC "**LADEN**" on airway B413	2	Sudan/Eritrea (FIR boundary), Russian Federation	Sudan	Remove duplication	ICAO MID	EUR NAT	AIM SG ATM SG
60.	Duplication of 5LNC "**LATEB**" on airway N310 & P300	2	Lebanon/Syrian Arab Republic (FIR boundary), India	Lebanon/Syrian Arab Republic	Remove duplication	ICAO MID	APAC	AIM SG ATM SG
61.	Duplication of 5LNC "**LITAN**" on airway N310 & P300	2	Lebanon/Cyprus, Indonesia	Lebanon/Cyprus	Remove duplication	ICAO MID	APAC	AIM SG ATM SG

62.	Duplication of 5LNC "**LOSAR**" on airway L513	2	Jordan, Indonesia	Jordan	Remove duplication	ICAO MID	ICAO APAC	AIM SG ATM SG
63.	Duplication of 5LNC "**LOTOS**" on airway L564	3	Spain, Saudi Arabia, China (Taiwan)	Spain	Remove duplication	KSA	ICAO MID	AIM SG ATM SG
64.	Duplication of 5LNC "**LUGAT**" on airway M872	2	Ukraine, Egypt	Ukraine	Remove duplication	Egypt	ICAO MID	AIM SG ATM SG
65.	Duplication of 5LNC "**MAANI**" on airway G782	2	Saudi Arabia, Finland	Saudi Arabia	Remove duplication	ICAO MID	ICAO EUR/NAT	AIM SG ATM SG
66.	Duplication of 5LNC "**MAHDI**" on airway B407	2	Algeria, Sudan	Algeria	Remove duplication	Sudan	ICAO MID	AIM SG ATM SG
67.	Duplication of 5LNC "**MALLA**" on airway L513	2	UAS, Syria	UAS	Remove duplication	Syria	ICAO MID	AIM SG ATM SG
68.	Duplication of 5LNC "**MISAN**" on airway B544 & G667	2	Yemen, Viet Nam	Yemen	Remove duplication	ICAO MID	APAC	AIM SG ATM SG
69.	Duplication of 5LNC "**MUNGA**" on airway A777	2	Oman, Australia	Oman	Remove duplication	ICAO MID	APAC	AIM SG ATM SG
70.	Duplication of 5LNC "**NABIL**" on airway M574	2	Indonesia, India/Yemen (FIR boundary)	To be determined by the 5LNC Duplicate Resolution Rules				
71.	Duplication of 5LNC "**NAMLA**" on airway N300	2	Bahrain/UAE, Nadi	Bahrain/UAE	Remove duplication	ICAO MID	ICAO SAM ICAO WACAF	AIM SG ATM SG
72.	Duplication of 5LNC "**NANTO**" on airway G665	2	Iran (Islamic Republic of), Indonesia	Iran	Remove duplication	ICAO MID	APAC	AIM SG ATM SG

73.	Duplication of 5LNC "**NARMI**" on airway B457	2	Morocco, Bahrain/Saudi Arabia (FIR boundary)	Morocco	Remove duplication	KSA Bahrain	ICAO MID	AIM SG ATM SG
74.	Duplication of 5LNC "**NASER**" on airway A411	2	Russian Federation, Libya	Russian Federation	Remove duplication	Libya	ICAO MID	AIM SG ATM SG
75.	Duplication of 5LNC "**NAZAR**" on airway A647	2	Iran/Turkmenistan, USA	Iran/Turkmenistan	Remove duplication	ICAO MID	ICAO NACC FAA	AIM SG ATM SG
76.	Duplication of 5LNC "**NODLA**" on airway G202	2	Iran (Islamic Republic of), Egypt	Iran	Remove duplication	Egypt	ICAO MID	AIM SG ATM SG
77.	Duplication of 5LNC "**ORBAT**" on airway N764 & P751	2	Tunisia, Yemen	Tunisia	Remove duplication	Yemen	ICAO MID	AIM SG ATM SG
78.	Duplication of 5LNC "**PADUR**" on airway Q615, P753	2	Panama/Central America, Saudi Arabia/Yemen	Panama/Central America	Remove duplication	Yemen Saudi Arabia	ICAO MID	AIM SG ATM SG
79.	Duplication of 5LNC "**PARAS**" on airway G208	2	Iran, Taiwan	Iran	Remove duplication	ICAO MID	ICAO APAC	AIM SG ATM SG
80.	Duplication of 5LNC "**PAROT**" on airway G208	2	Iran (Islamic Republic of), Indonesia	Iran	Remove duplication	ICAO MID	APAC	AIM SG ATM SG
81.	Duplication of 5LNC "**PASAK**" on airway M677	2	Bahrain, Cambodia	Bahrain	Remove duplication	ICAO MID	APAC	AIM SG ATM SG
82.	Duplication of 5LNC "**PASOS**" on airway L550, W850	2	Egypt/Cyprus, Mexico	Egypt/Cyprus	Remove duplication	ICAO MID	ICAO NACC	AIM SG ATM SG
83.	Duplication of 5LNC "**PATOR**" on airway B417	2	Saudi Arabia, Indonesia	Saudi Arabia	Remove duplication	ICAO MID	ICAO APAC	AIM SG ATM SG

84.	Duplication of 5LNC "**PAVON**" on airway M561	3	Venezuela, Mexico, Iran (Islamic Republic of)	Iran	Remove duplication	ICAO MID	NACC SAM	AIM SG ATM SG
85.	Duplication of 5LNC "**PETRA**" on airway B411 & M449	3	Thailand, China (mainland), Jordan	Thailand	Remove duplication	Jordan	ICAO MID	AIM SG ATM SG
86.	Duplication of 5LNC "**PRAWN**" on airway A411	4	Canada, Libya, China (Hong Kong), Australia	Canada	Remove duplication	Libya	ICAO MID	AIM SG ATM SG
87.	Duplication of 5LNC "**PURNA**" on airway A418	2	Iran, Indonesia	Iran	Remove duplication	ICAO MID	ICAO APAC	AIM SG ATM SG
88.	Duplication of 5LNC "**RABOL**" on airway P751	2	Yemen, Indonesia	Yemen	Remove duplication	ICAO MID	APAC	AIM SG ATM SG
89.	Duplication of 5LNC "**RAGAS**" on airway M561	2	Bahrain/Iran (Islamic Republic of) [FIR boundary], Ethiopia/Djibouti	Bahrain	Remove duplication	ICAO MID	ESAF	AIM SG ATM SG
90.	Duplication of 5LNC "**RAKID**" on airway M318 & M559	2	Saudi Arabia, Yemen	Saudi Arabia	Remove duplication	Yemen	ICAO MID	AIM SG ATM SG
91.	Duplication of 5LNC "**RASKI**" on airway L301	3	India/Oman (FIR boundary), Saudi Arabia, Iraq	Oman	Remove duplication	Saudi Arabia, Iraq	ICAO MID	AIM SG ATM SG
92.	Duplication of 5LNC "**RIBAM**" on airway G650	2	Saudi Arabia, Russian Federation	Saudi Arabia	Remove duplication	ICAO MID	ICAO EUR/NAT	AIM SG ATM SG
93.	Duplication of 5LNC "**SABEL**" on airway B424 & R674	2	Oman/Yemen (FIR boundary), Philippines	Oman	Remove duplication	ICAO MID	ICAO APAC	AIM SG ATM SG
94.	Duplication of 5LNC "**SALAM**" on airway L200, A412	3	Israel/Jordan, Iraq, Indonesia	Israel/Jordan	Remove duplication	ICAO MID Iraq	ICAO APAC	AIM SG ATM SG

95.	Duplication of 5LNC "**SALIM**" on airway L601	2	United States of America, Syrian Arab Republic	USA	Remove duplication	Syria	ICAO MID	AIM SG ATM SG
96.	Duplication of 5LNC "**SALUN**" on airway L604	2	Egypt/Greece (FIR boundary), China (Taiwan)	Egypt	Remove duplication	ICAO MID	APAC	AIM SG ATM SG
97.	Duplication of 5LNC "**SALWA**" on airway M430	2	United States of America, Saudi Arabia	USA	Remove duplication	KSA	ICAO MID	AIM SG ATM SG
98.	Duplication of 5LNC "**SINKA**" on airway G202	2	Iraq, Haiti	Iraq	Remove duplication	ICAO MID	NACC	AIM SG ATM SG
99.	Duplication of 5LNC "**SOFIA**" on airway G202	3	Brazil, Paraguay, Syrian Arab Republic	Brazil	Remove duplication	Syria	ICAO MID	AIM SG ATM SG
100.	Duplication of 5LNC "**SOKAL**" on airway L613 & A1	2	Egypt, Australia	Egypt	Remove duplication	ICAO MID	APAC	AIM SG ATM SG
101.	Duplication of 5LNC "**SOKAN**" on airway L768	2	Jordan/Syrian Arab Republic (FIR boundary), Viet Nam	Jordan	Remove duplication	ICAO MID	APAC	AIM SG ATM SG
102.	Duplication of 5LNC "**TAKMI**" on airway L566 & P323	2	Yemen, New Zealand	Yemen	Remove duplication	ICAO MID	APAC	AIM SG ATM SG
103.	Duplication of 5LNC "**TAKTI**" on airway N687	2	Saudi Arabia, Bhutan	KSA	Remove duplication	ICAO MID	APAC	AIM SG ATM SG
104.	Duplication of 5LNC "**TAMIM**" on airway B535	2	Yemen, Jordan	Yemen	Remove duplication	Jordan	ICAO MID	AIM SG ATM SG
105.	Duplication of 5LNC "**TANSA**" on airway B12	2	Egypt/Greece (FIR boundary), Philippines	Egypt	Remove duplication	ICAO MID	APAC	AIM SG ATM SG

106.	Duplication of 5LNC "**TAPOS**" on airway B535	3	Sudan, Indonesia, Congo	Sudan	Remove duplication	ICAO MID	APAC WACAF	AIM SG ATM SG
107.	Duplication of 5LNC "**TASMI**" on airway L602, G795	2	Iraq/Kuwait, Yemen	Iraq/Kuwait	Remove duplication	Yemen	ICAO MID	AIM SG ATM SG
108.	Duplication of 5LNC "**TESOS**" on FIR boundary	2	Botswana, Sudan/Kenia	Botswana	Remove duplication	Sudan	ICAO MID	AIM SG ATM SG
109.	Duplication of 5LNC "**TESVA**" on airway L852	2	Turkey/Iran, Finland	Turkey/Iran	Remove duplication	ICAO MID	ICAO EUR/NAT	AIM SG ATM SG
110.	Duplication of 5LNC "**TOBLI**" on airway A453	2	Bolivia (Plurinational State of), Bahrain	Bolivia	Remove duplication	Bahrain	ICAO MID	AIM SG ATM SG
111.	Duplication of 5LNC "**TOTOX**" on airway P574	2	Oman/India, Vietnam	Oman/India	Remove duplication	ICAO MID	ICAO APAC	AIM SG ATM SG
112.	Duplication of 5LNC "**UBTEN**" on FIR boundary	2	Botswana, Yemen/Somalia	Botswana	Remove duplication	Yemen	ICAO MID	AIM SG ATM SG
113.	Duplication of 5LNC "**VELOS**" on airway G662	2	Saudi Arabia, Philippine	Saudi Arabia	Remove duplication	ICAO MID	ICAO APAC	AIM SG ATM SG

QUESTIONNAIRE ON STATES' PLAN FOR THE PROVISION OF THE AIS DIGITAL DATA SETS

*Please complete this questionnaire and send it to ICAOMID by email: icaomid@icao.int no later than **(DD/MM/YYYY)***

Date: ----------

State/Organization:----------

Completed by:----------

Email address:----------

A. AIP Data Set

A.1. Does your State/Organization provide an AIP data set covering the extent of information as provided in the AIP?

☐ Yes, ☐ No.

A.2. If a complete AIP data set is not provided, does your State/Organization provide the AIP data subset(s) that are available?

☐ Yes, ☐ No.

A.3. If the answer is "YES" to question A.1 or A.2, indicate:

Provision date: <year/quarter> Specification / Format:

A.4. If the answer is "NO" to question A.1 and A.2, indicate:

Planned date for the provision of AIP Data Set: <year/quarter>

B. Obstacle Data Set for Area 1

B.1. Does your State/Organization provide Obstacle Data Set for Area 1 covering the the entire territory of the State?

☐ Yes, ☐ No.

B.2. If the answer is "YES", indicate:

Provision date: <year/quarter> Specification / Format:

B.3. If the answer is "NO", indicate:

B.4. Planned date for the provision of the Obstacle Data Set for Area 1: <year/quarter>

C. Obstacle Data Sets for Airports

C.1. Does your State/Organization provide Obstacle Data Set for aerodromes regularly used by international civil aviation covering the following areas?

Areas Area 2a + TKOF flight path + OLS	☐ Yes	☐ No	
Areas 2b, 2c, 2d	☐ Yes	☐ No	
Area 3	☐ Yes	☐ No	
Area 4	☐ Yes	☐ No	☐ Not applicable

Note.— Take-off flight path areas are specified in Annex 4, 3.8.2. Aerodrome obstacle limitation surfaces are specified in Annex 14, Volume 1, Chapter 4.

C.2. If the answer is "YES", indicate:

	Provision date	Specification / Format:
Areas Area 2a + TKOF flight path + OLS	**<year/quarter>**	
Areas 2b, 2c, 2d	**<year/quarter>**	
Area 3	**<year/quarter>**	
Area 4	**<year/quarter>**	

C.3. If the answer is "NO", indicate:

	Planned provision date
Areas Area 2a + TKOF flight path + OLS	**<year/quarter>**
Areas 2b, 2c, 2d	**<year/quarter>**
Area 3	**<year/quarter>**
Area 4	**<year/quarter>**

D. Instrument Flight Procedures Data Sets

D.1. Does your State/Organization provide Instrument flight procedure data sets for aerodromes regularly used by international civil aviation?

☐ Yes, ☐ No.

D.2. If the answer is "YES", indicate:

Provision date: <year/quarter> Specification / Format:

D.3. If the answer is "NO", indicate:

Planned date for the provision of the Instrument flight procedure data sets for aerodromes regularly used by international civil aviation: <year/quarter>

E. Airport Mapping Data Sets

E.1. Does your State/Organization provide Aerodrome mapping data sets for aerodromes regularly used by international civil aviation?

☐ Yes, ☐ No.

E.2. If the answer is "YES", indicate:

Provision date: <year/quarter> Specification / Format:

E.3. If the answer is "NO", indicate:

Planned date for the provision of the Aerodrome mapping data sets for aerodromes regularly used by international civil aviation: <year/quarter>

F. Terrain Data Set - Area 1

F.1. Does your State/Organization provide Terrain Data Set for Area 1 covering the entire territory of the State?

☐ Yes, ☐ No.

F.2. If the answer is "YES", indicate:

Provision date: <year/quarter> Specification / Format:

F.3. If the answer is "NO", indicate:

Planned date for the provision of the Terrain Data Set for Area 1: <year/quarter>

G. Terrain Data Sets for Airports

G.1. Does your State/Organization provide Terrain Data Set for aerodromes regularly used by international civil aviation covering the following areas?

Areas Area 2a + TKOF flight path + OLS	☐ Yes	☐ No	
Areas 2b, 2c, 2d	☐ Yes	☐ No	
Area 3	☐ Yes	☐ No	
Area 4	☐ Yes	☐ No	☐ Not applicable

G.2. If the answer is "YES", indicate:

	Provision date	Specification / Format:
Areas Area 2a + TKOF flight path + OLS	**<year/quarter>**	
Areas 2b, 2c, 2d	**<year/quarter>**	
Area 3	**<year/quarter>**	
Area 4	**<year/quarter>**	

G.3. If the answer is "NO", indicate:

	Planned provision date
Areas Area 2a + TKOF flight path + OLS	**<year/quarter>**
Areas 2b, 2c, 2d	**<year/quarter>**
Area 3	**<year/quarter>**
Area 4	**<year/quarter>**

H. Status

1. Currently, at what stage of the provision of the AIS Digital Data Sets is your State/Organization?

☐ Planning phase, specify estimated date to start: ../…. (MM/YYYY)

☐ In Progress

☐ Provision of the AIS Digital Data Sets

☐ Not Started

I. Challenges

What kind of challenges does your State/Organization face in the provision of the AIS Digital Data Sets?

☐ Regulatory
☐ Technical
☐ Financial
☐ Lack of training and resources
☐ Others

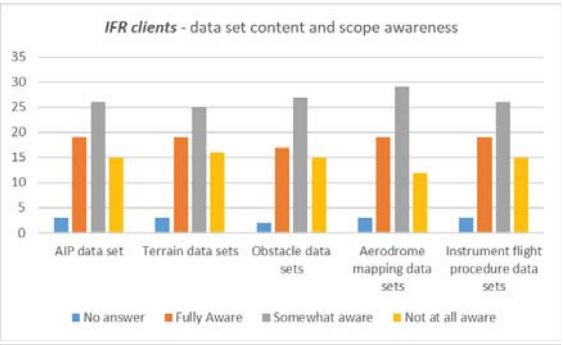
If others, please indicate them below:

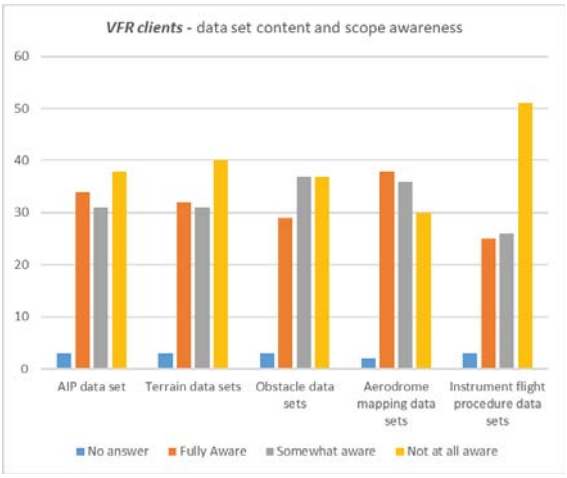
THANK YOU FOR YOUR TIME

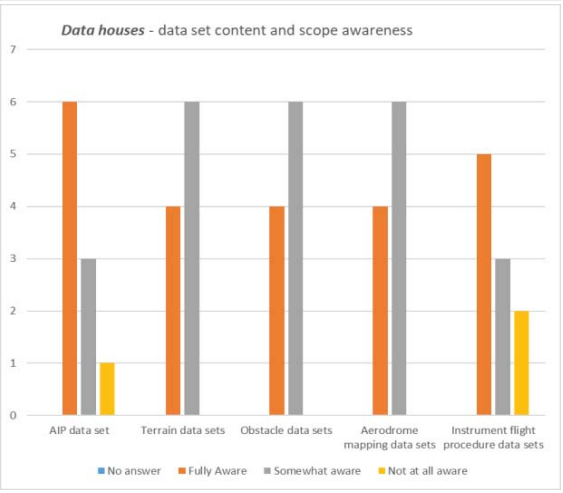
Annex A

A.1 DATA SETS AWARENESS

A.1.1 The users were asked to rate their awareness with regard to the intended scope and content of the five categories of digital data sets specified by ICAO Annex 15 and Doc 10066 (which data items need to be included). The following chart shows the answers to this group of questions.







A.1.2 For the IFR and VFR user categories, only around a third of the respondents are “fully aware” of the scope and content of the digital data sets. Obviously, data houses have been the most exposed to the information about the revised Annex 15 and PANS-AIM, therefore this category has the highest awareness rates. Therefore, as detailed specifications are developed and as the digital AIS data sets become available, information about their content and scope should be brought directly to the attention of the end VFR and IFR end users.

A.2 CAPABILITY TO USE THE DATA SETS

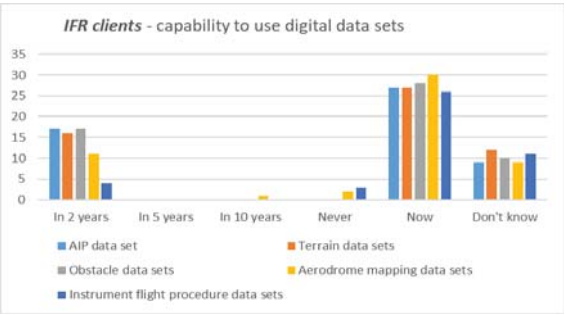
A.2.1 The users were asked to estimate when they expected to be able to use the digital AIS data sets, considering that they would be available as follows:

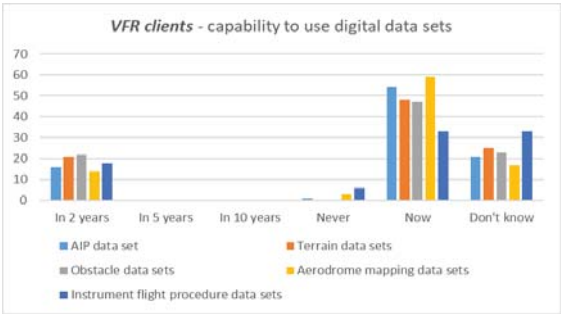
- ***AIP data set*** using AIXM 5.1.1 (available in draft status, see www.aixm.aero/confluence), complemented by a standard service which can extract CSV (comma separated values) for specific subjects (such as a list of navaids, waypoints, etc.);

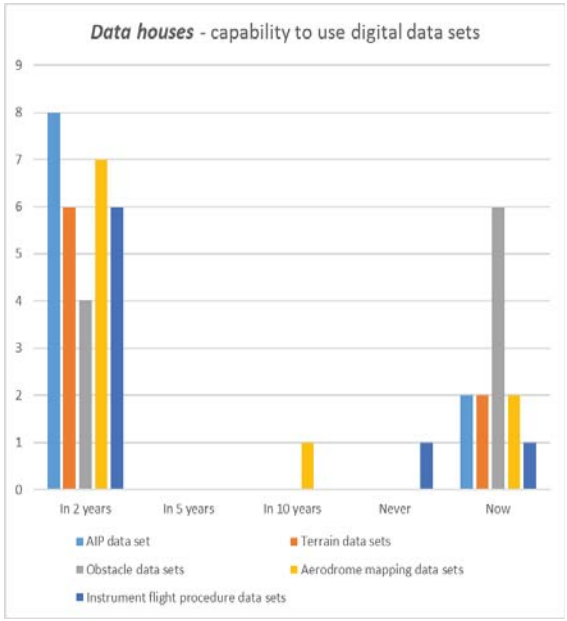
- ***IFP data set*** using AIXM 5.1.1, complemented by a standard service which can extract CSV for specific subjects (such as a list of legs, FAS Data Block, etc.);
- ***Obstacle data set*** using AIXM 5.1.1, complemented by a standard service which can extract a list of obstacles in CSV format;
- ***Terrain data set*** – geoTiFF or Shape, plus metadata
- ***Airport mapping data set*** – AIXM 5.1.1 and/or AMXM

A.2.2 *The following note was part of the survey form: "The provision of digital AIS data sets in full compliance with the ICAO provisions using earlier AIXM versions, such as AIXM 4.5, is technically not possible because of the limitations of such older versions. For example, AIXM 4.5 lacks support for line and polygon coding for obstacles, it cannot be used to code the PBN data and procedures, etc. A similar comment can be made for other simpler formats, such as CSV, which lack the capability to support the coding of complex aeronautical data structures and associations".*

A.2.3 The following charts show the answers to this group of questions.





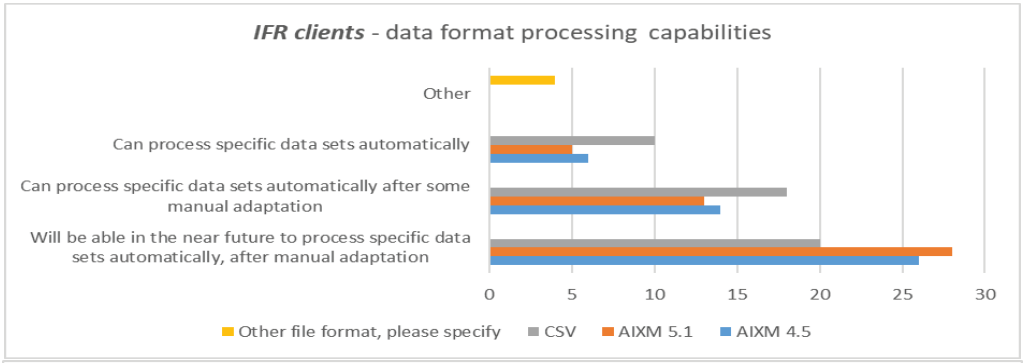


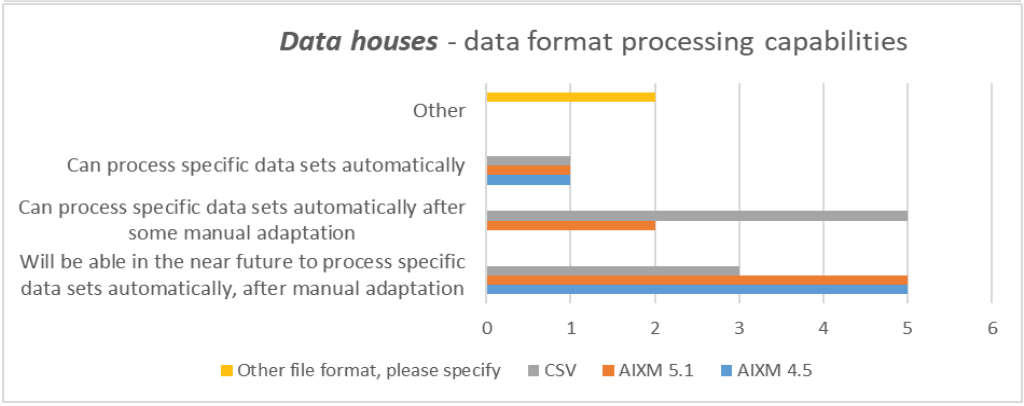
A.2.4 Most respondents seem to be capable of and interested in using the digital data sets in the short term (now or in the next two years), with relatively equal interest for the AIP, obstacles, terrain and airport mapping data sets. Obviously, VFR clients are less interested in instrument flight procedures. Data houses show a high interest for obstacle data sets.

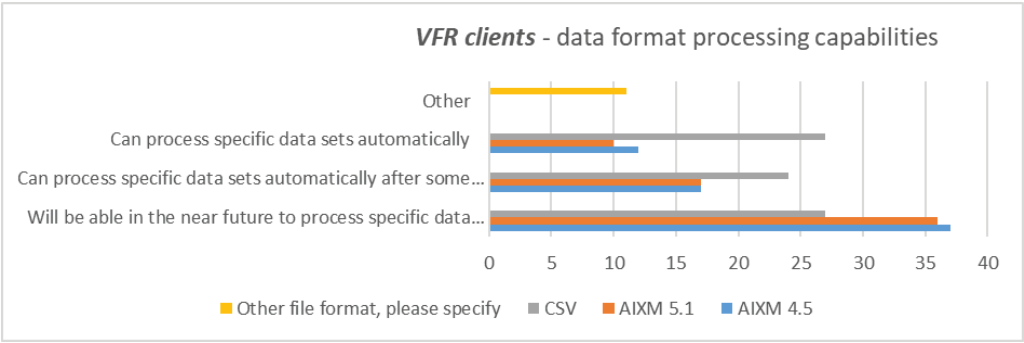
A.3 DATA FORMAT

A.3.1 The users were asked to indicate their current or near future (within 6 months) capability to use (ingest and process) digital data in AIXM and CSV formats. This also

included the possibility to indicate other data coding formats they are able to process. The following chart shows the answers to this group of questions.



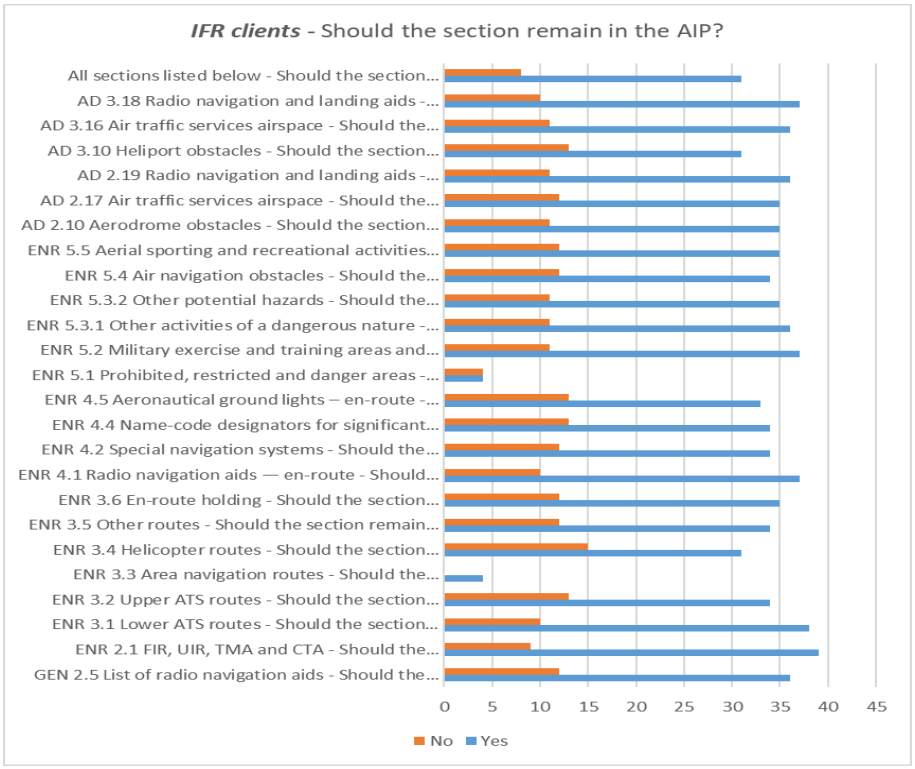


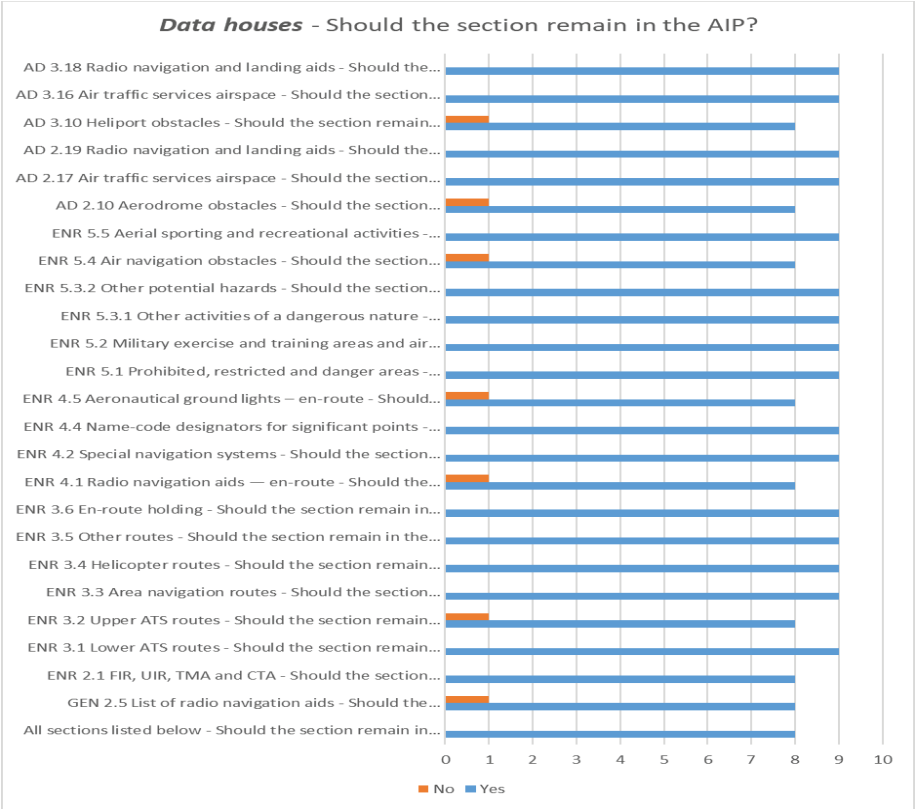


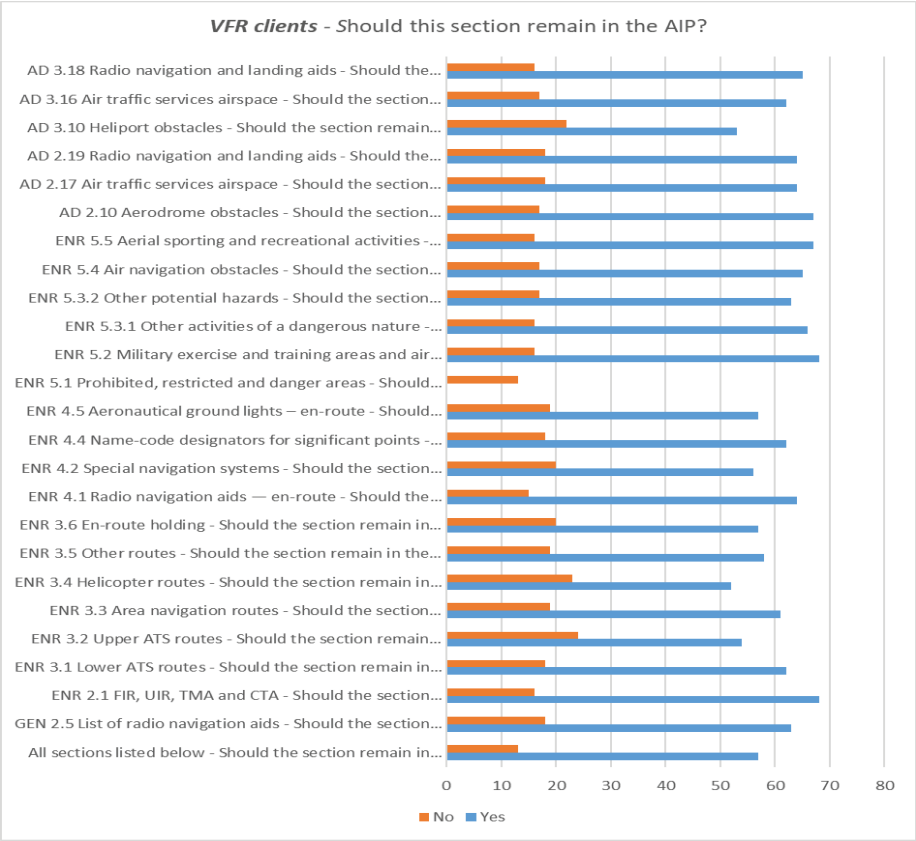
A.3.2 There are no significant differences in the capability to process AIXM 4.5 versus AIXM 5.1 data. The capability to process CSV data is obviously high, in particular for VFR clients, because common office tools (such as Excel) are able to read/write CSV. However, this simple format is unusable for full aeronautical data sets because it cannot represent complex associations and data types, which are necessary for many aeronautical data subjects. Its use is limited to data provided as one table, such as a list of navaids, obstacles, etc. It is relatively simple to extract CSV for specific topics (such as a list of waypoints) from an AIP Data Set provided in AIXM, as demonstrated for the Donlon sample: https://github.com/aixm/xslt/tree/master/donlon-to-csv .

A.4 NEED FOR AIP TABLES

A.4.1 The users were asked to indicate which AIP sections should still remain in an AIP even if the information is available in the digital AIP data set or in digital obstacle data sets. The following chart shows the answers to this group of questions.


IFR clients - Should the section remain in the AIP?
All sections listed below - Should the section...
AD 3.18 Radio navigation and landing aids -...
AD 3.16 Air traffic services airspace - Should the...
AD 3.10 Heliport obstacles - Should the section...
AD 2.19 Radio navigation and landing aids -...
AD 2.17 Air traffic services airspace - Should the...
AD 2.10 Aerodrome obstacles - Should the section...
ENR 5.5 Aerial sporting and recreational activities...
ENR 5.4 Air navigation obstacles - Should the...
ENR 5.3.2 Other potential hazards - Should the...
ENR 5.3.1 Other activities of a dangerous nature -...
ENR 5.2 Military exercise and training areas and...
ENR 5.1 Prohibited, restricted and danger areas -...
ENR 4.5 Aeronautical ground lights – en-route -...
ENR 4.4 Name-code designators for significant...
ENR 4.2 Special navigation systems - Should the...
ENR 4.1 Radio navigation aids — en-route - Should...
ENR 3.6 En-route holding - Should the section...
ENR 3.5 Other routes - Should the section remain...
ENR 3.4 Helicopter routes - Should the section...
ENR 3.3 Area navigation routes - Should the...
ENR 3.2 Upper ATS routes - Should the section...
ENR 3.1 Lower ATS routes - Should the section...
ENR 2.1 FIR, UIR, TMA and CTA - Should the...
GEN 2.5 List of radio navigation aids - Should the...
0 5 10 15 20 25 30 35 40 45
No Yes


Data houses - Should the section remain in the AIP?
AD 3.18 Radio navigation and landing aids - Should the...
AD 3.16 Air traffic services airspace - Should the section...
AD 3.10 Heliport obstacles - Should the section remain...
AD 2.19 Radio navigation and landing aids - Should the...
AD 2.17 Air traffic services airspace - Should the section...
AD 2.10 Aerodrome obstacles - Should the section...
ENR 5.5 Aerial sporting and recreational activities -...
ENR 5.4 Air navigation obstacles - Should the section...
ENR 5.3.2 Other potential hazards - Should the section...
ENR 5.3.1 Other activities of a dangerous nature -...
ENR 5.2 Military exercise and training areas and air...
ENR 5.1 Prohibited, restricted and danger areas -...
ENR 4.5 Aeronautical ground lights – en-route - Should...
ENR 4.4 Name-code designators for significant points -...
ENR 4.2 Special navigation systems - Should the section...
ENR 4.1 Radio navigation aids — en-route - Should the...
ENR 3.6 En-route holding - Should the section remain in...
ENR 3.5 Other routes - Should the section remain in the...
ENR 3.4 Helicopter routes - Should the section remain...
ENR 3.3 Area navigation routes - Should the section...
ENR 3.2 Upper ATS routes - Should the section remain...
ENR 3.1 Lower ATS routes - Should the section remain...
ENR 2.1 FIR, UIR, TMA and CTA - Should the section...
GEN 2.5 List of radio navigation aids - Should the...
All sections listed below - Should the section remain in...
0 1 2 3 4 5 6 7 8 9 10
No Yes

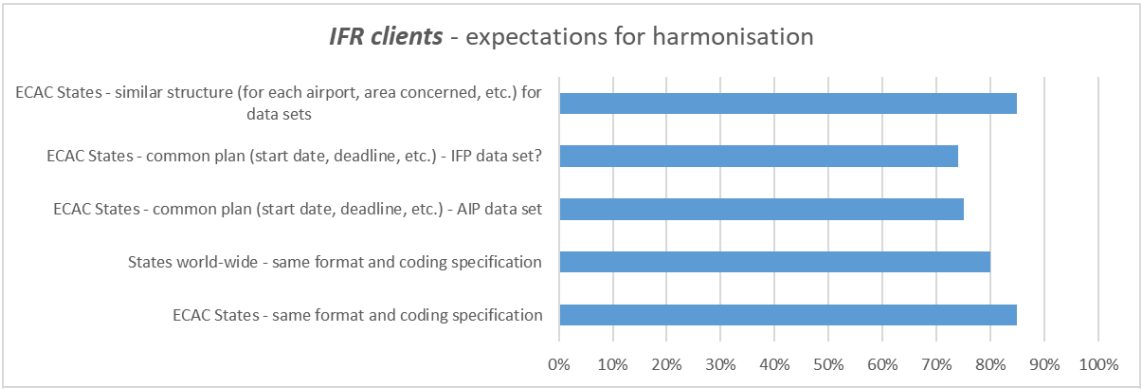


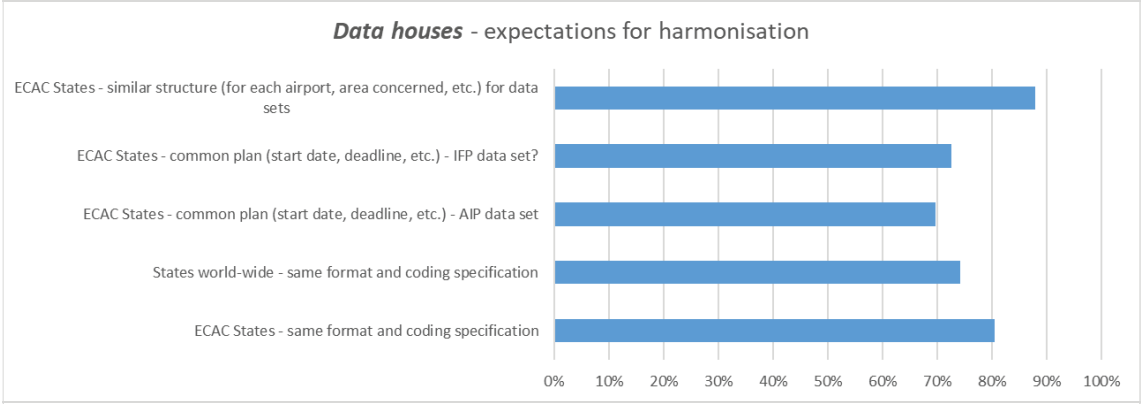
A.4.2 Overall, a significant proportion of respondents considers that the AIP should continue to include the tabular data, even if the same data is available in the form of digital data sets. Data houses seem to have a higher than average need for these tables to stay in the AIP, probably due to legal concerns related to the status of the digital data sets. This situation might change once the AIS clients start using the digital data sets and gain confidence in the digital services.

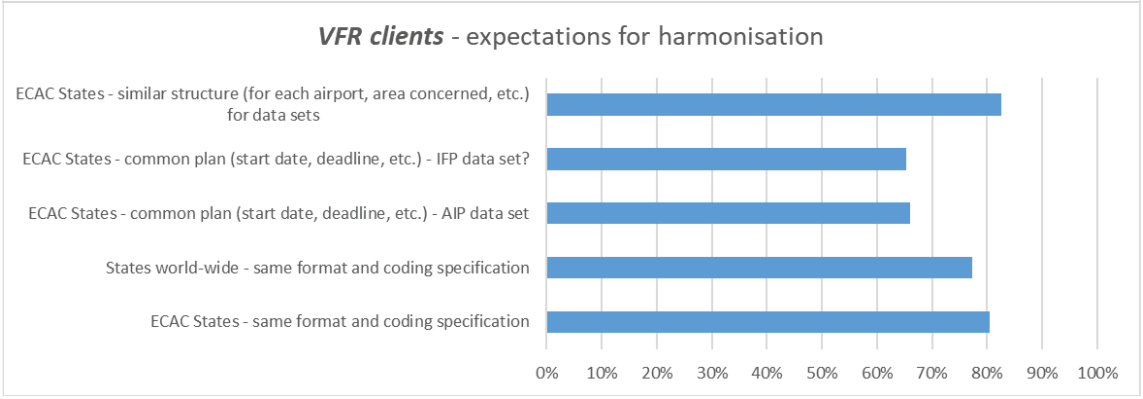
A.5 NEED FOR COORDINATION AND HARMONISATION

A.5.1 The users were asked to indicate if it is important that States (both for ECAC and world-wide adopt a common approach and use similar specifications for the provision of the digital data sets. The following questions were asked:

- Is it important for you that ***all ECAC States*** use the ***same format and coding specification*** for the provision of the digital data sets?
- Is it important is for you that all ***States world-wide*** use the ***same format and coding specification*** for the provision of the digital data sets?
- Is it important for you that all ***ECAC States*** agree on a ***common plan*** (start date, deadline, etc.) for the provision of the new ***AIP data set***?
- Is it important for you that all ***ECAC States*** agree on a ***common plan*** (start date, deadline, etc.) for the provision of the new instrument ***flight procedures data set***?
- Is it important for you that all ***ECAC States*** adopt a ***similar approach in organising*** (for each airport, area concerned, etc.) their obstacle, instrument flight procedures, terrain and/or airport mapping data sets?







A.5.2 There are no significant differences between the expectations of the IFR clients, VFR clients and data houses. A high proportion of them expects a harmonised approach, both in ECAC and at global level.

INTERNATIONAL CIVIL AVIATION ORGANIZATION

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

GUIDANCE FOR AIM PLANNING AND IMPLEMENTATION IN THE MID REGION

EDITION ~~FEBRUARY,~~AUGUST ~~2017~~2021

RECORD OF AMENDMENTS

Edition Number	Edition Date	Description	Pages Affected
0.1	1 September 2015	Initial draft version	All
0.2	7 October 2015	Inputs incorporated by AIM SG/2	All
0.3	April 2016	Change in Doc title; improving order and content of chapters; States comments considered; Reviewed by MSG/5	All
0.4	November 2016	Review by ANSIG/2	All
1.0	February 2017	Endorsed by MIDANPIRG/16	All
1.1	August 2021	Alignment the content with the GANP 6th edition, revised MID Air Navigation Strategy (Doc002) and the updated MID Region AIM Implementation Roadmap. Drafted by DDI AD-HOC WG	All

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FOREWORD

The “Guidance for AIM Planning and Implementation in the MID Region” has been developed to harmonize transition from AIS to AIM in the MID Region and to addresses Global and Regional issues related to planning and implementation of Aeronautical Information Management. This Regional AIM Guidance material explains concept and operational elements of AIM; outlines the Regional and National AIM Roadmaps; and provides guidance and tools for their implementation at the Regional and National levels.

This Document consolidates updates and supersedes all previous guidance materials on the AIM implementation in the MID Region (National AIM Roadmap Template, Regional AIM Roadmap, etc.). The “Guidance for AIM Planning and Implementation in the MID Region” will be reviewed and updated, whenever deemed necessary, by the AIM Sub-Group.

First edition of the Document, developed by the ICAO MID Regional Office, was endorsed by MIDAPIRG/16 (Kuwait, 13-16 February 2017).

The Document was prepared in accordance with ICAO provisions related to AIM, the Global Air Navigation Plan, Aviation System Block Upgrades (ASBU) methodology, MID Region Air Navigation Plan and the MID Region Air Navigation Strategy, in addition to the twelfth Air Navigation Conference (AN-Conf/12) Recommendation 3/8 related to AIM. States are invited to take necessary measures to implement provisions of this document and notify their experiences and practices related to transition from AIS to AIM.

ABBREVIATIONS AND ACRONYMS

The abbreviations and acronyms used in this document along with their expansions are given in the following List:

AI	Aeronautical Information
AICM	Aeronautical Information Conceptual Model
AIP	Aeronautical Information Publication
AIRAC	Aeronautical Information Regulation and Control
AIS	Aeronautical Information Services
AIS-AIM SG	AIS to AIM Study Group
AIM	Aeronautical Information Management
AIM SG	Aeronautical Information Management Sub-Group
AIXM	Aeronautical Information Exchange Model
AN-Conf/11	Eleventh Air Navigation Conference
AN-Conf/12	Twelfth Air Navigation Conference
ANP	Air Navigation Plan
ANSP	Air Navigations Services Provider
ASBU	Aviation System Block Upgrade
ATM	Air Traffic management
CBTA	Competency-based training and assessment
eAIP	electronic Aeronautical Information Publication
eANP	electronic Air Navigation Plan
~~eTOD~~	~~electronic Terrain and Obstacle Data~~
GANP	Global Air Navigation Plan
GANR	Global Air Navigation Report
GIS	Geographic Information System
GML	Geography Markup Language

IM	Information Management
IMP	Information Management Panel
ISO	International Organization for Standardization
MET	Meteorology
MIDAD	MID Region AIM Database
MIDANPIRG	Middle East Air Navigation Planning and Implementation Regional Group
MIL	Military
MSG	MIDANPIRG Steering Group
PBN	Performance-Based Navigation
QMS	Quality Management System
RWY	Runway
SARPs	Standards and Recommended Practices
SMART	Specific, Measurable, Achievable, Relevant and Timely
SWIM	System Wide Information Management
TOD	Terrain and Obstacle Data
TORs	Terms of Reference
UML	Unified Modelling Language
WGS-84	World Geodetic System-1984
XML	Extensible Markup Language

~~CHAPTER 1~~

CHAPTER 1. ICAO AIM CONCEPT

1.1. INTRODUCTION

The Eleventh Air Navigation Conference (AN-Conf/11) held in Montréal, 22 September to 3 October 2003, endorsed the Global ATM Operational Concept (Doc 9854) and recognized that, in the global air traffic management (ATM) system environment envisioned by the operational concept, aeronautical information service (AIS) would become one of the most valuable and important enabling services. As the global ATM system foreseen in the operational concept was based on a collaborative decision-making environment, the timely availability of high-quality and reliable electronic aeronautical, meteorological, airspace and flow management information would be necessary. Some recommendations of AN-Conf/11 addressed the importance of aeronautical information in particular.

Aeronautical Information Management (AIM) during its evolution has been defined as the provision of the right Aeronautical Information (quality assured), at the right place (through digital exchange), and at the right time (timeliness). ICAO Annex 15 defines AIM as the *dynamic, integrated management of aeronautical information through the provision and exchange of quality-assured digital aeronautical data in collaboration with all parties*.

The Twelfth Air Navigation Conference (AN-Conf/12) held in Montréal, 19 to 30 November 2012, through Recommendation 3/8, supported and pushed:

- Transition from AIS to AIM by implementing a fully automated digital aeronautical data chain;
- Implementing necessary processes to ensure the quality of aeronautical data; and
- Engage in intraregional and interregional cooperation for an expeditious transition from AIS to AIM in a harmonized manner and to using digital data exchange and consider regional or subregional AIS databases as an enabler for the transition from AIS to AIM information from the origin to the end users

1.2. TRANSITION FROM AIS TO AIM

1.2.1. ICAO ROADMAP FOR THE TRANSITION FROM AIS TO AIM

The aeronautical information/data based on paper and telex-based text messages can not satisfy anymore the requirements of the ATM integrated and interoperable system. AIS is required to evolve from the paper product-centric service to the data-centric aeronautical information management (AIM) with a different method of information provision and management.

ICAO published in 2009 the "*Roadmap for the transition from AIS to AIM*". The changes foreseen are such that this development is being referred to as the transition from aeronautical information services (AIS) to aeronautical information management (AIM). It identifies the major milestones recommended for a uniform evolution across all regions of the world and specific steps that need to be achieved for implementation.

The Roadmap envisaged the transition into three phases and twenty one (21) steps. Three (3) phases of action are envisaged for States and ICAO to complete the transition to AIM:

– *Phase 1 — Consolidation*

Phase 1 is the pre-requisite for the transition from AIS to AIM (implementation of the current SARPs). In Phase 1, QMS implementation is still a challenge for some States.

– *Phase 2 — Going digital*

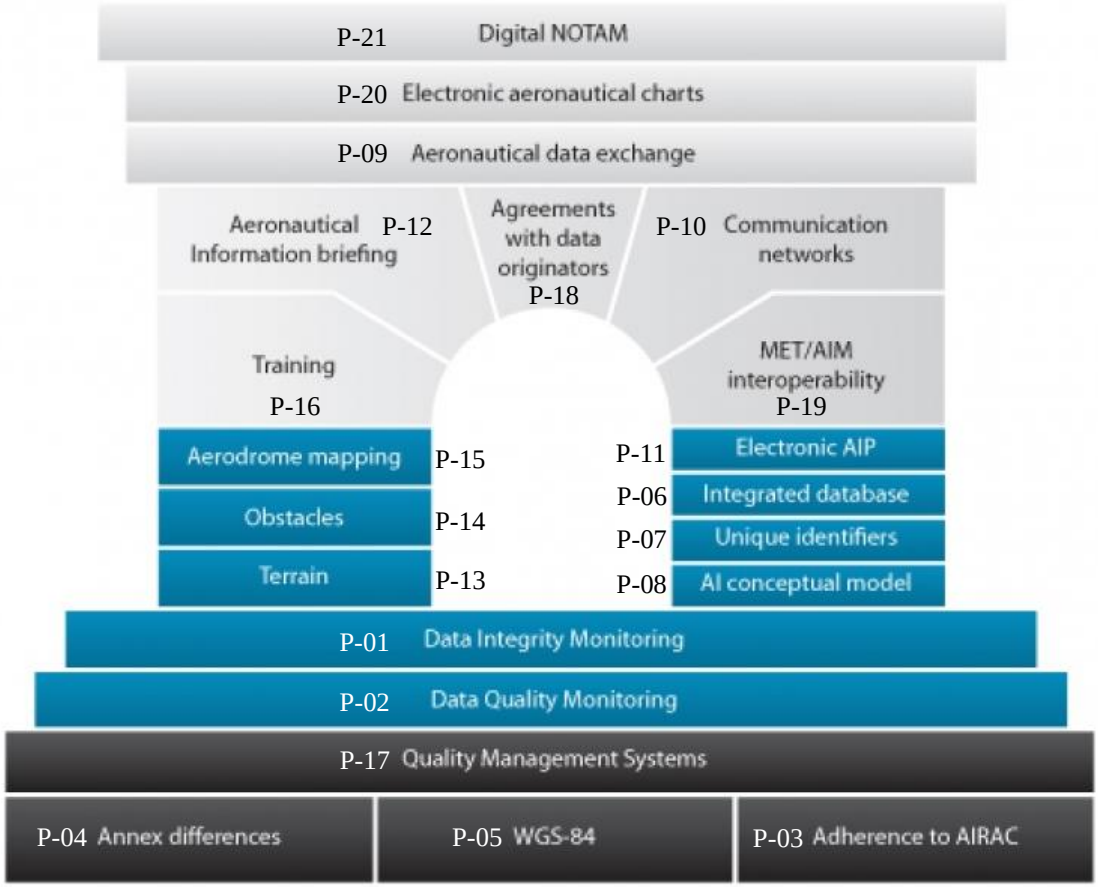
Main components of the Phase 2 are:

- Data-driven processes for the production of the current products;
- Introduction of structured digital data from databases into AIS/AIM processes;
- Introduction of highly structured databases and tools such as GIS;
- Electronic Terrain and Obstacle Datasets; and
- Implementation of aeronautical information conceptual model (AICM).

– *Phase 3 — Information management*

Main components of the Phase 3 are:

- Enabling AIM functions to address the new requirements of the Global ATM Operational Concept in a net-centric information environment;
- Transfer of information in the form of digital data based on the established databases; and
- Aeronautical data exchange model ensuring interoperability between all systems.



Positioning of the 21 steps of the roadmap in the three phases

~~***AIS-AIM Study Group***~~

~~1.7 The Air Navigation Commission in 2008 agreed to the establishment of AIS-AIM SG in order to assist with the development of:~~

- ~~A global strategy/roadmap for the transition from AIS to AIM;~~
- ~~SARPs and guidance material related to the provision of a standard AICM and standard AIXM to enable the global exchange of data in digital format; and~~
- ~~Other SARPs, guidance material and training material necessary to support AIM implementation.~~

~~1.8 Some achievements of the AIS-AIM Study Group have been as follows:~~

- ~~ICAO Roadmap for transition from AIS to AIM;~~
- ~~Amendments to Annex 15:~~
  - ~~Amendment 36: New provisions related to the operational use of the public Internet; volcanic ash deposition; QMS; use of automation enabling digital data exchange; eAIP; NOTAM Format; and eTOD.~~

- Amendment 37: Annex 15 restructuring; Chapter 1 (General), Chapter 2 (Responsibilities and functions) and Chapter 3 (Aeronautical Information Management) introduced in Nov 2014;
- Amendment 40: Chapters 4 (Scope of AI and data), Chapter 5 (AI Products and services) and Chapter 6 (AI updates) instead of current Chapters 4-11 (in progress, applicability date would be November 2018).

- Development of new PANS-AIM (in progress, applicability date would be November 2018)
- Development of Aeronautical Data Catalogue (in progress; Appendix A to the new PANS-AIM)
- Development of Training Manual, Quality Manual, update of AIS Manual (Doc 8126) (in progress)

1.9 AIS-AIMSG/12 was the last AIS-AIMSG held in Montreal, Canada from 19 to 23 October 2015. Materials related to the AIS-AIM SG including the meetings' Study Notes, Information Papers and Summary of Discussions are available on the ICAO AIM website at:

http://www.icao.int/safety/ais-aimsg/Pages/default.aspx

1.2.2. *INFORMATION MANAGEMENT PANEL (IMP)*

1.10 Information management is identified in the ICAO Global Air tTraffic Management Operational Concept (Doc 9854) as the fundamental enabler allowing the future ATM system to achieve its full operational potential. The Information Management Panel (IMP) has thus been formed to further elaborate on the concepts, means, practices, procedures and technologies needed to provide accredited, quality- assured information on a timely basis across the spectrum of ATM community operations.

2 The Air Navigation Commission in 2014 agreed to the establishment of the Information Management Panel (IMP) to elaborate on necessary concepts and develop a global and interoperable approach to ensure effective management of information within the global air navigation system. The IMP will undertake tasks relating to the global transition from AIS to AIM, based upon Recommendations 3/1, 3/2, 3/3 and 3/9 of the Twelfth Air Navigation Conference in 2012 (AN-Conf/12).

3

4 Five (54) Working Groups were established to undertake tasks of the Panel:

5

6 Information Services Working Group

7 Architecture working Group

8 Awareness Working Group WIM Governance

Five (5) Working Groups were established to undertake tasks of the Panel:

- Information Services Working Group
- Architecture working Group
- Awareness Working Group
- Governance Working Group
- AIM Working Group

Materials related to the IMP including the meetings' Working/Information Papers and Reports are available on the ICAO AIM ~~website~~ portal at:

http://www.icao.int/airnavigation/IMP/Pages/default.aspx

~~**CHAPTER 2**~~

CHAPTER 2. REGIONAL AIM PLANNING

2.1. REGIONAL ROADMAP FOR AIM IMPLEMENTATION

~~2.2~~1 ~~Having~~ Having Phase ~~I~~ 1of the transition from AIS to AIM mostly completed in the MID Region, the current focus should be the implementation of ~~phase~~ Phase ~~II~~ 2 of the Roadmap for the transition from AIS to AIM to prepare further transition to Phase ~~III~~ 3 in a timely manner. Accordingly, States should take into consideration the following "MID Region AIM Implementation Roadmap" in planning for the transition from AIS to AIM in a prioritized manner.

2.2. MID REGION AIM IMPLEMENTATION ROADMAP

	2014				2015				2016				2017				2018				Priority	Remarks
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
AIXM																					1	The target is to have, 80% by 2018
eAIP																					1	The target is to have 80% by 2020
Terrain A-1																					2	The target is to have 70% by 2018
Obstacle A-1																					2	The target is to have 60% by 2018
Terrain A-4																					2	The target is to have 100% by 2018
Obstacle A-4																					2	The target is to have 100% by 2018
Terrain A-2a																					3	The target is to have 50% by 2018
Obstacle A-2a																					3	The target is to have 50% by 2018
Data Quality Monitoring																					3	Target for 2018: To be implemented by 50% of the States that have implemented QMS at least for the segment originator AIS (excluding the segment AIS End user)
Data Integrity Monitoring																					3	
Agreement with data originators																					3	Target for 2018: 50% of the States that have implemented QMS
Terrain and Obstacle for Areas 2b, 2c, 2d and 3																					4	Optional based on the States' decision to be reflected in the States' national Regulations and AIM National Plans, in accordance with operational needs
Aerodrome Mapping																					4	Optional based on the States' decision to be reflected in the States' national Regulations and AIM National Plans, in accordance with operational needs

***White**: Not started* ***Yellow**: Initial Target* ***Orange**: Intermediate Target* ***Green**: Target for full implementation*

Light Green: Timeframe for implementation (implemented / ongoing)
Dark Green: Implementation completed (by all States)

Steps/Elements	2019 & before	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031+	Priority	Remarks
AIXM database (AIXM 5.1+)														1	
eAIP														1	
Terrain area 1, 2a and 4 Datasets														1	Terrain area 2a dataset (and its supplementary areas according to Annex 15, 5.3.3.3.3)
Obstacle area 1, 2a and 4 Datasets														1	Obstacle area 2a dataset (and its supplementary areas according to Annex 15, 5.3.3.4.5)
Terrain area 2b, 2c, 2d and 3 Datasets														2	Based on the States' decision to be reflected in the States' national Regulations and AIM National Plans, in accordance with operational needs
Obstacle area 2b, 2c, 2d and 3 Datasets														2	Based on the States' decision to be reflected in the States' national Regulations and AIM National Plans, in accordance with operational needs
AIP Datasets														1	(sub-datasets/grouping TBD)
Aerodrome Mapping Dataset(s)														2	Based on the States' decision to be reflected in the States' national Regulations and AIM National Plans, in accordance with operational needs
Instrument Flight Procedure (IFP) Dataset(s)														1	
Agreement with data originators														1	
Provision of quality-assured aeronautical data and information														1	
Training														1	Continuous
NOTAM Improvements														2	Step 1: identification of operational conditions under which a NOTAM shall or shall not be originated Step 2 (TBD): replacement of current NOTAMs by a digital version through the use of AIXM
Aeronautical Data Exchange														2	Continuous trials between States' AISs should be ongoing

Light Green: Timeframe for implementation (implemented / ongoing)
Dark Green: Implementation completed (by all States)

Steps/Elements	2019 & before	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031+	Priority	Remarks
Dissemination of Aeronautical Information in SWIM environment														2	
Electronic Aeronautical Charts														2	
Interoperability with MET														2	
Aeronautical Information Briefing														2	(Digital briefing)

MEASURE OF NATIONAL AIM IMPLEMENTATION ROADMAP

~~2.2~~ Taking into consideration the "MID Region AIM implementation Roadmap" MID States are requested to provide the ICAO MID Regional Office with their National AIM Implementation ~~plan~~ roadmap Using the template below, in planning for the transition from AIS to AIM in a prioritized manner.

STATE	
DATE	

Steps/elements	Timeline														Start	End	Remarks
	2019-	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032+			
WGS-84																	
AIRAC																	
QMS																	
AIXM database (AIXM 5.1+)																	
eAIP																	
Terrain Area 1																	

Obstacle Area 1																	
Terrain Area 2a (plus TKOF flight path and OLS)																	
Obstacle Area 2a (plus TKOF flight path and OLS)																	
Terrain Area 2b, 2c, 2d																	
Obstacle Area 2b, 2c, 2d																	
Terrain Area 3																	
Obstacle Area 3																	
Terrain Area 4																	
Obstacle Area 4																	
AIP Datasets																	
Aerodrome Mapping Datasets																	
IFP Datasets																	
Agreement with data originators																	
Provision of quality-assured aeronautical data and information																	
Training																	
NOTAM Improvements																	

Aeronautical data exchange																
Dissemination of Aeronautical Information in SWIM environment																
Electronic aeronautical charts																
Interoperability with MET products																
Aeronautical information briefing																

Legend		Not Started
		In Progress
		Implemented

~~CHAPTER 3.~~ ~~CHAPTER 3~~

~~CHAPTER 4.~~

~~CHAPTER 5.~~ ~~ASBU METHODOLOGY AND THE MID AIR NAVIGATION STRATEGY~~

~~CHAPTER 6.~~ ~~(AIM/SWIM RELATED ASBU MODULES~~ THREADS/ELEMENTS ~~)~~

~~CHAPTER 7.~~CHAPTER 3. **ASBU METHODOLOGY AND THE MID AIR NAVIGATION STRATEGY(AIM/SWIM RELATED ASBU THREADS/ELEMENTS)**

~~7.1.~~3.1. ASBU METHODOLOGY

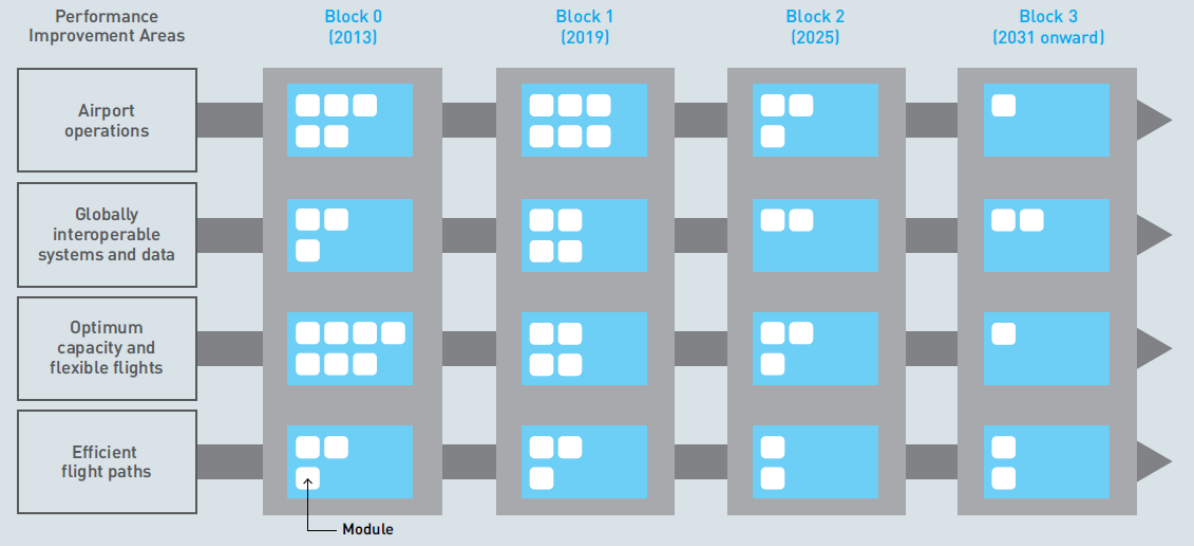
~~3.1~~ ICAO introduced the Aviation System Block Upgrades (ASBU) methodology in the fourth edition of the Doc 9750 (Global Air Navigation Plan), endorsed by the ICAO Assembly in 2013 (further revised by Assembly 39 in 2016), as a systemic manner to achieve a harmonized implementation of the air navigation 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.

~~3.2~~ The GANP represents a rolling, 15-year strategic ~~methodology which~~methodology, which leverages existing technologies and anticipates future developments based on State/industry agreed operational objectives. The Block Upgrades are organized in six-year time increments starting in 2013 and continuing through 2031 and beyond.

~~3.3~~ The Sixth Edition of the Global Air Navigation Plan – GANP (ICAO DOC 7950) endorsed by the ICAO Assembly 40, introduced the Multilayer Structure for the Global Air Navigation Planning:

- ~~•~~ Global Strategic Level: includes GATMOC vision, Global performance ambitious and the conceptual roadmap.
- ~~•~~ Global Technical Level: includes the BBBs, ASBUs and the performance-based decision making method
- ~~•~~ Regional Level: addresses regional and subregional performance and operational needs, differences, constraints and opportunities through the ICAO regional air navigation plans and other regional initiatives aligned with the global levels.
- ~~•~~ National Level: focuses on State National Plans and their deployment in coordination with relevant stakeholders and in alignment with regional and global plans

~~3.3 ASBU methodology defines improvements, through modules, over four blocks in four performance improvements areas:~~



3.54 Details on the 6th Edition of the GANP and ASBU framework including the four levels of the GANP are available for interactive consultation via the GANP Portal: https://www4.icao.int/ganpportal

3.2. BASIC BUILDING BLOCK (BBB) FRAMEWORK

3.65 The Basic Building Block (BBB) framework outlines the foundation of any robust air navigation system. It is nothing new but the identification of the essential services to be provided for international civil aviation in accordance with ICAO Standards. These essential services are defined in the areas of aerodromes, air traffic management, search and rescue, meteorology and information management.

3.76 The BBB is considered an independent framework and not a block of the ASBU framework as they represent a baseline rather than an evolutionary step. This baseline is defined by essential services recognized by ICAO Member States as necessary for international civil aviation to develop in a safe and orderly manner. Once these essential services are provided, they constitute the baseline for any operational improvement.

3.87 BBBs provide two-baseline framework for the Aeronautical Information Services:

- AIS basic modules and elements;
- AIS support & end users.

7.2.3.3. MID REGION AIR NAVIGATION STRATEGY

3.98 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 updated the MID Region Air Navigation Strategy, which is aligned with the GANP 6th Edition and ASBU Framework.

3.4109 The Revised MID Region Air Navigation Strategy (MID Doc 002) was endorsed by the MIDANPIRG/16 18 meeting to introduce MID Region ASBU Threads/Elements Prioritization and Monitoring. Block 0 ASBU Modules implementation priorities, elements, indicators and targets for the MID Region. It recognizes 11 (out of 18) Block 0 Modules as priority 1 in the MID Region (fFor more information refer to the MID Doc 002 in the ICAO Secure Portal at: https://portal.icao.int/RO_MID/Pages/MIDDocs.aspx).

3.4. AIM ASBU THREADS/ELEMENTS

3.110 ASBU is heavily dependent on AIM, as AIM is a critical prerequisite for the implementation of many current or future ATM or Air Navigation concepts that relies on enhanced data quality (accuracy, resolution, integrity, timeliness, traceability, completeness, format) to support Performance-Based Navigation (PBN), airborne computer-based navigation systems and ground automation.

3.121 In the AIM domain, the main ASBU THREAD/ELEMENTS, which are relevant with Seamless ATM, are as follows:

DAIM-B1/1:Provision of quality-assured aeronautical data and information
DAIM-B1/2:Provision of digital Aeronautical Information Publication (AIP) data sets
DAIM-B1/3:Provision of digital terrain data sets
DAIM-B1/4:Provision of digital obstacle data sets
DAIM-B1/5:Provision of digital aerodrome mapping data sets
DAIM-B1/6:Provision of digital instrument flight procedure data sets
DAIM-B1/7:NOTAM improvements
DAIM-B2/1:Dissemination of aeronautical information in a SWIM environment
DAIM-B2/2:Daily Airspace Management information to support flight and flow
DAIM-B2/3:Aeronautical information to support higher airspace operations
DAIM-B2/4:Aeronautical information requirements tailored to UTM
DAIM-B2/5:NOTAM replacement

3.5. DAIM THREAD/ELEMENTS (BLOCK 1) PRIORITIZATION AND MONITORING IN THE MID REGION

3.132 On the basis of operational requirements and taking into consideration the associated benefits, the following table shows priority 1 DAIM Elements along with the associated elements, applicability, performance Indicators, supporting Metrics, and performance Targets as included in the revised version of the MID Region Air Navigation Strategy asendorsed by MIDANPIRG/18.

3.5.1. DESCRIPTION AND PURPOSE:

Improved aeronautical information based on enhanced data quality (accuracy, resolution, integrity, timeliness, traceability, completeness, format) to support Performance-Based Navigation (PBN), airborne computer-based navigation systems and ground automation. In addition, digital exchange and processing of aeronautical information allows a more efficient management of information by avoiding reliance on manual processing and manipulation.

3.5.2. 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

Element		Applicability	Performance Indicators/ Supporting Metrics	Targets	Timelines
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: 1. Number of States that have implemented QMS for AIS/AIM 2. Number of States that have implemented WGS-84 for horizontal plan (ENR, Terminal, AD) and have implemented WGS-84 Geoid Undulation 3. Number of States that are compliant with the requirements of AIRAC adherence, 4. Number of States that have implemented an AIXM-based AIS database (AIXM V5.1+) Number of States that have established formal arrangements with at least 50% of their AIS data originators. 5.	80%	Dec 2021
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	60%	Dec 2021
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	60 %	Dec 2021

BLOCK 0 AIM RELATED MODULE

B0-DATM Implementation

3.5 Block 0 contains 18 Modules and serves as the enabler and foundation for the envisioned future aviation systems. B0-DATM is a priority 1 ASBU Module in accordance with the MID Region Air Navigation Strategy (MID Doc 002). MID Doc 002 defines the B0-DATM as follows:

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**
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	90% by Dec. 2018
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	80% by Dec. 2018
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)	80% by Dec. 2020
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	90% by Dec. 2018
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)	Horizontal: 100% by Dec. 2018 Vertical: 90% by Dec. 2018

		Indicator: % of States that have implemented WGS-84 Geoid Undulation Supporting Metric: Number of States that have implemented WGS-84 Geoid Undulation	
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: 70% by Dec. 2018 Obstacles: 60% by Dec. 2018 Area 4: Terrain: 100% by Dec. 2018 Obstacles: 100% by Dec. 2018
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	90% by Dec. 2018

3.6. MID AIR NAVIGATION KEY PERFORMANCE INDICATORS (KPIS)

3.13 In accordance with GANP, "a performance-based approach is results-oriented, helping decision makers set priorities and determine appropriate trade-offs that support optimum resource allocation while maintaining an acceptable level of safety performance and promoting transparency and accountability among stakeholders. In promoting a performance-based approach, ICAO recommends that States utilize a focused set of Key Performance Indicators (KPIs) that provide the means of identifying shortfalls and prioritizing investments. The sixth edition of the GANP includes 19 key performance indicators (KPIs) for States' adoption to facilitate the performance-based approach and management to improve air traffic management (ATM) operations. An overview of ICAO KPIs is at https://www4.icao.int/ganpportal/ASBU/KPI.

3.14 In the MID Region, an initial set of KPIs has been identified to be used for monitoring the performance of the Air Navigation System at National and Regional Levels. The MID Region Air Navigation Strategy included an initial list of Key Performance Indicators (KPIs) to be used for the monitoring of the air navigation system performance.

3.7. CONCEPT OF OPERATIONS OF D-AIM

3.15 AIS in the BBBs: Quality-assured product-centric Aeronautical Information Services.

3.16 The BBBs refer to the basic AIS services and the provision of aeronautical information in a standardized presentation, based on point-to-point exchanges.

3.17 AIM in Block1: Service Improvement through enhanced data quality and digital exchange and processing of information.

- Improved aeronautical information based on enhanced data quality to support PBN, airborne
- Computer-based navigation systems and ground automation
- Digital information exchange and processing allows a more efficient information management

3.18 AIM in Block2: Service improvement through dissemination of aeronautical info via SWIM and new information for new users.

- Block2 guides towards a full AIM environment, which include the dissemination of aeronautical information in a SWIM-enabled environment, user-defined products and the decommissioning of current distribution mechanisms
- The traditional aeronautical information will be complemented by new information required to support operations in high airspace or the UAS Traffic Management concept.

3.8. PRIORITY 1 ELEMENTS IN MID REGION

3.8.1. DAIM –B1/1 PROVISION OF QUALITY-ASSURED AERONAUTICAL DATA AND INFORMATION

3.19 The main purpose of this element is to ensure that aeronautical data and information comply with quality standards in order to meet the needs of airspace users and support the safety of flight operations.

3.20 This element ensures that processes, procedures and systems are improved to allow for an enhanced quality of aeronautical information products and services. This element includes:

3.8.1.1 QUALITY MANAGEMENT SYSTEM (QMS)

1.3.21 Implementation of quality management systems to ensure that aeronautical data and information
comply with the required standards.

3.22 Quality aeronautical data and information is critical for area navigation, required navigation performance, airborne computer-based navigation systems and data link systems.

3.23 The provision of quality assured aeronautical information products and services should be carried out in a standardized ~~presentation, since~~presentation since there is an inherent need to fulfil

the requirements of the next intended users. Customers in the AIS domain are the next intended users of aeronautical data and information (pilots, air traffic controllers, flight planning organizations, etc.).

~~3.24~~ Data quality specifications have evolved to include requirements for accuracy, resolution, integrity, traceability, timeliness, completeness and format of aeronautical data and information. These data quality specifications are specified in Annex 15, Chapter 3.

~~3.25~~ Non-compliant aeronautical information and data can potentially affect the safety of air navigation.
Annex 15 requires States to introduce a QMS to provide users assurance and confidence in the quality of data and information throughout the aeronautical data chain (collection, processing, and distribution). Roles, responsibilities, competencies and associated knowledge, skills and attitudes required for the performance of each function within the AIS is identified in the QMS.

~~3.26~~ The application of a QMS introduces benefits such as risk-based thinking, effective communication, overall understanding and demonstrated control over processes.

~~3.27~~ The QMS is based on process approach principles to manage and control processes, the interactions between processes and the inputs and outputs required to meet customer and regulatory requirements. Processes and procedures provide structure in the work environment and promote quality and safety. Widely communicated, accepted and utilized processes ensures consistency in the delivery of aeronautical information products and services.

~~3.28~~ Policies, processes and procedures, including the use of metadata ensuring aeronautical data is traceable to the source, allows for any anomalies to be detected and corrected.

~~3.29~~ An AISP must monitor compliance with the QMS and may elect to have the system certified under a quality management standard. An external certification organization will carry out conformity audits over the certificate validity period. ISO 9001 certification is a means to assure that the implemented QMS is compliant with the requirements of the quality standard.

Note - Guidance material is contained in the Manual on the Quality Management System for Aeronautical Information Services (Doc 9839).

2. Use of common reference systems (spatial – WGS84 and temporal- AIRAC) to facilitate consistent interpretation of aeronautical data and information and facilitate their timely exchange.

3.8.1.2 WORLD GEODETIC SYSTEM-1984 (WGS-84)

~~3.15~~30 World Geodetic System — 1984 (WGS-84) shall be used as the horizontal (geodetic) reference system for international air navigation. Consequently, published aeronautical geographical coordinates (indicating latitude and longitude) shall be expressed in terms of the WGS-84 geodetic reference datum.

~~3.16~~31 WGS-84 shall be introduced in the published coordinates in AIP in the following sections:

a) Horizontal:

- Enroute

- Terminal
- Aerodrome

b) Vertical:

- Geoid Undulation

Note - Comprehensive guidance material concerning WGS-84 is contained in the World Geodetic System - 1984 (WGS-84) Manual (Doc 9674).

3.8.1.3 IMPLEMENTATION OF A SYSTEM FOR AIRAC ADHERENCE MONITORING

~~3.32~~ Aeronautical information is constantly changing: airspace structures and routes are revised, navigation aids change, flight procedures are amended, and runway and taxiway information changes. It is essential for efficiency and safety that airlines, pilots, air traffic controllers and air traffic flow managers all use the same aeronautical information at the same time.

~~3.33~~ AIRAC is a system established by ICAO Annex 15 — *Aeronautical Information Services* and based on common effective dates to ensure that changes to aeronautical information are made in a consistent manner by States around the world. As a result, States are working with globally agreed timelines when it comes to making aeronautical information available, allowing all further actors in the data chain to perform their obligations in a timely manner.

~~4.2~~3.34 Operationally significant changes to the AIP, listed in Annex 15 STD 6.2.1~~, Appendix 4~~ shall be published in accordance with AIRAC procedures and shall be clearly identified by the acronym — AIRAC.

~~4.3~~3.35 When an AIP Amendment or an AIP Supplement is published in accordance with AIRAC procedures, a NOTAM called “Trigger NOTAM” shall be originated giving a brief description of the contents, the effective date and time, and the reference number of the amendment or supplement.

~~4.4~~3.36 The Trigger NOTAM shall be issued as soon as possible, preferably at the publication date of the AIRAC AIP Amendment or the AIP Supplement. This NOTAM shall come into force on the same effective date and time as the amendment or supplement and shall remain valid for a period of fourteen days.

~~4.5~~3.37 The text in Item E) should start with the words ‘TRIGGER NOTAM’ (followed only in the case of an AIP Amendment by the abbreviation PERM), the reference number of the published AIP Amendment or AIP Supplement concerned, the effective date and a brief description of its contents.

~~4.6~~3.38 Trigger NOTAM shall be issued in the appropriate NOTAM series, according to the information to be promulgated and shall follow the normal NOTAM procedures.

Example:

Q) HECA/QARTT/I/BO/000/999
A) HECC B) 1704270000 C) 1705102359
E) TRIGGER NOTAM – PERM AIRAC AIP AMDT 4/17 WEF 27 APR 2017.
IMPLEMENTATION OF NEW ATS ROUTE UL111.

Note – the term ‘PERM’ is inserted in Item E) to stress that Item C) contains an artificial end-date and that the information is of a permanent nature.

4.73.39 When information has not been submitted by the AIRAC date, a NIL notification shall be originated and distributed by NOTAM or other suitable means, not later than one cycle before the AIRAC effective date concerned.

4.83.40 Implementation dates other than AIRAC effective dates shall not be used for pre-planned operationally significant changes requiring cartographic work and/or for updating of navigation databases.

4.93.41 Information provided under the AIRAC system in paper copy form shall be distributed by the AIS unit at least 42 days in advance of the effective date with the objective of reaching recipients at least 28 days in advance of the effective date. Information provided as electronic media, concerning the circumstances listed in Annex 15, STD 6.2.1 ~~Appendix 4~~ shall be distributed/made available by the AIS unit so as to reach recipients at least 28 days in advance of the AIRAC effective date.

Recommendation – *Whenever major changes are planned and where advance notice is desirable and practicable, information provided as electronic media should be distributed/made available at least 56 days in advance of the effective date. This should be applied to the establishment of, and premeditated major changes in, the circumstances listed in* STD 6.2.7 ~~*Appendix 4, Part 3*~~*, and other major changes if deemed necessary.*

4.103.42 AIS/AIM units should:

1) raise the awareness of the Data Originators regarding the AIRAC provisions; and

2) include necessary procedures related to AIRAC adherence in the arrangement with the Data Originators.

4.113.43 States should implement a system for AIRAC adherence monitoring and report on annual basis (by 31 December) to the ICAO MID Regional Office the case(s) of late publication of aeronautical information of operational significance and non-adherence to the AIRAC provisions. **Appendix B** could be used as a monitoring and reporting tool in the AIRAC adherence.

4.123.44 List of AIRAC effective dates for 20~~17~~ 20 to 202~~1~~4 is as follows:

~~2017~~	~~2018~~	~~2019~~	~~2020~~	~~2021~~
~~05 January~~	~~04 January~~	~~03 January~~	~~02 January~~	~~28 January~~
~~02 February~~	~~01 February~~	~~31 January~~	~~30 January~~	~~25 February~~
~~02 March~~	~~01 March~~	~~28 February~~	~~27 February~~	~~25 March~~
~~30 March~~	~~29 March~~	~~28 March~~	~~26 March~~	~~22 April~~
~~27 April~~	~~26 April~~	~~25 April~~	~~23 April~~	~~20 May~~
~~25 May~~	~~24 May~~	~~23 May~~	~~21 May~~	~~17 June~~
~~22 June~~	~~21 June~~	~~20 June~~	~~18 June~~	~~15 July~~
~~20 July~~	~~19 July~~	~~18 July~~	~~16 July~~	~~12 August~~
~~17 August~~	~~16 August~~	~~15 August~~	~~13 August~~	~~09 September~~
~~14 September~~	~~13 September~~	~~12 September~~	~~10 September~~	~~07 October~~
~~12 October~~	~~11 October~~	~~10 October~~	~~08 October~~	~~04 November~~
~~09 November~~	~~08 November~~	~~07 November~~	~~05 November~~	~~02 December~~
~~07 December~~	~~06 December~~	~~05 December~~	~~03 December~~	~~30 December~~
			~~31 December~~	

2020	*2021*	*2022*	*2023*	*2024*
2020-01-02	2021-01-28	2022-01-27	2023-01-26	2024-01-25
2020-01-30	2021-02-25	2022-02-24	2023-02-23	2024-02-22
2020-02-27	2021-03-25	2022-03-24	2023-03-23	2024-03-21
2020-03-26	2021-04-22	2022-04-21	2023-04-20	2024-04-18
2020-04-23	2021-05-20	2022-05-19	2023-05-18	2024-05-16
2020-05-21	2021-06-17	2022-06-16	2023-06-15	2024-06-13
2020-06-18	2021-07-15	2022-07-14	2023-07-13	2024-07-11
2020-07-16	2021-08-12	2022-08-11	2023-08-10	2024-08-08
2020-08-13	2021-09-09	2022-09-08	2023-09-07	2024-09-05
2020-09-10	2021-10-07	2022-10-06	2023-10-05	2024-10-03
2020-10-08	2021-11-04	2022-11-03	2023-11-02	2024-10-31
2020-11-05	2021-12-02	2022-12-01	2023-11-30	2024-11-28
2020-12-03	2021-12-30	2022-12-29	2023-12-28	2024-12-26
2020-12-31				

3.8.1.4 AIXM-BASED AIS DATABASE

3.3.45 Full move into an automated data-centric environment so that the management, processing, verification, usage and exchange can be done in a structured, automatic manner and human intervention is reduced.

3.46 Annex 15 STD 3.5.1 states that Automation shall be applied in order to ensure the quality, efficiency and cost-effectiveness of aeronautical information services.

3.47 In addition, STD 3.5.3 stipulates that in order to meet the data quality requirements, automation shall:

a) enable digital aeronautical data exchange between the parties involved in the data processing chain; and

b) use aeronautical information exchange models and data exchange models designed to be globally interoperable.

3.48 An Integrated Aeronautical database is a single, centralized repository of aeronautical information where digital aeronautical data from a State are integrated and used to produce current and future AIM products and services.

3.49 The establishment and maintenance of a database where digital aeronautical data from a State are integrated and used to produce current and future AIM products and services is the main step in Phase 2 of the transition to AIM.

3.50 A database may be operated by States or by regional initiatives under delegation from States. The design of such a database will not be identical in all States or regions because local technical or functional requirements must be considered.

3.51 This Integrated Aeronautical database must be able to exchange information based on the Aeronautical Information Exchange Model (AIXM) with other aeronautical databases.

3.8.1.5 AERONAUTICAL INFORMATION EXCHANGE MODEL (AIXM)

3.652 The aeronautical information exchange model (AIXM) is designed to enable the management and distribution of aeronautical information services data in digital format. AIXM takes advantages of established information engineering standards and supports current and future aeronautical information system requirements. The major tenets are:

a) an exhaustive temporality model, including support for the temporary information contained in NOTAM;

b) alignment with ISO standards for geospatial information, including the use of the geography markup language (GML);

c) support for the latest ICAO and user requirements for aeronautical data including obstacles, terminal procedures and airport mapping databases; and

d) modularity and extensibility.

3.753 AIXM covers the ICAO requirements for the "data necessary for the safety, regularity and efficiency of international air navigation", existing industry standards (e.g. ARINC 424) and emerging data needs. It has constructs for: aerodromes, navigation aids, terminal procedures, airspace and route structures, ATM and related services, air traffic restrictions and other data.

3.54 AIXM has two components:

a) The AIXM UML Model provides a formal description of the information.

b) The AIXM XML Schemas are an encoding format for aeronautical data.

3.93.55 AIXM 5 takes advantages of established information engineering standards and supports current and future aeronautical information system requirements.

3.8.1.6 FORMAL ARRANGEMENTS WITH AIS DATA ORIGINATORS

43.56. Aeronautical data and information is of high quality if it is aggregated and provided by authoritative sources. This requires to properly controlling relationships along the whole data chain from the origination to the distribution to the next intended user (formal arrangements with data originators, neighboring States, data and information service providers and others).

3.57 Annex 15 — Aeronautical Information Services requires formal arrangements to be established between the parties providing aeronautical data and aeronautical information on behalf of the States and their users. The formal arrangements between data originators and the AIS provider should reflect the relevant regulations and standards for the data origination.

3.58 States must establish requirements for the identification of appropriate aeronautical data originators and ensure that formal arrangements are put in place between the AIS provider and the aeronautical data originators.

3.59 Since the aeronautical data catalogue contains all data elements that the AIS manages, each one being assigned an owner, the AIS can use the aeronautical data catalogue to systematically establish and document formal arrangements with all identified data originators.

~~3.60~~ A sample formal arrangement which may be used as a template when formalizing the working arrangements between the data originators and the AIS is provided in *Aeronautical Information Services Manual, Part II*, Appendix 1.

~~***Aeronautical Information Exchange Model (AIXM)***~~

~~***7.2.1.11.1.1.1***~~

~~***7.2.1.21.1.1.1***~~

~~***7.2.1.31.1.1.1 3.6 THE AERONAUTICAL INFORMATION EXCHANGE MODEL (AIXM) IS DESIGNED TO ENABLE THE MANAGEMENT AND DISTRIBUTION OF AERONAUTICAL INFORMATION SERVICES DATA IN DIGITAL FORMAT. AIXM TAKES ADVANTAGES OF ESTABLISHED INFORMATION ENGINEERING STANDARDS AND SUPPORTS CURRENT AND FUTURE AERONAUTICAL INFORMATION SYSTEM REQUIREMENTS. THE MAJOR TENETS ARE:***~~

~~***7.2.1.41.1.1.1***~~

~~***7.2.1.51.1.1.1 A) AN EXHAUSTIVE TEMPORALITY MODEL, INCLUDING SUPPORT FOR THE TEMPORARY INFORMATION CONTAINED IN NOTAM;***~~

~~***7.2.1.61.1.1.1***~~

~~***7.2.1.71.1.1.1 B) ALIGNMENT WITH ISO STANDARDS FOR GEOSPATIAL INFORMATION, INCLUDING THE USE OF THE GEOGRAPHY MARKUP LANGUAGE (GML);***~~

~~***7.2.1.81.1.1.1***~~

~~***7.2.1.91.1.1.1 C) SUPPORT FOR THE LATEST ICAO AND USER REQUIREMENTS FOR AERONAUTICAL DATA INCLUDING OBSTACLES, TERMINAL PROCEDURES AND AIRPORT MAPPING DATABASES; AND***~~

~~***7.2.1.101.1.1.1***~~

~~***7.2.1.111.1.1.1 D) MODULARITY AND EXTENSIBILITY.***~~

~~***7.2.1.121.1.1.1***~~

~~***7.2.1.131.1.1.1 3.7 AIXM COVERS THE ICAO REQUIREMENTS FOR THE "DATA NECESSARY FOR THE SAFETY, REGULARITY AND EFFICIENCY OF INTERNATIONAL AIR NAVIGATION", EXISTING INDUSTRY STANDARDS (E.G. ARINC 424) AND EMERGING DATA NEEDS. IT HAS CONSTRUCTS FOR: AERODROMES, NAVIGATION AIDS, TERMINAL PROCEDURES, AIRSPACE AND ROUTE STRUCTURES, ATM AND RELATED SERVICES, AIR TRAFFIC RESTRICTIONS AND OTHER DATA.***~~

~~***7.2.1.141.1.1.1***~~

~~***3.8.0.01.1.1.1 AIXM HAS TWO COMPONENTS:***~~

~~***7.2.1.151.1.1.1***~~

~~***1.0.0.01.1.1.1 THE AIXM UML MODEL PROVIDES A FORMAL DESCRIPTION OF THE INFORMATION.***~~

~~***7.2.1.161.1.1.1***~~

~~***2.0.0.01.1.1.1 THE AIXM XML SCHEMAS ARE AN ENCODING FORMAT FOR AERONAUTICAL DATA.***~~

~~***7.2.1.171.1.1.1***~~

~~***7.2.1.181.1.1.1 3.9 AIXM 5 TAKES ADVANTAGES OF ESTABLISHED INFORMATION ENGINEERING STANDARDS AND SUPPORTS CURRENT AND FUTURE AERONAUTICAL INFORMATION SYSTEM REQUIREMENTS.***~~

~~***7.2.1.19***~~

~~***7.2.1.20 ELECTRONIC AIP (EAIP)***~~

~~*7.2.1.21*~~

~~*7.2.1.22 3.10 THE AIP, AIP AMENDMENT, AIP SUPPLEMENT AND AIC SHOULD ALSO BE PUBLISHED IN A FORMAT THAT ALLOWS FOR DISPLAYING ON A COMPUTER SCREEN AND PRINTING ON PAPER. WHEN PROVIDED, THE EAIP SHOULD BE AVAILABLE ON A PHYSICAL DISTRIBUTION MEDIUM (CD, DVD, ETC.) AND/OR ONLINE ON THE INTERNET. WHEN PROVIDED, THE INFORMATION CONTENT OF THE EAIP AND THE STRUCTURE OF CHAPTERS, SECTIONS AND SUB-SECTIONS SHALL FOLLOW THE CONTENT AND STRUCTURE OF THE PAPER AIP. THE EAIP SHALL INCLUDE FILES THAT ALLOW FOR PRINTING A PAPER AIP.*~~

~~*7.2.1.23*~~

~~*7.2.1.24 NOTE 1 - THIS COMPOSITE ELECTRONIC DOCUMENT IS NAMED "ELECTRONIC AIP" (EAIP) AND MAY BE BASED ON A FORMAT THAT ALLOWS FOR DIGITAL DATA EXCHANGE.*~~

~~*7.2.1.25*~~

~~*7.2.1.26 NOTE 2 - THE EAIP IS NOT INTENDED TO SUPPORT THE DIGITAL NOTICE TO AIRMEN (NOTAM) PROCESS, AS DIGITAL NOTAM REQUIRE A DATABASE OF AERONAUTICAL INFORMATION AND ARE, THEREFORE, NOT RELIANT ON THE EAIP.*~~

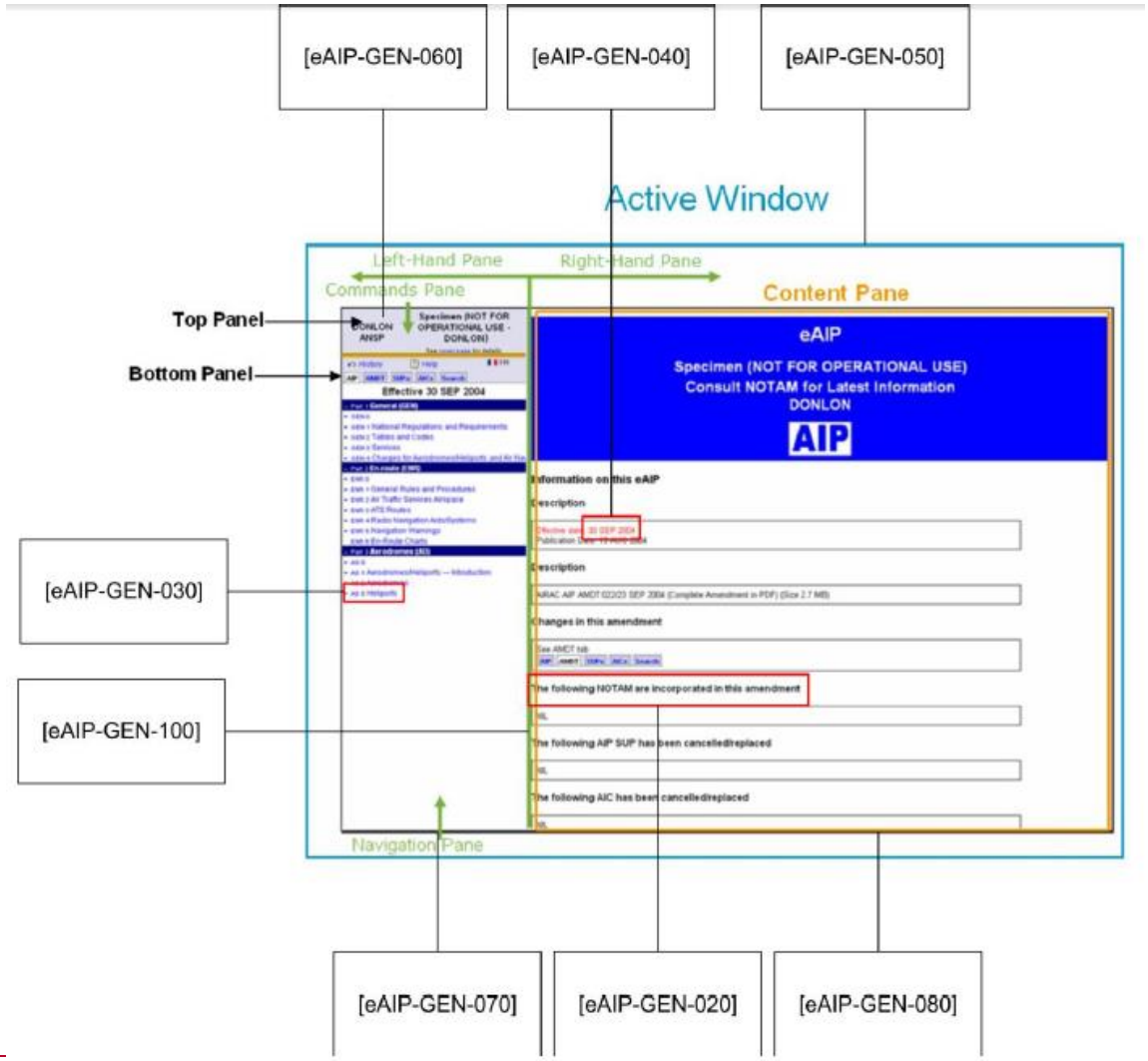
~~*7.2.1.27*~~

~~*7.2.1.28 3.11 AERONAUTICAL DATA AND AERONAUTICAL INFORMATION WITHIN THE AIPS, AMDTS AND SUPS SHOULD BE MADE AVAILABLE, AS A MINIMUM, "IN A WAY THAT ALLOWS THE CONTENT AND FORMAT OF THE DOCUMENTS TO BE DIRECTLY READABLE ON A COMPUTER SCREEN".*~~

~~*7.2.1.29*~~

~~*7.2.1.30 3.12 GENERAL REQUIREMENTS ASSOCIATED WITH THE DISPLAY OF THE EAIP ARE REFLECTED BELOW:*~~

~~*7.2.1.31*~~



~~*7.2.1.32*~~

~~*7.2.1.33*~~

~~*7.2.1.34 3.13 THE EAIP, AS A MINIMUM, SHOULD HAVE HELP AND SEARCH FACILITY AND PROVIDE HISTORY OF CURRENT AND PREVIOUS AMENDMENTS TO USERS. IT SHOULD ALSO INCLUDE A TABLE OF CONTENT. FORMAT, DISPLAY AND CONTENT REQUIREMENT FOR AIP PAGES, AIP SUP, AIP AMENDMENT AND AIC SHOULD BE IN ACCORDANCE WITH ANNEX15, DOC 8126 AND OTHER RELATED SARPS.*~~

~~*7.2.1.35*~~

~~*7.2.1.36 NOTE 3 – MORE GUIDANCE MATERIAL ON THE SPECIFICATIONS OF EAIP COULD BE FOUND IN THE EUROCONTROL SPECIFICATIONS FOR THE ELECTRONIC AERONAUTICAL INFORMATION PUBLICATION (EAIP).*~~

~~*7.2.1.37*~~

~~*7.2.1.38 QUALITY MANAGEMENT SYSTEM (QMS)*~~

~~*7.2.1.39*~~

~~*7.2.1.40 3.14 QUALITY MANAGEMENT SYSTEMS SHALL BE IMPLEMENTED AND MAINTAINED ENCOMPASSING ALL FUNCTIONS OF AN AERONAUTICAL INFORMATION SERVICE. THE EXECUTION OF SUCH QUALITY MANAGEMENT SYSTEMS SHALL BE MADE DEMONSTRABLE FOR EACH FUNCTION STAGE.*~~

~~*7.2.1.41*~~

~~*7.2.1.42 NOTE 1 - AN ISO 9000 CERTIFICATE ISSUED BY AN ACCREDITED CERTIFICATION BODY WOULD BE CONSIDERED AN ACCEPTABLE MEANS OF COMPLIANCE.*~~

~~*7.2.1.43*~~

~~*7.2.1.44 NOTE 2 - GUIDANCE MATERIAL IS CONTAINED IN THE MANUAL ON THE QUALITY MANAGEMENT SYSTEM FOR AERONAUTICAL INFORMATION SERVICES (DOC 9839).*~~

~~*7.2.1.45*~~

~~*7.2.1.46 NOTE 3 - NECESSARY MEASURES SHOULD BE TAKEN FOR THE SIGNATURE OF FORMAL ARRANGEMENTS CONCERNING DATA QUALITY BETWEEN AIS/AIM AND THE DATA ORIGINATORS, COMMENSURATE WITH THE AERODROME OPERATORS, AIR NAVIGATION SERVICE PROVIDERS (ANSPS) AND THE MILITARY AUTHORITY.*~~

~~*7.2.1.47*~~

~~*7.2.1.48*~~*1.1.1.1 WORLD GEODETIC SYSTEM 1984 (WGS-84)*

~~*7.2.1.49*~~*1.1.1.1*

~~*7.2.1.50*~~*1.1.1.1 3.15 WORLD GEODETIC SYSTEM — 1984 (WGS-84) SHALL BE USED AS THE HORIZONTAL (GEODETIC) REFERENCE SYSTEM FOR INTERNATIONAL AIR NAVIGATION. CONSEQUENTLY, PUBLISHED AERONAUTICAL GEOGRAPHICAL COORDINATES (INDICATING LATITUDE AND LONGITUDE) SHALL BE EXPRESSED IN TERMS OF THE WGS-84 GEODETIC REFERENCE DATUM.*

~~*7.2.1.51*~~*1.1.1.1*

~~*7.2.1.52*~~*1.1.1.1 3.16 WGS-84 SHALL BE INTRODUCED IN THE PUBLISHED COORDINATES IN AIP IN THE FOLLOWING SECTIONS:*

~~*7.2.1.53*~~*1.1.1.1*

~~*1.0.0.0*~~*1.1.1.1 HORIZONTAL:*

~~*7.2.1.54*~~*1.1.1.1*

~~*1.1.0.0*~~*1.1.1.1 ENROUTE*

~~*7.2.1.55*~~*1.1.1.1*

~~*1.2.0.0*~~*1.1.1.1 TERMINAL*

~~*7.2.1.56*~~*1.1.1.1*

~~*1.3.0.0*~~*1.1.1.1 AERODROME*

~~*7.2.1.57*~~*1.1.1.1*

~~*2.0.0.0*~~*1.1.1.1 VERTICAL:*

~~*7.2.1.58*~~*1.1.1.1*

~~*7.2.1.59*~~*1.1.1.1 GEOID UNDULATION*

~~*7.2.1.60*~~*1.1.1.1*

~~*7.2.1.61*~~*1.1.1.1 NOTE - COMPREHENSIVE GUIDANCE MATERIAL CONCERNING WGS-84 IS CONTAINED IN THE WORLD GEODETIC SYSTEM - 1984 (WGS-84) MANUAL (DOC 9674).*

~~*7.2.1.62*~~*3.8.1.7 PROVISION OF DIGITAL TERRAIN AND OBSTACLE DATA SETS*

3.61 The requirements for the provision of terrain and obstacle data in an electronic form are part of the move from traditional AIS to Aeronautical Information Management (AIM) defined by ICAO as the dynamic, integrated management of aeronautical information through the provision and exchange of quality-assured digital aeronautical data in collaboration with all parties. It is anticipated that the provision of data, rather than the traditional paper products that have always been required in the past, will increase over time. With the transition from a product-based to a data-centric environment, the AIM will be able to use the digital terrain and obstacle data from the central storage for the development and provision of various AIM products using terrain and/or obstacle data. Therefore, terrain and obstacle data bring about a change in the culture and philosophy with regard to aeronautical information provision.

3.62 With the introduction of TOD in Amendment 33 to ICAO Annex 15, ICAO has defined four coverage areas where different numerical requirements apply for terrain and obstacle data:

- Area 1: The entire territory of a State
- Area 2: The vicinity of an aerodrome
- Area 3: An area bordering the movement area on an aerodrome
- Area 4: The radio altimeter area operating in front of a precision approach runway, Category II or III.

3.63 With Amendment 36 to ICAO Annex 15, Area 2 was broken down into four sub-areas as follows:

— Area 2a: a rectangular area around a runway that comprises the runway strip plus any clearway that exists;

— Area 2b: an area extending from the ends of Area 2a in the direction of departure, with a length of 10 km and a splay of 15 per cent to each side;

— Area 2c: an area extending outside Area 2a and Area 2b at a distance of not more than 10 km from the boundary of Area 2a; and

— Area 2d: an area outside Areas 2a, 2b and 2c up to a distance of 45 km from the aerodrome reference point, or to an existing terminal control area (TMA) boundary, whichever is nearest.

3.8.2. *DAIM –B1/3 PROVISION OF DIGITAL TERRAIN DATA SETS*

3.64 ICAO ~~ANNEX~~Annex 15 PARA 5.3.3.3.1 states that:
"Terrain data sets shall contain digital representation of the terrain surface in the form of continuous elevation values at all intersections (points) of a defined grid, referenced to common datum."

3.65 ICAO PANS-AIM PARA 5.3.3.2.1.1 provides that:
"A terrain grid shall be angular or linear and shall be of regular or irregular shape."

3.8.2.1 TERRAIN DATA - ~~AREA~~AREA 1

3.66 ICAO ~~ANNEX~~Annex 15 ~~TEXT~~ PARA 5.3.3.3.2 states that "*Terrain data sets shall be provided for Area 1.*"

This standard requires an electronic terrain data set to be provided for the entire territory of the State.

3.8.2.2 TERRAIN DATA - ~~AREA~~AREA 2

3.5.2.2.1 3.67 ICAO ANNEX Annex 15 TEXT PARA 5.3.3.3.3 states that *"For aerodromes regularly used by international civil aviation, terrain data shall be provided for:*

a) Area 2a;
b) the take-off flight path area; and
c) an area bounded by the lateral extent of the aerodrome obstacle limitation surfaces."

3.68 This standard defines the minimal required set of electronic terrain data for Area 2 to be provided for all aerodromes designated as international in the National AIP section AD 1.3 – 'Index to aerodromes and heliports'.

3.5.2.2.23.69 ICAO ANNEX Annex 15 TEXT PARA 5.3.3.3.4 states that "*Recommendation.— For aerodromes regularly used by international civil aviation, additional terrain data should be provided within Area 2 as follows:*

a) In the area extending to a 10-km radius from the ARP; and
b) Within the area between 10 km and the TMA boundary or a 45-km radius (whichever is smaller), where terrain penetrates a horizontal terrain data collection surface specified as 120 m above the lowest runway elevation."

3.70 ICAO recommends that, in addition to the minimal set of electronic terrain specified in ICAO Annex 15 Para 5.3.3.3.3, terrain data should be provided for all of Area 2 for all aerodromes designated as international in the National AIP section AD 1.3 – 'Index to aerodromes and heliports'.

3.71 The recommendation is to provide all terrain data within a 10 km radius from the ARP, and beyond the 10 km radius only data for terrain that is above 120 m of the lowest runway elevation.

3.8.2.3 TERRAIN DATA - AREAREA 3

3.72 ICAO ANNEX Annex 15 TEXT PARA 5.3.3.3.7 states that "*Recommendation.— For aerodromes regularly used by international civil aviation, terrain data should be provided for Area 3.*"

3.73 The provision of terrain data for Area 3 is a recommendation and it should be provided to support aerodrome-mapping data in order to ensure the consistency and quality of all geographical data related to the aerodrome.

3.8.2.4 TERRAIN DATA - AREAREA 4

3.74 ICAO ANNEX Annex 15 TEXT PARA 5.3.3.3.8 states that "*For aerodromes regularly used by international civil aviation, terrain data shall be provided for Area 4 for all runways where precision approach Category II or III operations have been established and where detailed terrain information is required by operators to enable them to assess the effect of terrain on decision height determination by use of radio altimeters.*"

3.75 This standard requires that terrain data for Area 4 is made available for Cat II/III runways of all aerodromes designated as international in the National AIP section AD 1.3 – 'Index to aerodromes and heliports'.

3.8.3. DAIM –B1/4 PROVISION OF DIGITAL OBSTACLE DATA SETS

3.76 ICAO ANNEX Annex 15 TEXT PARA 5.3.3.4.1 states that
"*Obstacle data sets shall contain the digital representation of the vertical and horizontal extent of the obstacles.*"

3.77 ICAO ANNEX Annex 15 TEXT PARA 5.3.3.4.2 states that
"*Obstacles data shall not be included in terrain data sets.*"

3.78 ICAO PANS-AIM TEXT PARA 5.3.3.2.2.1 states that
"*Obstacle data elements are features that shall be represented in the data sets by points, lines or polygons.*"

3.79 These provisions define what is meant by obstacle data, reiterating that obstacles must not be included in the terrain data set. They indicate that obstacle data should provide a representation of the horizontal and vertical extent of the obstacles, in a digital form.

3.8.3.1 OBSTACLE DATA - AREA 1

AREA 1

3.80 ICAO ANNEX Annex 15 TEXT PARA 5.3.3.4.3 states that
"*Obstacle data shall be provided for obstacles in Area 1 whose height is 100 m or higher above ground.*"

3.81 This standard requires that data relating to obstacle must be provided for all objects over 100 metres in height (above ground level).

3.8.3.2 OBSTACLE DATA - AREA AREA 2

3.82 ICAO ANNEX Annex 15 TEXT PARA 5.3.3.4.4 states that
"*For aerodromes regularly used by international civil aviation, obstacle data shall be provided for all obstacles within Area 2 that are assessed as being a hazard to air navigation.*"

3.83 The text "*aerodromes regularly used by international civil aviation*" means all aerodromes designated as international in the National AIP section AD 1.3 – 'Index to aerodromes and heliports'.

3.84 ICAO ANNEX Annex 15 TEXT PARA 5.3.3.4.5 states that
"*For aerodromes regularly used by international civil aviation, obstacle data shall be provided for*:

a) *Area 2a for those obstacles that penetrate an obstacle data collection surface outlined by a rectangular area around a runway that comprises the runway strip plus any clearway that exists. The Area 2a obstacle collection surface shall have a height of 3 m above the nearest runway elevation measured along the runway centre line, and for those portions related to a clearway, if one exists, at the elevation of the nearest runway end;*

b) Objects in the take-off flight path area which project above a plane surface having a 1.2 per cent slope and having a common origin with the take-off flight path area; and

c) Penetrations of the aerodrome obstacle limitation surfaces.

Note. — Take-off flight path areas are specified in Annex 4, 3.8.2. Aerodrome obstacle limitation surfaces are specified in Annex 14, Volume 1, Chapter 4."

3.85 This standard defines the minimal required set of electronic obstacle data for Area 2 to be provided for all aerodromes designated as international in the National AIP section AD 1.3 – 'Index to aerodromes and heliports'.

a) a) Area 2a:
All obstacles which exist within the region defined as Area 2a and that intersect a horizontal plane 3m above the nearest point on the runway centreline are to be provided in the digital data set with the Area 2 numerical requirements defined in ICAO PANS AIM Appendix 1 Table A1-6.

b) b) Objects in the take-off flight path area
Objects in the take-off flight path area which project above a plane surface having a 1.2 per cent slope and having a common origin with the take-off flight path area (i.e. at the end of the runway or clearway as appropriate) must be made available with the Area 2 numerical requirements defined in ICAO PANS-AIM Appendix 1 Table A1-6:

It is, therefore, necessary to include those obstacles which must be included on the Aerodrome Obstacle Chart — ICAO Type A (Operating Limitations) in order to meet this clause.

c) c) Penetrations of the aerodrome obstacle limitation surfaces:
Objects penetrating the aerodrome obstacle limitation surfaces must be provided with the Area 2 numerical requirements defined in ICAO PANS-AIM Appendix 1 Table A1-6.

3.86 ICAO ANNEX Annex 15 TEXT PARA 5.3.3.4.6 states that
"*Recommendation.— For aerodromes regularly used by international civil aviation, obstacle data should be provided for Areas 2b, 2c and 2d for obstacles that penetrate the relevant obstacle data collection surface specified as follows:*

a) Area 2b: an area extending from the ends of Area 2a in the direction of departure, with a length of 10 km and a splay of 15 per cent to each side. The Area 2b obstacle collection surface has a 1.2 per cent slope extending from the ends of Area 2a at the elevation of the runway end in the direction of departure, with a length of 10 km and a splay of 15 per cent to each side;

b) Area 2c: an area extending outside Area 2a and Area 2b at a distance of not more than 10 km from the boundary of Area 2a. The Area 2c obstacle collection surface has a 1.2 per cent slope extending outside Area 2a and Area 2b at a distance of not more than 10 km from the boundary of Area 2a. The initial elevation of Area 2c has the elevation of the point of Area 2a at which it commences; and

c) Area 2d: an area outside Areas 2a, 2b and 2c up to a distance of 45 km from the aerodrome reference point, or to an existing TMA boundary, whichever is nearest.

The Area 2d obstacle collection surface has a height of 100 m above ground; except that data need not be collected for obstacles less than a height of 3m above ground in Area 2b and less than a height of 15m above ground in Area 2c."

~~3.87~~ The collection of obstacle data should comply in accordance with the Area 2 numerical requirements (ICAO PANS-AIM Appendix 1 Table A1-6):

a) Area 2b, as described, is a surface that extends from the outer ends of Area 2a, with a 15% splay to either side. This surface commences at the elevation of the nearest runway threshold or runway end, in case of a displaced threshold, and slopes upwards at an angle of 1.2%.

b) Area 2c is described as the area within 10km of the edges of Area 2a, excluding those parts identified as being Area 2b. Once again, a 1.2% slope~~d~~ assessment surface is identified.

c) Area 2d is identified as the area extending from the outer edges of Area 2a, Area 2b and Area 2c, out to a distance of 45km or the TMA boundary, whichever is the closest. Given that the TMA boundary is only mentioned in this point and in ICAO PANS-AIM Appendix 8 Figure A8-1, it is assumed that should the TMA end closer to Area 2a than 10km, Area 2b and 2c would still extend to 10km, despite extending further than the TMA boundary.

3.8.3.3 OBSTACLE DATA - AREA ~~AREA~~ 3

~~3.88~~ ICAO ~~ANNEX~~ Annex 15 ~~TEXT~~ PARA 5.3.3.4.9 states that
"*Recommendation.— For aerodromes regularly used by international civil aviation, obstacle data should be provided for Area 3 for obstacles that penetrate the relevant obstacle data collection surface extending a half-metre (0.5 m) above the horizontal plane passing through the nearest point on the aerodrome movement area.*"

~~3.89~~ The provision of obstacle data for Area 3 is a recommendation and the data should be provided to support aerodrome-mapping data in order to ensure consistency and quality of all geographical data related to the aerodrome. Therefore, the provision of this data serves no purpose if aerodrome-mapping data is not provided, as the view resulting from the Area 3 data set will comprise "islands" of data with no reference point to place the data in context, e.g. a digital representation of the movement surfaces.

3.8.3.4 OBSTACLE DATA - AREA ~~AREA~~ 4

~~3.90~~ ICAO ~~ANNEX~~ Annex 15 ~~TEXT~~ PARA 5.3.3.4.10 states that
"*For aerodromes regularly used by international civil aviation, obstacle data shall be provided for Area 4 for all runways where precision approach Category II or III operations have been established.*"

~~3.91~~ This standard requires that obstacle data for Area 4 is made available.

~~***electronic Terrain and Obstacle Dataset (eTOD)***~~

~~3.17 eTOD is an electronic set(s) of terrain and/or obstacle data for the defined coverage areas and with the defined data specifications to fulfill the needs of electronic air navigation applications for digital data. The coverage areas for sets of electronic terrain and obstacle data shall be specified as:~~

— Area 1: the entire territory of a State;

— Area 2: within the vicinity of an aerodrome, subdivided as follows;

— Area 2a: a rectangular area around a runway that comprises the runway strip plus any clearway that exists.

— Area 2b: an area extending from the ends of Area 2a in the direction of departure, with a length of 10 km and a splay of 15 per cent to each side;

— Area 2c: an area extending outside Area 2a and Area 2b at a distance of not more than 10 km from the boundary of Area 2a; and

— Area 2d: an area outside the Areas 2a, 2b and 2c up to a distance of 45 km from the aerodrome reference point, or to an existing TMA boundary, whichever is nearest;

— Area 3: the area bordering an aerodrome movement area that extends horizontally from the edge of a runway to 90 m from the runway centre line and 50 m from the edge of all other parts of the aerodrome movement area.

— Area 4: The area extending 900 m prior to the runway threshold and 60 m each side of the extended runway centre line in the direction of the approach on a precision approach runway, Category II or III.

3.18 Electronic terrain data shall be provided for Area 1 and 4. The obstacle data shall be provided for obstacles in Area 1 higher than 100 m above ground.

Note 1 – Comprehensive guidance material concerning eTOD is contained in Annex 15; the Guidelines for electronic terrain, obstacle and aerodrome mapping information (Doc 9881) and the EUROCONTROL Terrain and Obstacle Data Manual.

Note 2 – Description and method of obtaining of the eTOD should be defined in AIP GEN 3.1.6.

AIM/SWIM RELATED MODULES

3.19 Performance Improvement Area 2 (Globally Interoperable Systems and Data – Through Globally Interoperable System Wide Information Management) focuses on ASBU Modules which mainly support Collaborative Decision Making (CDM) through Information Management (i.e. Aeronautical Information, MET, Flight and Flow, etc.) in a SWIM environment. PIA 2 includes 11 Modules over 4 blocks as ***follows:***

Performance Improvement Area 2: Globally Interoperable Systems and Data – Through Globally Interoperable System Wide Information Management			
Block 0 (2013)	**Block 1 (2018)**	**Block 2 (2023)**	**Block 3 (2028)**
B0-FICE Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration	**B1-FICE** Increased Interoperability, Efficiency and Capacity though FF-ICE, Step 1 application before Departure	**B2-FICE** Improved Coordination through multi-centre Ground-Ground Integration: (FF-ICE/1 and Flight Object, SWIM)	**B3-FICE** Improved Operational Performance through the introduction of Full FF-ICE
B0-DATM Service Improvement through Digital Aeronautical Information Management	**B1-DATM** Service Improvement through Integration of all Digital ATM Information		
	B1-SWIM Performance Improvement through the application of System-Wide Information Management (SWIM)	**B2-SWIM** Enabling Airborne Participation in collaborative ATM through SWIM	
B0-AMET Meteorological information supporting enhanced operational efficiency and safety	**B1-AMET** Enhanced Operational Decisions through Integrated Meteorological Information (Planning and Near-term Service)		**B3-AMET** Enhanced Operational Decisions through Integrated Meteorological Information (Near-term and Immediate Service)

~~CHAPTER 4~~

~~CHAPTER 8.~~CHAPTER 4. AIM NATIONAL PLANNING AND IMPLEMENTATION

~~8.1.~~4.1. AIM NATIONAL PLANNING

~~4.1~~ States should focus on the implementation of ~~phase~~ Phase ~~II~~ 2 and ~~III~~ 3 of the ICAO Roadmap for the transition from AIS to AIM and take into consideration the "MID Region AIM implementation Roadmap" in planning for the transition from AIS to AIM in a prioritized manner.

~~4.2~~ States are required to develop/update their National AIM Implementation Roadmap on an annual basis (by end of December), using the Template at **Appendix A** (National AIM Implementation Roadmap Template) and provide their feedback, lessons learned and difficulties to the ICAO MID Office for further assistance, as necessary.

~~8.2.~~4.2. AIR NAVIGATION DEFICIENCIES

~~4.~~13 A deficiency is a situation where a facility, service or procedure does not comply with a regional air navigation plan approved by the Council, or with related ICAO Standards and Recommended Practices, and which situation has a negative impact on the safety, regularity and/or efficiency of international civil aviation.

~~4.~~14 Priority for action to remedy a deficiency is based on the following safety assessments:

'U' priority = Urgent requirements having a direct impact on safety and requiring immediate corrective actions. Urgent requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is urgently required for air navigation safety.

'A' priority = Top priority requirements necessary for air navigation safety. Top priority requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is considered necessary for air navigation safety.

'B' priority = Intermediate requirements necessary for air navigation regularity and efficiency. Intermediate priority requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is considered necessary for air navigation regularity and efficiency.

~~4.~~15 MIDANPIRG is responsible to identify and address specific deficiencies in the air navigation field and to facilitate the development and implementation of an action plan by States to resolve identified deficiencies, where necessary.

~~4.~~16 States are required to use the MID Air Navigation Deficiency Database (MANDD) for the submission of requests for addition, update, and elimination of Air Navigation Deficiencies, including the submission of a specific Corrective Action Plan (CAP) for each deficiency. Each State MANDD Focal Point is given the required credential and MANDD is accessible at: http://www.icao.int/mid

~~4.17~~ A Sample State's Corrective Action Plan (CAP) is provided as **Appendix C** for assistance to States in developing their CAPs for the Air Navigation Deficiencies.

~~4.18~~ States are required to submit a Formal Letter to the ICAO MID Regional Office containing the evidence(s) that mitigation measures have been implemented for the elimination of deficiency(ies) when requesting the elimination of deficiency(ies) from the MANDD.

~~8.3.~~4.3. HUMAN RESOURCE AND TRAINING

~~4.19 Within the context of the established quality management system, the competencies and the associated knowledge, skills and abilities required for each function shall be identified, and personnel assigned to perform those functions shall be appropriately trained. Processes shall be in place to ensure that personnel possess the competencies required to perform specific assigned functions. Appropriate records shall be maintained so that the qualifications of personnel can be confirmed. Initial and periodic assessments shall be established that require personnel to demonstrate the required competencies. Periodic assessments of personnel shall be used as a means to detect and correct shortfalls.~~

~~4.9~~ As part of an organization's quality management system (QMS), AIS technical personnel are required to be competent in the tasks they perform. The goal of Competency-based training and assessment (CBTA) is to provide a competent workforce for the provision of quality aeronautical information services and products. To focus training and assessment on how AIS technical personnel is expected to competently perform on the job, a description of this performance in the operational context is needed. Clear performance criteria are identified and assessed in an organizational competency framework to ensure consistency. The adapted competency model, with defined performance criteria, provides a means of assessing whether trainees achieve the desired performance. The AIS trainee, instructor, training organization and regulator must share a common understanding of the competency requirements and individual roles and responsibilities. Competency requirements must be identified and documented. Processes (i.e., training, assessment plans, etc.) must be established and followed to ensure all AIS are trained and assessed to perform assigned function. Using an adapted competency model with selected competencies, pre-defined observable behaviours, conditions and standards are used to ensure these requirements are met.

4.4. DEVELOPING COMPETENCY-BASED TRAINING

~~4.10~~ In line with the State's requirements, the AISP must ensure that job descriptions, training programs, training plans and training records are developed, maintained and continuously improved based on the ICAO competency frameworks. CBTA makes use of a systematic approach whereby the competencies and performance criteria are defined. The training programme is based on identified tasks, and a process for assessment is developed to ensure the identified competencies have been achieved. In particular, the performance criteria are established by the AISP since the competency standards are context-dependent per function. The CBTA methodology is delivered throughout all phases of training; supported by classroom events and performance reviews. Observations and periodic assessments should be conducted to ensure competencies are obtained and maintained. There may be instances where additional training is required, such as training for new or changed software, new tasks and functions, or training required after a long absence.

~~**Note 1 - Guidance material concerning training methodology to ensure the competency of personnel is contained in the Aeronautical Information Management Training Development Manual (Doc 9991).**~~
Note.— The ICAO Competency Framework is defined in the AIS Manual Volume I (Doc 8126) and the AIS Competency Framework is described in more detail in Section 2 of the Training Manual (Doc 9991).

~~CHAPTER 5~~

~~CHAPTER 9.~~CHAPTER 5. REPORTING AND MONITORING

~~9.1.~~5.1. MID eANP VOLUME III

~~5.1~~ The status of implementation is reported and monitored by the AIM Sub-Group and through the B0-DATM Tables contained in the MID eANP Volume III. ~~the~~ The MID eANP is available on the ICAO MID website at: http://www.icao.int/MID/Pages/MIDeANP.aspx

~~9.2.~~5.2. REGIONAL PERFORMANCE DASHBOARD

~~5.2~~ The 38th Assembly approved the Regional Performance Dashboards. The Dashboards aim to provide a glance of both Safety and Air Navigation Capacity and Efficiency strategic objectives, using a set of indicators and targets based on the regional implementation of the Global Aviation Safety Plan (GASP) and the Global Air Navigation Plan (GANP).

~~5.3~~ ICAO introduced the Regional Performance Dashboards as a framework of nested reporting of results with an increased focus on implementation. The initial version of the dashboard shows the globally agreed targeted performance at the regional level and contains graphics and maps with a planned expansion to include regionally agreed targets and the Aviation System Block ~~upgrades~~ Upgrades (ASBU) Block 0 Modules (i.e. AIM National Plan/Roadmap, AIXM, eAIP, eTOD, WGS-84 and QMS).

~~5.4~~ For the first edition of the Regional Performance Dashboards, the implementation of 3 steps from Phase ~~I~~ 1 of the ICAO Roadmap for transition from AIS to AIM (AIRAC, QMS and WGS-84) is monitored. ~~The dashboard can be accessed on the ICAO website at: http://www.icao.int/safety/Pages/Regional-Targets.aspx.~~

~~5.5~~ As of January 2016, the Regional Performance Dashboards has evolved to the more advanced iSTARS Regional Safety Briefing.

~~5.5 It is agreed that in the expansion of the MID Regional Performance Dashboard, AIM National Roadmap, AIXM 5+, eAIP, eTOD Area 1 and 4 should be added to the MID Region Dashboard.~~

5.6 The integrated Safety Trend Analysis and Reporting System (iSTARS) is a web-based system on the ICAO Secure Portal. iSTARS provides a quick and convenient interface to a collection of safety and efficiency datasets and web applications to make safety, efficiency and risk analyses.

5.7 The ICAO Regional Offices are monitoring the implementation progress of the Air Navigation improvements against the objectives set forth by the Global Air Navigation Plan and the Regional Air Navigation plan.

5.8 The primary purpose of the application is to inform all the civil aviation stakeholders and ICAO regional bodies about the implementation progress, and collectively channel the appropriate resources to solve the implementation gaps.

5.9 The dashboard and details of status of AN Implementation by Region is available on **iSTARS** at https://portal.icao.int/space/Pages/ANPage.aspx

9.3.5.3. MID REGION AIR NAVIGATION REPORT

5.210 MIDANPIRG/16 endorsed the first MID Region Air Navigation Report-2016. The objective of the Report is to monitor the status of implementation of the priority 1 ASBU Block 0 Modules in the MID Region as well as the outlook of ASBU implementation in 2020. The MID Region Air Navigation Report will be an annual document for reporting and monitoring the ASBU implementation in the MID Region. The Report is available on the ICAO MID Office website at: https://www.icao.int/MID/MIDANPIRG/Pages/MID-AN.aspx ~~http://www2010.icao.int/MID/Pages/default.aspx~~

9.4.5.4. DEVELOPING A METHODOLOGY FOR REPORTING THE PROGRESS OF AIM IMPLEMENTATION

5.611 "*Methodology for assessing and reporting the progress of transition from AIS to AIM*" aims to develop a uniform method and plan for the reporting by the States on the progress achieved for the AIM transition, based on the ICAO Roadmap for Transition from AIS to AIM. The ICAO air navigation planning and implementation performance framework requires that reporting, monitoring, analysis and review activities be conducted on a cyclical, annual basis (ICAO DOC 9750). The Methodology is used while collecting data for monitoring the progress achieved in the transition from AIS to AIM and for the purpose of Regional Performance Dashboard, MID eANP, etc.

5.712 MIDANPIRG/15 meeting (Bahrain, 8-11 June 2015) reviewed the draft Methodology for reporting and assessing the progress related to the transition from AIS to AIM, as an initial MID Regional framework for monitoring the progress achieved for the AIM transition.

5.5. METHODOLOGY FOR REPORTING AND ASSESSING THE PROGRESS RELATED TO THE TRANSITION FROM AIS TO AIM

Element (Phase/Step/Step No.)			Metric/ Indicator	Finalization/Compliance Criteria	Link to ASBU Block	Remarks
1			**2**	**3**	**4**	**5**
Phase 1						
AIRAC adherence		P-03	FC/NC	Implementation of a system for AIRAC adherence monitoring (compliance with Annex 15 AIRAC provisions) (TBD)	Block 0	
WGS-84 implementation		P-05	FC/PC/NC	National AIP GEN 2.1.3 ‘Geodetic reference datum’ provides information about the implementation of WGS-84 in ENR, Terminal and AD	Block 0	
QMS		P-17	FC/NC	ISO 9001 Certification	Block 0	
Phase 2						
Data quality monitoring		P-01	FI/NI	QMS (P-17) and Agreement with data originators (P-18) is implemented (TBD)	Block 0	
Data integrity monitoring		P-02				*Linked to P-01*
Integrated aeronautical information database	AIXM-based AIS Database	P-06	FI/NI	National aeronautical data and information is stored and maintained in AIXM-based AIS database	Block 0	*Structured AI Database with digital exchange capabilities (AIXM 5.1)*
	Implementation of IAID		FI/PI/NI	Implementation of a database providing eAIP (text, tables and charts) and NOTAM, linked to the terrain/obstacles and aerodrome mapping datasets (TBD)	Block 1	
Unique identifiers		P-07				*Linked to P-06*
Aeronautical information conceptual model		P-08				*Linked to P-06*
Electronic AIP		P-11	FI/NI	National AIP GEN 3.1.3 ‘Aeronautical publications’ provides information about the availability of the National AIP in electronic format (eAIP)	Block 0	
Terrain	Area 1	P-13	FC/NC	National AIP GEN 3.1.6 ‘Electronic terrain and obstacle data’ provides information on how the dataset can be obtained	Block 0	
	Area 4	P-13	FC/PC/NC or N/A	National AIP GEN 3.1.6 ‘Electronic terrain and obstacle data‘ provides information on how the dataset for specific CAT II/III RWY can be obtained.	Block 0	*In case of PC, list name of CAT II/III ADs having the dataset*

Element (Phase/Step/Step No.)			Metric/ Indicator	Finalization/Compliance Criteria	Link to ASBU Block	Remarks
1			**2**	**3**	**4**	**5**
				States should indicate in remarks the number of existing CAT II/III RWY. N/A for States with no CAT II/III RWY.		
	Area 2a	P-13	FC/PC/NC	National AIP GEN 3.1.6 'Electronic terrain and obstacle data' provides information on how the dataset can be obtained. States should indicate in remarks the number of AD eligible for provision of Area 2 data. This number should come from the Regional eANP Table AOP II-1 – for aerodromes with one of the following designation: — RS: international scheduled air transport, regular use — RNS: international non-scheduled air transport, regular use — RG: international general aviation, regular use.	Block 0	*In case of PC, list name of ADs having the dataset*
	Take-off flight path area	P-13	FC/PC/NC	Same as Terrain Area 2a	Block 0	*In case of PC, list name of ADs having the dataset*
	An area bounded by the lateral extent of the aerodrome obstacle limitation surfaces	P-13	FC/PC/NC	Same as Terrain Area 2a	Block 0	*In case of PC, list name of ADs having the dataset*
Obstacles	Area 1	P-14	FC/NC	National AIP GEN 3.1.6 'Electronic terrain and obstacle data' provides information on how the dataset can be obtained	Block 0	
	Area 4	P-14	FC/PC/NC or N/A	National AIP GEN 3.1.6 'Electronic terrain and obstacle data' provides information on how the dataset for specific CAT II/III RWY can be obtained. States should indicate in remarks the number of existing CAT II/III RWY. N/A for States with no CAT II/III RWY.	Block 0	*In case of PC, list name of CAT II/III ADs having the dataset*
	Area 2a	P-14	FC/PC/NC	National AIP GEN 3.1.6 'Electronic terrain and obstacle data' provides information on how the dataset can be obtained. States should indicate in remarks the number of AD eligible for provision of Area 2 data. This number should come from the Regional eANP Table AOP II-1 – for aerodromes with one of the following designation:	Block 0	*In case of PC, list name of ADs having the dataset*

Element (Phase/Step/Step No.)		Metric/ Indicator	Finalization/Compliance Criteria	Link to ASBU Block	Remarks
1		**2**	**3**	**4**	**5**
			— RS: international scheduled air transport, regular use — RNS: international non-scheduled air transport, regular use — RG: international general aviation, regular use.		
objects in the take-off flight path area which project above a plane surface having a 1.2 per cent slope and having a common origin with the take-off flight path area	P-14	FC/PC/NC	Same as Obstacles Area 2a	Block 0	*In case of PC, list name of ADs having the dataset*
penetrations of the aerodrome obstacle limitation surfaces	P-14	FC/PC/NC	Same as Obstacles Area 2a	Block 0	*In case of PC, list name of ADs having the dataset*
Aerodrome mapping	P-15	FI/PI/NI	National AIP GEN 3.1.6 ‘Electronic terrain and obstacle data’ provides information on how the dataset can be obtained	Block 1	*In case of PC, list name of ADs having the dataset*
Phase 3					
Aeronautical data exchange	P-09	FI/PI/NI	Direct data exchange between AIS and data originators/users (TBD)	Block 1	*In case of PC, list name of Units (Data Originators/Users)*
Communication networks	P-10				
Aeronautical information briefing	P-12	FI/PI/NI	Provision of preflight aeronautical information briefing at the international aerodromes (TBD) Mandatory for international aerodromes contained in the Regional eANP Table AOP II-1 – for aerodromes with one of the following designation: — RS: international scheduled air transport, regular use — RNS: international non-scheduled air transport, regular use — RG: international general aviation, regular use.	Block 1	*In case of PC, list name of ADs providing AI briefing*

Element (Phase/Step/Step No.)		Metric/ Indicator	Finalization/Compliance Criteria	Link to ASBU Block	Remarks
1		**2**	**3**	**4**	**5**
Training	P-16				
Agreement with data originators	P-18	FI/PI/NI	Signed agreements between AIS and ANSPs (ATM, CNS, etc.), Aerodromes and Military	Block 0	*In case of PC, list name of Data Originator(s)*
Interoperability with meteorological products	P-19				*Linked to P-12*
Electronic aeronautical charts	P-20	FI/NI	National AIP GEN 3.2 ‘Aeronautical Charts provides information about the availability of the e-Aeronautical Charts	Block 1	
Digital NOTAM	P-21	FI/NI	TBD	Block 1	

FC: Fully Compliant; PC: Partially Compliant; NC: Not Compliant; FI: Fully Implemented; PI: Partially Implemented; NI: Not Implemented; N/A: Not Applicable

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APPENDICES

~~APPENDIX A~~

APPENDIX A - NATIONAL AIM IMPLEMENTATION ROADMAP TEMPLATE

STATE	
DATE	

Steps/Elements	Timeline														Start	End	Remarks
	2019-	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032+			
WGS-84																	
AIRAC																	
QMS																	
AIXM database (AIXM 5.1+)																	
eAIP																	
Terrain Area 1																	
Obstacle Area 1																	
Terrain Area 2a (plus TKOF flight path and OLS)																	
Obstacle Area 2a (plus TKOF flight path and OLS)																	
Terrain Area 2b, 2c, 2d																	
Obstacle Area 2b, 2c, 2d																	

Terrain Area 3																
Obstacle Area 3																
Terrain Area 4																
Obstacle Area 4																
AIP Datasets																
Aerodrome Mapping Datasets																
IFP Datasets																
Agreement with data originators																
Provision of quality-assured aeronautical data and information																
Training																
NOTAM Improvements																
Aeronautical data exchange																
Dissemination of Aeronautical Information in SWIM environment																
Electronic aeronautical charts																

Interoperability with MET products																
Aeronautical information briefing																

~~Phase/Step~~	~~Step No.~~	~~Timeline~~					~~Start~~	~~End~~	~~Remarks~~
		~~2014~~	~~2015~~	~~2016~~	~~2017~~	~~2018~~			
~~Phase I~~									
~~AIRAC adherence~~	~~P-03~~								
~~WGS-84 implementation~~	~~P-05~~								
~~QMS~~	~~P-17~~								
~~Phase II~~									
~~Data Quality Monitoring~~	~~P-01~~								
~~Data Integrity Monitoring~~	~~P-02~~								
~~AIXM~~	~~P-06~~								
~~Unique identifiers~~	~~P-07~~								
~~Aeronautical information conceptual model~~	~~P-08~~								

Phase/Step	Step No.	Timeline					Start	End	Remarks
		2014	2015	2016	2017	2018			
eAIP	P-11								
Terrain A-1	P-13								
Obstacle A-1	P-14								
Terrain A-4	P-13								
Obstacle A-4	P-14								
Terrain A-2	P-13								Please specify implementation of Area 2a, 2b, 2c and/or 2d
Obstacle A-2	P-14								Please specify implementation of Area 2a, 2b, 2c and/or 2d
Terrain A-3	P-13								
Obstacle A-3	P-14								
AD Mapping	P-15								
Phase III									
Aeronautical data exchange	P-09								
Communication networks	P-10								
Aeronautical information briefing	P-12								
Training	P-16								
Agreement with data originators	P-18								

~~Phase/Step~~	~~Step No.~~	~~Timeline~~					~~Start~~	~~End~~	~~Remarks~~
		~~2014~~	~~2015~~	~~2016~~	~~2017~~	~~2018~~			
~~Interoperability with meteorological products~~	~~P-19~~								
~~Electronic aeronautical charts~~	~~P-20~~								
~~Digital NOTAM~~	~~P-21~~								

Legend		Not Started
		In Progress
		Implemented

~~Appendix A – APPENDIX B~~

APPENDIX B - AIRAC ADHERENCE MONITORING

YEAR: ~~2016~~2021			STATE: …….		
AIRAC EFF Date	**AIRAC AMDT Serial Number; or NIL Notification**	**AIRAC AMDT PUB/Distribution Date**	**Trigger NOTAM (Serial Number)**	**No change until 28 days after EFF Date? (Yes / No)**	**Remarks**
28 JAN 21~~7 JAN 16~~	- AIRAC …../~~16~~21; or - NIL notification issued on …….				
25 FEB 21~~4 FEB 16~~	- AIRAC …../~~16~~21; or - NIL notification issued on …….				
25 MAR 21~~3 MAR 16~~	- AIRAC …../~~16~~21; or - NIL notification issued on …….				
22 APR 21~~31 MAR 16~~	- AIRAC …../~~16~~21; or - NIL notification issued on …….				
~~**28 APR 16**~~	~~- AIRAC …../16; or~~ ~~- NIL notification issued on …….~~				
20 MAY 21~~26 MAY 16~~	- AIRAC …../~~16~~21; or - NIL notification issued on …….				
17 JUN 21~~23 JUN 16~~	- AIRAC …../~~16~~21; or - NIL notification issued on …….				
15 JUL 21~~21 JUL 16~~	- AIRAC …../~~16~~21; or - NIL notification issued on …….				
12 AUG 21~~18 AUG 16~~	- AIRAC …../~~16~~21; or - NIL notification issued on …….				
09 SEP 21~~15 SEP 16~~	- AIRAC …../~~16~~21; or - NIL notification issued on …….				
07 OCT 21~~13 OCT 16~~	- AIRAC …../~~16~~21; or - NIL notification issued on …….				
04 NOV 21~~10 NOV 16~~	- AIRAC …../~~16~~21; or - NIL notification issued on …….				
02 DEC 21~~8 DEC 16~~	- AIRAC …../~~16~~21; or - NIL notification issued on …….				
30 DEC 21	- AIRAC …../21; or - NIL notification issued on …….				

~~Appendix C - APPENDIX C~~

~~Appendix D –~~ APPENDIX C - SAMPLE STATE'S CORRECTIVE ACTION PLAN

DEFICIENCY DESCRIPTION		**PRIORITY** *(U/A/B)*
		RATIONALE *F:Financial, H:HR, S:State, O:Other*
STATE'S COMMENTS/OBSERVATION		
CORRECTIVE ACTION(S) PROPOSED	**ACTION OFFICE/BODY**	**DATE OF COMPLETION**

REFERENCES

- ICAO Annex 15 – Aeronautical Information Services and ICAO Annex 4 Aeronautical Charts
- ICAO Doc 9750 – Global Air Navigation Plan
- ICAO Roadmap for the transition from AIS to AIM
- ICAO PANS AIM (Doc. 10066);
- AIS Manual Volumes 1-4 (Doc. 8126);
- Aeronautical Chart Manual (Doc. 8697);
- WGS-84 (Doc. 9674);
- AIM Training Manual (Doc 9991).
- Guidelines for Terrain, Obstacle and Aerodrome Mapping Information (Doc. 9881);
- QMS AIM Manual (Doc. 9839);
- ~~EUROCONTROL Guidelines – Operating procedures for AIS Dynamic Data (OPADD)~~
- ~~EUROCONTROL Specifications for the electronic Aeronautical Information Publication (eAIP)~~
- ~~EUROCONTROL Terrain and Obstacle Data Manual~~
- ~~MIDANPIRG/15 Report~~
- MID Doc 002 – MID Region Air Navigation Strategy
- ~~MSG/4 Report~~
- http://www.aixm.aero
- http://www.icao.int/airnavigation/Documents/ICAO_AN%20Report_EN_final_30042014.pdf
- http://www.icao.int/airnavigation/IMP/Pages/default.aspx
- http://www.icao.int/safety/ais-aimsg/Pages/default.aspx
- http://www.icao.int/safety/Pages/Regional-Targets.aspx.
- https://portal.icao.int/RO_MID/Pages/MIDDocs.aspx
- https://portal.icao.int/space/anp/Pages/Home.aspx

- END -

APPENDIX 5D

DAIM Digital Aeronautical Information Management

In order to assist States in the planning for the transition from AIS to AIM in an expeditious manner, the following Tables, should be used:

1- **Table DAIM 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 (AIP, Terrain, Obstacles, AMDB, data-driven charting, etc.) for which the State is responsible. This Table will be used for the monitoring of the GANP and MID Region Air Navigation Strategy element DAIM-B1/1.

2- **Table DAIM 3-2** sets out the requirements for aeronautical data quality. It will be used for the monitoring of the GANP and MID Region Air Navigation Strategy element DAIM-B1/1.

3- **Table DAIM 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 GANP and MID Region Air Navigation Strategy element DAIM-B1/1.

4- **Table DAIM 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 GANP and MID Region Air Navigation Strategy elements DAIM-B1/3 and DAIM-B1/4.

5- **Table DAIM 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 GANP and MID Region Air Navigation Strategy elements DAIM-B1/3 and DAIM-B1/4.

6- **Table DAIM 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 GANP and MID Region Air Navigation Strategy elements DAIM-B1/3, DAIM-B1/4 and B1/5.

Table DAIM 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 (AIP, Terrain, Obstacles, AMDB, etc.). The minimum set of databases which should be integrated is defined in Annex 15.

Note 2 — 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:
FI – Fully Implemented (eAIP: Text, Tables and Charts)
PI – Partially Implemented
NI – Not Implemented

Note 3 — AIP production includes, production of AIP, AIP Amendments and AIP Supplements

Note 4 — Charts' GIS-based database should be interoperable with AIP database

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

5 Requirement for an IAID driven SNOWTAM processing, shown by:
FI – Fully Implemented
NI – Not Implemented

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

7 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

8 Requirement for ATS systems to be interoperable with the IAID, shown by:
FI – Fully Implemented

PI – Partially Implemented

NI – Not Implemented

9 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.

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

TABLE DAIM-3-1

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

State	IAID	AIP	NOTAM	SNOWTAM	PIB	Procedure Design	ATS	Action Plan	Remarks
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
BAHARAIN	FI	FI	FC	FI	FC	FI	FI		**AIXM:** 5.1
EGYPT	FI	PI	FC	FI	FC	PI	PI		**AIXM:** 5.1 (by 2020) 3 and 7 by 2020
IRAN,	NI	NI	NC	NI	NC	NI	NI		**AIXM:** NI Separate semi-automated NOTAM/SNOWTAM system is operative
IRAQ	NI	NI	NC	NI	NC	NI	NI		**AIXM:** NI
JORDAN	FI	NI	FC	FI	FC	NI	NI	2021	**AIXM:** 4.5 (through EAD)
KUWAIT	NI	NI	FC	NI	PC	NI	NI		**AIXM:** NI (5.1 in progress)
LEBANON	NI	NI	NC	NI	NC	NI	NI		**AIXM:** 4.5
LIBYA	NI	NI	NC	NI	NC	NI	NI		**AIXM:** NI
OMAN	NI	NI	NC	NI	NC	NI	NI	Apr 2021	**AIXM:** NI (5.1 in progress)
QATAR	PI	PI	FC	NI	FC	PI	NI	2021 – Data Integration (AIP, Terrain, Obstacle, Procedure Design and AMDB)	**AIXM:** 5.1
SAUDI ARABIA	NI	NI	NC	NI	NC	NI	NI	AIXM 5.1 & NOTAM: 2020	**AIXM:** 4.5
SUDAN	FI	FI	FC	NI	FC	FI	FI		**AIXM:** 5.1
SYRIA	NI	NI	NC	NI	NC	NI	NI	No Action Plan	**AIXM:** NI
UAE	FI	FI	NC	NI	PC	NI	PI	AMDB: 2016-2021; PIB: AVBL at OMAA, OMDB,	**AIXM:** 5.1.1

State	IAID	AIP	NOTAM	SNOWTAM	PIB	Procedure Design	ATS	Action Plan	Remarks
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
								OMDW, OMFJ, other ADs 2020; Procedure Design 2020; ATS: ACC AVBL, ADs 2020 Digital NOTAM: 2016-2021	
YEMEN	NI	NI	NC	NI	NC	NI	NI	No Action Plan	**AIXM:** NI

Table DAIM-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

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

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 DAIM-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	FI	FC	FC	FC	FC		
EGYPT	FC	FC	PI	FC	PC	PC	FC	4, 6 and 7 by 2022	
IRAN,	FC	PC	NI	NC	FC	FC	FC		
IRAQ	NC	PC	NI	NC	NC	NC	FC		
JORDAN	FC	PC	NI	FC	FC	FC	FC	3, 4: 2021	
KUWAIT	FC	PC	NI	NC	NC	NC	FC		
LEBANON	NC	PC	NI	PC	PC	PC	FC		
LIBYA	NC	NC	NI	NC	NC	NC	NC	No Action Plan	
OMAN	NC	PC	NI	NC	PC	PC	FC	Apr 2021	
QATAR	FC	PC	NI	FC	FC	FC	FC	4: 2021, 3: 2020	
SAUDI ARABIA	FC	FC	NI	FC	FC	FC	FC	4: 2020	
SUDAN	FC	FC	PI	FC	FC	FC	FC	4: 2021	
SYRIA	NC	NC	NI	NC	NC	NC	NC	No Action Plan	
UAE	FC	PC	PI	FC	FC	FC	FC	4: implemented for some of internal stakeholders. Completion by 2020	
YEMEN	NC	NC	NI	PC	NC	NC	NC	No Action Plan	

Table DAIM-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 En-route 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 DAIM-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		
EGYPT	FC	FC	FC	FC		
IRAN	FC	FC	FC	FC		
IRAQ	FC	FC	FC	NC		
JORDAN	FC	FC	FC	FC		
KUWAIT	FC	FC	FC	FC		Last survey FEB 2015
LEBANON	FC	FC	FC	FC		
LIBYA	PC	PC	NC	NC	No Action Plan	
OMAN	FC	FC	FC	FC		
QATAR	FC	FC	FC	FC		Annual Validation/Survey
SAUDI ARABIA	FC	FC	FC	FC		
SUDAN	FC	FC	FC	FC		
SYRIA	FC	FC	FC	NC	No Action Plan	
UAE	FC	FC	FC	FC		
YEMEN	FC	FC	FC	FC		

Table DAIM-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
N/A – Not Applicable

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
N/A – Not Applicable

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 DAIM-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	NC	NC	Completion of area 4 (HECA & HESH): Dec. 2019	
IRAN	FC	FC	FC	FC		
IRAQ	NC	NC	NC	NC		
JORDAN	PC	PC	NC	NC	2021	
KUWAIT	FC	FC	FC	FC		
LEBANON	NC	N/A	NC	N/A	2 & 4: Q2-2019	
LIBYA	NC	N/A	NC	N/A		
OMAN	NC	N/A	NC	N/A	Apr 2021	
QATAR	FC	FC	FC	FC		
SAUDI ARABIA	FC	FC	FC	FC		
SUDAN	NC	N/A	NC	N/A	2021	
SYRIA	NC	N/A	NC	N/A	No Action Plan	
UAE	FC	FC	FC	FC		
YEMEN	NC	N/A	NC	N/A	No Action Plan	

Table DAIM-3-4-2
Provision of Terrain and Obstacle data sets for Area 2, the take-off flight path area (TOFP) and the obstacle limitation surfaces (OLS)

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 Terrain data sets for the take-off flight path area (TOFP), shown by:
FI – Fully Implemented
PI – Partially Implemented
NI – Not Implemented
N/A – Not Applicable

7 Compliance with requirement for the provision of Terrain data sets for the obstacle limitation surfaces (OLS) 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 2a, shown by:

FC – Fully Compliant
PC – Partially Compliant
NC – Not Compliant

9 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

10 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

11 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

12 Compliance with requirement for the provision of Obstacle data sets for the take-off flight path area (TOFP), shown by:

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

13 Compliance with requirement for the provision of Obstacle data sets for the obstacle limitation surfaces (OLS), shown by:

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

14 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.

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

TABLE DAIM-3-4-2

Provision of Terrain and Obstacle data sets for Area 2, the take-off flight path area (TOFP) and the obstacle limitation surfaces (OLS)

State	Terrain data sets						Obstacle data sets						Action Plan	Remarks
	Area 2a	Area 2b	Area 2c	Area 2d	TOFP	OLS	Area 2a	Area 2b	Area 2c	Area 2d	TOFP	OLS		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
BAHARAIN	FC	NI	NI	NI	FI	FI	FC	FI	FI	FI	FI	FI		
EGYPT	PC	PI	PI	PI	NI	NI	NC	NI	NI	NI	NI	NI	To be completed by 2022	
IRAN,	FC	FI	FI	FI	NI	NI	FC	FI	FI	FI	NI	NI		
IRAQ	NC	NI	NI	NI	NI	NI	NC	NI	NI	NI	NI	NI	To be completed by 2024	
JORDAN	NC	NI	NI	NI	NI	NI	NC	NI	NI	NI	NI	NI	To be completed by 2022	Area 2a, 2b and 2c implemented for OJAI RWY 26R/08L
KUWAIT	NC	NI	NI	NI	NI	NI	NC	NI	NI	NI	NI	NI		
LEBANON	NC	NI	NI	NI	NI	NI	NC	NI	NI	NI	NI	NI	To be completed by Dec 2021	
LIBYA	NC	NI	NI	NI	NI	NI	NC	NI	NI	NI	NI	NI	No Action Plan	
OMAN	NC	NI	NI	NI	NI	NI	NC	NI	NI	NI	NI	NI	Apr 2021	
QATAR	FC	FI	FI	FI	FI	FI	FC	FI	FI	FI	FI	FI		

SAUDI ARABIA	PC	PI	PI	PI	PI	PI	FC	FI	FI	FI	PI	PI	To be completed by 2021	Obstacle and terrain data sets for area 2a, TOFP and OLS are provided in: OERK, OEDF, OEMA, and OEJN
SUDAN	NC	NI	NI	NI	NI	NI	NC	NI	NI	NI	NI	NI	2021	
SYRIA	NC	NI	NI	NI			NC	NI	NI	NI			No Action Plan	
UAE	PC	PI	PI	PI	PI	PI	PC	PI	PI	PI	PI	PI	To be completed by 2020	TOD Area 2 (all sub-areas) survey & data acquisition through international airport service providers
YEMEN	NC	NI	NI	NI	NI	NI	NC	NI	NI	NI	NI	NI	No Action Plan	

Table DAIM-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 DAIM-3-4-3

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	FI	NI	To be completed by 2021	
EGYPT	NI	NI	NI	To be completed by 2022	
IRAN	FI	FI	NI	AMDB 2021	
IRAQ	NI	NI	NI		
JORDAN	PI	PI	NI		Area 3 implemented for OJAI RWY 26R/08L
KUWAIT	FI	FI	NI		
LEBANON	NI	NI	NI	Area 3: Q4-2019 AMDB: no plan	
LIBYA	NI	NI	NI	No Action Plan	
OMAN	NI	NI	NI	Apr 2021	
QATAR	FI	FI	PI	AMDB: 2021	
SAUDI ARABIA	PI	PI	NI	Area 3 2022	
SUDAN	NI	NI	NI	2021	
SYRIA	NI	NI	NI	No Action Plan	
UAE	FI	FI	NI	AMDB: completed by 2021	AMDB technical infrastructure (metadata, model) implemented in IAID, pending compatibility analysis AIXM 5.1 with revised AMDB model (RTCA DO-272D) when released.
YEMEN	NI	NI	NI	No Action Plan	

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APPENDIX 6A

Deficiencies in the AIM/MAP Field

EGYPT

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	ANNEX 15 : 5.3.3.4.3 5.3.3.4.5 5.3.3.4.10	-	Lack of provision of required obstacle data sets	May, 2014	-	O	Phase 1: Determine the required specification for Obstacles area 1 and 4 (1/1/2018 to 1/3/2018); Phase 2: provide the required specification to Consultancy office to determine the implementing entity (1/3/2018 to 1/3/2019); Phase 3: Determine the implementing entity and begin to produce new software for eTOD (1/03/2019 to 1/12/2019); Phase 4: finish the new software and begin to produce eTOD area 4 (from existing raw data from Cairo International Airport Company) (1/1/2020 to 1/6/2020); Phase 5 (in parallel with phase 4): begin to produce eTOD area 1 after get raw data (1/1/2020 to 31/12/2020) Terrain data sets are provided for Areas 1 and 4. Terrain data sets for area 2a, TOFP and OLS are not provided.	Egypt	Dec, 2022	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	**Facilities/ Services**	**Description**	**Date First Reported**	**Remarks/ Rationale for Non-elimination**		**Description**	**Executing Body**	**Date of Completion**	**Priority for Action**
2	ANNEX 15: Para. 5.3.3.3.2 5.3.3.3.3 5.3.3.3.8	-	Lack of provision of required terrain data sets	May, 2014	-	O	Phase 1: Determine the required specification for Obstacles area 1 and 4 (1/1/2018 to 1/3/2018); Phase 2: provide the required specification to Consultancy office to determine the implementing entity (1/3/2018 to 1/3/2019); Phase 3: Determine the implementing entity and begin to produce new software for eTOD (1/03/2019 to 1/12/2019); Phase 4: finish the new software and begin to produce eTOD area 4 (from existing raw data from Cairo International Airport Company) (1/1/2020 to 1/6/2020); Phase 5 (in parallel with phase 4): begin to produce eTOD area 1 after get raw data (1/1/2020 to 31/12/2020) Terrain data sets are provided for Areas 1 and 4. Terrain data sets for area 2a, TOFP and OLS are not provided.	Egypt	Dec, 2022	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the AIM/MAP Field

IRAN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	ANNEX 15: Para. 2.3.10 and 3.5.3	-	Lack of AIXM-based AIS Database	Dec, 2007	-	O	Based on Corrective action plan it`s divided on two millstone, First; Setup new software till July 2021, Second Update database by End of DEC2021	Iran	Dec, ~~2021~~2023	A
2	ANNEX 15 : 5.3.3.3.2 5.3.3.3.3 5.3.3.3.8	-	Lack of provision of required terrain data sets	Jan, 2021	-	O	Terrain data sets are available for Areas 1, 4 and 2a. Terrain data sets for TOFP and OLS are not provided.	Iran	Dec, ~~2021~~2022	A
3	ANNEX 15 : 5.3.3.4.3 5.3.3.4.5 5.3.3.4.10	-	Lack of provision of required obstacle data sets	Jan, 2021	-	O	Obstacle data sets are available for Areas 1, 4 and 2a. Obstacle data sets for TOFP and OLS are not provided.	Iran	Dec, ~~2021~~2022	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the AIM/MAP Field

IRAQ

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	ANNEX 4: Para. 16.2	-	Non-production of World Aeronautical Chart – ICAO 1:1 000 000	May, 1995	-	F H S	Corrective Action Plan has not been formally provided by the State	Iraq	Dec, 2023	B
2	ANNEX 15: Para. 1.2.1.1	-	Implementation of geoid undulation referenced to the WGS-84 ellipsoid	Dec, 1997	-	F H O	Corrective Action Plan has not been formally provided by the State	Iraq	Dec, 2024	A
3	ANNEX 15: Para. 3.6	QMS Implementation	Lack of Implementation of QMS	Jan, 2003	-	F H O	Corrective Action Plan has not been formally provided by the State	Iraq	Dec, 2022	A
4	ANNEX 4: Para. 11.2	-	Non-production of Instrument Approach Chart-ICAO for Mousl Intl. Airport	Jan, 2003	-	F H O	An official letter regarding the status of Mosul Airport was not submitted to ICAO MID office	Iraq	Dec, ~~2021~~2022	A
5	ANNEX 15: Para. 5.5	-	Non provision of pre-flight information service at international airports	Mar, 2004	-	F H O	Corrective Action Plan has not been formally provided by the State	Iraq	Dec, 2023	A
6	ANNEX 15: Para. 5.3.3.3.2 5.3.3.3.3 5.3.3.3.8	-	Lack of provision of required terrain data sets	May, 2014	-	O	Corrective Action Plan has not been formally provided by the State	Iraq	Dec, 2024	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	**Facilities/ Services**	**Description**	**Date First Reported**	**Remarks/ Rationale for Non-elimination**		**Description**	**Executing Body**	**Date of Completion**	**Priority for Action**
7	ANNEX 15: Para.5.3.3.4.3 5.3.3.4.5 5.3.3.4.10	-	Lack of provision of required obstacle data sets	May, 2014	-	O	Corrective Action Plan has not been formally provided by the State	Iraq	Dec, 2024	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the AIM/MAP Field

JORDAN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	ANNEX 4: Para. 16.2	-	Non-production of World Aeronautical Chart – ICAO1:1 000 000	Feb, 2008	-	F H	Corrective Action Plan has not been formally provided by the State	Jordan	Dec, ~~2021~~2022	B
2	ANNEX 15: Para. 5.3.3.3.2 5.3.3.3.3 5.3.3.3.8	-	Lack of provision of required terrain data sets	May, 2014	-	F H	Corrective Action Plan has not been formally provided by the State	Jordan	Dec, 2022	A
3	ANNEX 15: Para. 5.3.3.4.3 5.3.3.4.5 5.3.3.4.10	-	Lack of provision of required obstacle data sets	May, 2014	-	F H	Corrective Action Plan has not been formally provided by the State	Jordan	Dec, 2022	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the AIM/MAP Field

LEBANON

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	ANNEX 4: Para. 16.2	-	Non-production of World Aeronautical Chart – ICAO1:1 000 000	May, 1995	-	H	Corrective Action Plan was provided in August 2016.	Lebanon	Dec, ~~2021~~2022	B
2	ANNEX 15: Para. 3.6	QMS Implementation	Lack of Implementation of QMS	Jan, 2003	(USOAP-CMA finding)	H	Corrective Action Plan was provided in August 2016.	Lebanon	Dec, 2022	A
3	ANNEX 15: Para. 5.3.3.3.2 5.3.3.3.3	-	Lack of provision of required terrain data sets	May, 2014	-	O	Corrective Action Plan was provided in August 2016.	Lebanon	Dec, ~~2021~~2022	A
4	ANNEX 15: 5.3.3.4.3 5.3.3.4.5	-	Lack of provision of required obstacle data sets	May, 2014	-	O	Corrective Action Plan was provided in August 2016.	Lebanon	Dec, ~~2021~~2022	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the AIM/MAP Field

LIBYA

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	ANNEX 4: Para. 16.2	-	Non-production of World Aeronautical Chart – ICAO 1:1 000 000	May, 2014	-	O	Corrective Action Plan has not been formally provided by the State	Libya	Dec, ~~2021~~2023	B
2	ANNEX 15: Para. 3.6	QMS Implementation	Lack of Implementation of QMS	May, 2014	(USOAP-CMA finding)	O	Corrective Action Plan has not been formally provided by the State	Libya	Dec, 2023~~2021~~	A
3	ANNEX 15: Para 6.2	-	Lack of a system for AIRAC adherence monitoring	May, 2014	-	O	Corrective Action Plan has not been formally provided by the State	Libya	Dec, 2023~~2021~~	A
4	ANNEX 15: Para. 2.3.10 and 3.5.3	-	Lack of AIXM-based AIS Database	May, 2014	-	O	Corrective Action Plan has not been formally provided by the State	Libya	Dec, 2023~~2021~~	A
5	ANNEX 15: Para. 5.3.3.3.2 5.3.3.3.3	-	Lack of provision of required terrain data sets	May, 2014	-	O	Corrective Action Plan has not been formally provided by the State	Libya	Dec, 2023~~2021~~	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	**Facilities/ Services**	**Description**	**Date First Reported**	**Remarks/ Rationale for Non-elimination**		**Description**	**Executing Body**	**Date of Completion**	**Priority for Action**
6	ANNEX 15: Para. 5.3.3.4.3 5.3.3.4.5	-	Lack of provision of required obstacle data sets	May, 2014	-	O	Corrective Action Plan has not been formally provided by the State	Libya	Dec, 2023~~2021~~	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the AIM/MAP Field

OMAN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	ANNEX 15: Para. 3.6	QMS Implementation	Lack of Implementation of QMS	Jan, 2003	(USOAP-CMA finding)	O	A formal letter is sent to ICAO MID to remove this deficiency~~- An agreement with an international quality company is established to assist for progressive implementation of quality systems within DGAN AIS.~~ ~~- QMS is expected to be fully implemented by September 2019.~~	Oman	Jun, 2021	A
2	ANNEX 15: Para. 2.3.10 and 3.5.3	-	Lack of AIXM-based AIS Database	Jul, 2005	-	O	A contract is going to be signed with a company specializing in this area for AIP Data Migration. AIM equipment installation will be completed by end of February 2017. The target is to have 70% of the data by June 2018	Oman	Dec, 2022	A
3	ANNEX 15: Para. 5.3.3.3.2 5.3.3.3.3	-	Lack of provision of required terrain data sets	May, 2014	-	O	An agreement with National survey authority is going to be established to assist for progressive implementation of terrain datasets for area1. The target is to have the required data by Dec 2019.	Oman	Dec, 2022	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	**Facilities/ Services**	**Description**	**Date First Reported**	**Remarks/ Rationale for Non-elimination**		**Description**	**Executing Body**	**Date of Completion**	**Priority for Action**
4	ANNEX 15: Para. 5.3.3.4.3 5.3.3.4.5	-	Lack of provision of required obstacle data sets	May, 2014	-	O	Area 1 obstacles are published in AIP Oman ENR 5.4 "Air Navigation (En-Route) Obstacles". Data originators for obstacles will be consulted for Area 1 obstacle completeness and update.	Oman	Dec, 2022	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the AIM/MAP Field

SAUDI ARABIA

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	ANNEX 15 : para. 5.3.3.3.2 5.3.3.3.3 5.3.3.3.8	-	Lack of provision of required terrain data sets	Dec, 2021	-	O	Terrain data sets are available for Areas 1~~ and 4~~. Terrain data sets for area 2a, TOFP and OLS are provided in: OERK, OEDF, OEMA, and OEJN. Updates of OEJN terrain digital data sets are expected to be available and published by: Q1-2021	Saudi Arabia	~~Dec~~July, ~~2021~~2022	A
2	ANNEX 15 : 5.3.3.4.3 5.3.3.4.5 5.3.3.4.10	-	Lack of provision of required obstacle data sets	Dec, 2021	-	O	Obstacle data sets are provided for Areas 1 and 4. Obstacle data sets for area 2a, TOFP and OLS are provided in: OERK, OEDF, OEMA, and OEJN. Updates of OEJN terrain digital data sets are expected to be available and published by: Q1-2021	Saudi Arabia	~~Dec~~July, ~~2021~~2022	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the AIM/MAP Field

SUDAN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	ANNEX 15: Para. 5.3.3.3.2 5.3.3.3.3	-	Lack of provision of required terrain data sets	May, 2014	-	O	Corrective Action Plan has not been formally provided by the State	Sudan	Dec, ~~2021~~2022	A
2	ANNEX 15: Para. 5.3.3.4.3 5.3.3.4.5	-	Lack of provision of required obstacle data sets	May, 2014	-	O	Corrective Action Plan has not been formally provided by the State	Sudan	Dec, ~~2021~~2022	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the AIM/MAP Field

SYRIA

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	ANNEX 15: Para 6.2	-	Lack of a system for AIRAC adherence monitoring	May, 1995	-	F H	Corrective Action Plan has not been formally provided by the State	Syria	Dec, ~~2021~~2022	A
2	ANNEX 4: Para. 16.2	-	Non-production of World Aeronautical Chart – ICAO1:1 000 000	May, 1995	-	F H S	Corrective Action Plan has not been formally provided by the State	Syria	Dec, 2022~~1~~	B
3	ANNEX 15: Para. 3.6	QMS Implementation	Lack of Implementation of QMS	Jan, 2003	(USOAP-CMA finding)	F H	Corrective Action Plan has not been formally provided by the State	Syria	Dec, 2022~~1~~	A
4	ANNEX 15: Para. 1.2.1.1	-	Implementation of geoid undulation referenced to the WGS-84 ellipsoid.	Jan, 2003	-	F H	Corrective Action Plan has not been formally provided by the State	Syria	Dec, 2022~~1~~	A
5	ANNEX 15 Para. 5.2 and 6.3.1	-	Lack of consistency in AIP information and lack of regular and effective updating of the AIP.	Jul, 2005	-	H	Corrective Action Plan has not been formally provided by the State	Syria	Dec, 2022~~1~~	A
6	ANNEX 15: Para. 2.3.10 and 3.5.3	-	Lack of AIXM-based AIS Database	Jul, 2005	-	F H	Corrective Action Plan has not been formally provided by the State	Syria	Dec, 2022~~1~~	A
7	ANNEX 15: Para. 5.5	-	Non provision of pre-flight information service at international airports	Jul, 2005	-	F H	Corrective Action Plan has not been formally provided by the State	Syria	Dec, 2022~~1~~	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	**Facilities/ Services**	**Description**	**Date First Reported**	**Remarks/ Rationale for Non-elimination**		**Description**	**Executing Body**	**Date of Completion**	**Priority for Action**
8	ANNEX 15: Para. 5.3.3.3.2 5.3.3.3.3	-	Lack of provision of required terrain data sets	May, 2014	-	O	Corrective Action Plan has not been formally provided by the State	Syria	Dec, 2022~~1~~	A
9	ANNEX 15: Para. 5.3.3.4.3 5.3.3.4.5	-	Lack of provision of required obstacle data sets	May, 2014	-	O	Corrective Action Plan has not been formally provided by the State	Syria	Dec, 2022~~1~~	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the AIM/MAP Field

UAE

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	ANNEX 15 : 5.3.3.3.2 5.3.3.3.3 5.3.3.3.8	-	Lack of provision of required terrain data sets	Dec, 2021	-	O	Terrain data sets are provided for Areas 1, 4 and 2a. Terrain data sets for TOFP and OLS are not provided. Abu Dhabi Airports (Fully Compliant) Dubai Airports (Fully Compliant) OMSJ (Fully Compliant) OMFJ (Fully Compliant) OMRK (Not Compliant) All UAE Intl Airports are providing full Area 2 Terrain.	UAE	Dec, 2021	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	**Facilities/ Services**	**Description**	**Date First Reported**	**Remarks/ Rationale for Non-elimination**		**Description**	**Executing Body**	**Date of Completion**	**Priority for Action**
2	ANNEX 15: 5.3.3.4.3 5.3.3.4.5 5.3.3.4.10	-	Lack of provision of required obstacle data sets	Dec, 2021	-	O	Obstacle data sets are provided for Areas 1, 4 and 2a. Obstacle data sets for TOFP and OLS are not provided. Abu Dhabi Airports (Fully Compliant) Dubai Airports (Fully Compliant) OMSJ (Fully Compliant) OMFJ (Fully Compliant) (Partially compliant, update survey required) All UAE Intl Airports are providing full Area 2 obstacles.	UAE	Dec, 2021	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the AIM/MAP Field

YEMEN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	ANNEX 15: Para 6.2	-	Lack of a system for AIRAC adherence monitoring	May, 1995	-	H O	~~Corrective Action Plan has not been formally provided by the State~~ Yemen advised to remove the deficiency. Formal letter from CAMA should be addressed to ICAO MID to remove the deficiency.	Yemen	Dec, 2021	A
2	ANNEX 4: Para. 16.2	-	Non-production of World Aeronautical Chart – ICAO1:1 000 000	May, 1995	-	F	Two options have been planned: 1-assitance from another state, or 2-Signing a contract with a specialized company for the production of this chart.~~Corrective Action Plan has not been formally provided by the State~~	Yemen	Dec, 2022	B
3	ANNEX 15: Para. 3.6	QMS Implementation	Lack of Implementation of QMS	Jan, 2003	-	F	An agreement with international quality company is going to be signed to assist for implementing of quality system within Yemen ANS -AIS	Yemen	Dec, 2022	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
4	ANNEX 4: Para. 11.2	-	Non-production of Instrument Approach Chart-ICAO for TAIZ Intl. Airport	Jan, 2003	-	O	CAMA has adopted a new project for Taiz int. airport and the production of new approach procedures according to PBN requirements planned as part of the project. Expected to be completed 2025~~Corrective Action Plan has not been formally provided by the State~~	Yemen	Dec, 2025	A
5	ANNEX 15: Para. 5.5	-	Non provision of pre-flight information service at international airports	Mar, 2004	-	F H	Implemented in Sanaa and Aden int. airports. Expected to be implemented in the rest airports by dec.2022 ~~Corrective Action Plan has not been formally provided by the State~~	Yemen	Dec, 2022	A
6	ANNEX 15: Para. 2.3.10 and 3.5.3	-	Lack of AIXM-based AIS Database	Jul, 2005	-	F	A contract is going to be signed with a company specializing in this area for AIP Data Migration.~~Corrective Action Plan has not been formally provided by the State~~	Yemen	Dec, 2022	A
7	ANNEX 15 : Para 5.3.3.3.2 5.3.3.3.3	-	Lack of provision of required terrain data sets	May, 2014	-	O	An agreement with national survey authority is going to be established to assist for implementations~~Corrective Action Plan has not been formally provided by the State~~	Yemen	Dec2023	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
8	ANNEX 15 : Para. 5.3.3.4.3 5.3.3.4.5	-	Lack of provision of required obstacle data sets	May, 2014	-	O	An agreement with national survey authority is going to be established to assist for implementations~~Corrective Action Plan has not been formally provided by the State~~	Yemen	Dec2023	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Note:* Priority for action to remedy a deficiency is based on the following safety assessments:

'U' priority = Urgent requirements having a direct impact on safety and requiring immediate corrective actions.

Urgent requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is urgently required for air navigation safety.

'A' priority = Top priority requirements necessary for air navigation safety.

Top priority requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is considered necessary for air navigation safety.

'B' priority = Intermediate requirements necessary for air navigation regularity and efficiency.

Intermediate priority requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is considered necessary for air navigation regularity and efficiency.

Definition:

A deficiency is a situation where a facility, service or procedure does not comply with a regional air navigation plan approved by the Council, or with related ICAO Standards and Recommended Practices, and which situation has a negative impact on the safety, regularity and/or efficiency of international civil aviation.

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(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

ATTACHMENT A

ICAO MID

ATTACHMENT A

AIM SG/8 and MIDAD TF/6 Virtual Meetings

(13 – 15 September 2021, 09:00 – 11:30 UTC)

List of Participants

State Org/Industries	Contact	Title
Bahrain	Mr. Abdulla Hasan Al Qadhi	Chief AIM
	Mr. Mohammed Ahmed Al Hallaq	Head, AIM Operation
	Ms. Fatima Ali Mohammed	Computer Specialist
Egypt	Mr. Ahmed Abdel Wahab M. Elmarady	Air Navigation Safety Oversight Inspector
	Mr. Ayman Emam Ibrahim	AIS General Manager
	Mr. Hany Mohamed Fathy	AIS SUPERVISOR
	Mr. Osama Ahmed Ali Taha	director of NOTAM
	Mr. Tarek Hussein Taher Abd El Fattah	Director of Military Civilian Coordination and Navigation Warning Directorate
	Mr. Younan Emil Michael	Director of Briefing
	Mr. Mohamed Yasser Fikry Abd El Hafiz Gawish	AIS publications Manger EAIMA head and IFAIMA MID Regional director
	Mr Karim Aly	
	Mustafa Abdul-Rahman Tawfiq	
	Ms. Safaa Hanafy Abdo Saleh	flight plane and operation general director
Iran	Mrs. Narges Assari	AIS Expert-in-charge
	Mr. Mohammad Sadeghi	Expert-in-charge of Static Data
	Ms. Sotoudeh Nikmanesh	ATC Expert
Iraq	Mr. Berivan Shafiq Tofiq	AIS Officer
	Mr. Ali Waleed	AIS-HQ Manager
Jordan	Mr. Munther Farhan Al Qaisi	AIS Officer
	Mr. Tarik Mohammed Al-Rabee	AIS Officer
	Mr. Ra'ed Ghazawi	ANS Inspector
	Mr. Tareq Okleh Abdalah Al Momani	AIS Officer
Kuwait	Mr. Mohammad H. D. Alenezi	Chief of AIS
	Mr. Hisham Saleh bu-abla	Air Navigation Services Inspector
Lebanon	Mr. Bassem Nasser	Chief of AIS
Libya	Mr. Hasan Salem	Chief of AIS
	Mr. Tareg Kashkar	Chief of IFPD
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State Org/Industries	Contact	Title
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Saudi Arabia	Mr. Hadi A. Alghamdi	Manager of Saudi Aeronautical Information Publication
	Mr. Mazen Alshehri	AIM Manager
	Mr. Ibrahim Alshaya	Aeronautical Charts Supervisor
	Mr. Imed ben Saad	AFP and AIM Expert
	Ms. Hind Abdulaziz Almohaimeed	AIP Specialist
	Mr. Mohamed A. Ben Abdessalem	AIM Strategy Specialist
	Mr. Muhammad Al-Juhani	Flight Procedure Designer Inspector
	Mr. Osama Al-Shetairi	AIP Supervisor
Sudan	Mr. Hassan Mohamed Ghrashi	AIM Director
	Mr. Amged Abouzaid A. Haroon	AIM Director
Syria	Mr. Hasan Hammoodi	
	Mrs. Ghadeer Hossino	
UAE	Mr. Abdalla Salim Al Rashidi	Director AIM
	Mr. Dean Fernandes	Manager AIM Operations
	Mr. Kedari Manthanwar	Assistant Manager - AIM Design
	Mr. Syed Samiullah	Senior Officer – PANS OPS
	Ms. Maram Khaled Ali	AIM Publication Officer
	Mr. Robert Novac Bara	GCAA Airspace Inspector
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USA (FAA)	Ms. Lynette M. Jamison	Aeronautical Information Standards
	Mr. George P.Sempeles	Aeronautical Information Specialist
AACO	Mr. Joud Charafeddine	Specialist-Industry Affairs
	Mr. Walid Al Hoss	Manager Economics and Technical Department
Eurocontrol	Mr. Emmanuel Dettwiller	
	Mrs. Roberta Luccioli	
IATA	Mr. Lindi-Lee Kirkman	Manager Safety & Flight Operations-ATM Infrastructure
	Ms. Zainab Khudhair	Manager Safety & Flight Operations (Africa & Middle East)
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	Mr. Radhouan Aissaoui	RO/IM
	Mr. Ahmad Amireh	RO/ATM/SAR
	Mr. Ahmad Kaveh	RO/ATM
	Mrs. Hoda Gabriel	Technical Assistant

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