



Eighth Meeting of the AASPG Infrastructure and Information Management Sub-group (IIM/SG8)

(Nairobi, Kenya, 4 – 8 August 2025)

Report

Prepared by the Secretariat

August 2025

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LIST OF ABBREVIATIONS

AANDD	AFI Air Navigation Deficiencies Database
AAO SG	AASPG Airspace and Aerodrome Subgroup
AASPG	Africa-Indian Ocean Aviation System Planning and Implementation Group
AFCAC	African Civil Aviation Commission
AFI	Africa and Indian Ocean
AFI VACP	AFI Volcanic Ash Contingency Plan
AFI VOLCEX OPINS	AFI Volcanic Ash Exercise Operational Instructions
AFTN	Aeronautical Fixed Telecommunication Network
AIDC	Air Traffic Services Inter-Facility Data Communication
AIM	Aeronautical Information Management
AIXM	Aeronautical Information Exchange Systems
AMET	Advanced Meteorological Information
AMHS	Aeronautical Message Handling System
ANS	Air Navigation Service
ANSP	Air Navigation Service Provider
APIRG	AFI Planning and Implementation Group
ASBU	Aviation System Block Upgrades
ASECNA	Agency for Aerial Navigation Safety in Africa and Madagascar
ATU	African Telecommunication Union
AUC	African Union Commission
AU	African Union
BBB	Basic Building Block
CAA	Civil Aviation Authority
CBA	Cost Benefit Analysis
CNS	Communication Navigation Surveillance
CODEVMET-AFI	Cooperative Development of Aeronautical Meteorological Service in the AFI Region
DAIM	Digital Aeronautical Information Management
ESAF	Eastern and Southern African
FIRs	Flight Information Regions
FSMP	Frequency Spectrum Management Panel
GANP	Global Air Navigation Plan
GNSS	Global Navigation Satellite System
HQ	Headquarters
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IIM SG	Infrastructure and Information Management Sub-Group
ITU	International Telecommunication Union

ITU WRC	International Telecommunication Union World Radiocommunication Conference
IWXXM	ICAO Meteorological Information Exchange Model
MET	Aeronautical Meteorology
MoU	Memorandum of Understanding
NCPI	National Coordinator for Planning and Implementation
NCLB	No Country Left Behind
PBN	Performance Based Navigation
PBCS	Performance Based Communication and Surveillance
PRCC	Programme Review and Coordination Committee
RASG-AFI	AFI Regional Aviation Safety Group
RDI	Research, Development and Innovation
RODB	Regional OPMET Data Bank
SADIS	Secure Aviation Data Information Service
SANSA	South Africa National Space Agency
SAR	Search and Rescue
SARP	Standards and Recommended Practices
SAT	South Atlantic
SAWS	South African Weather Service
SBAS	Satellite-based Augmentation System
SWIM	System Wide Information Management
TAC	Traditional Alphanumeric Code
WACAF	Western and Central African
WAFS	World Area Forecast System
WMO	World Meteorological Organization
WRC	World Radiocommunication Conference
VoIP	Voice over Internet Protocol
VSAT	Very Small Aperture Terminal

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LIST OF CONCLUSIONS AND DECISIONS

Reference of draft Conclusion /Decision	Title of draft Conclusion /Decision
<i>Draft IIM/SG8 Decision 8/01</i>	<i>Election of the Chairperson and Vice-Chairperson of the Sub-Group</i>
<i>Draft IIM/SG8 Decision 8/02</i>	<i>Effective reporting on the implementation of the Basic Building Blocks (BBBs)</i>
<i>Draft IIM/SG8 Decision 8/03</i>	<i>Revision of ASBU elements in the Volume III of the AFI eANP</i>
<i>Draft IIM/SG8 Decision 8/04</i>	<i>Endorsement of the restructured IIM-SG projects in CNS, AIM and MET</i>
<i>Draft IIM/SG8 Decision 8/05</i>	<i>Endorsement of the AIM project on the Implementation of Competency-Based Training Standards for AIS personnel</i>
<i>Draft IIM/SG8 Decision 8/06</i>	<i>Endorsement of the two MET projects on calibration of surface-based meteorological sensors and instruments and on Strengthening Wind Shear Warning Capacity for Safer Aviation Operations in the AFI Region</i>
<i>Draft IIM/SG8 Conclusion 8/07</i>	<i>Implementation of the IWXXM in the AFI Region</i>
<i>Draft IIM/SG8 Conclusion 8/08</i>	<i>Effective implementation of the AFI AMBEX System and Procedures</i>
<i>Draft IIM/SG8 Decision 8/09</i>	<i>Improvement of the GNSS RFI Risk Management</i>
<i>Draft IIM/SG8 Conclusion 8/10</i>	<i>Improvement of the management of the volcanic events in the AFI Region</i>
<i>Draft IIM/SG8 Decision 8/111</i>	<i>Proposal of inclusion of CNS, MET and AIM Projects to the AFI ANS PROJECTS CATALOGUE</i>
<i>Draft IIM/SG8 Conclusion 8/12</i>	<i>Amendment of the SAT Mandate</i>
<i>Draft IIM/SG8 Decision 8/13</i>	<i>Endorsement of the project on the Implementation of System Wide Information Management (SWIM)</i>
<i>Draft IIM/SG8 Decision 8/14</i>	<i>Future Work Programme of the IIM Subgroup</i>

PART I – HISTORY OF THE MEETING

1. Introduction

- 1.1. The Eight meeting of the AASPG Infrastructure and Information Management Sub-Group (IIM/SG8) was held in Nairobi, Kenya from 4 to 8 August 2025.
- 1.2. The Sub-Group records the outcomes of its meetings in the form of Conclusions and Decisions with the following significance:
 - a) Conclusions deal with the matters which, in accordance with the Group's terms of reference, merit directly the attention of States for further actions to be undertaken in accordance with established procedures; and
 - b) Decisions deal with matters of concern only to the AASPG and its subsidiary bodies.

2. Objectives

- 2.1. The objectives of the meeting were to discuss amongst others, actions to further facilitate regional planning and implementation activities, the regional Air Navigation Plan, Air Navigation Deficiencies in AIM, CNS and MET areas, the status of the implementation AASPG Projects as well as ASBU elements. The meeting also aimed to deliberate on the status of the implementation of AASPG Projects as well as ASBU Elements, for which the States' reporting is still low.

3. Attendance

- 3.1. The meeting was attended by ninety-five (95) participants from twenty-two (22) States, and Organizations such as AAMAC, AFCAC, ASECNA, IATA, WMO. The ICAO ESAF and WACAF Regional Offices provided the secretariat services.
- 3.2. The list of participants is provided at **Appendix 1** to this report.

4. Officers and Secretariat

- 4.1. The meeting was chaired by Mr. Issoufou Abdoulaye (Niger), Chairperson of the Subgroup.
- 4.2. Mr. Goama Ilboudo Regional Officer, MET from the ICAO WACAF Regional Office served as the Secretary of the meeting with the support of Ms. Chinga Mazhetese, Ms. Keziah Ogutu and Mr. Harvey Gabriel Lekamisy, respectively Regional Officers ENV/MET, ATM/SAR and CNS from the ICAO ESAF Regional Office; and Ms. Sandrine GNASSOU and Mr. Fanfé Bamba, respectively Regional Officers CNS and AIM from ICAO WACAF Regional Office.

5. Working language

- 5.1. The meeting was conducted in the English and French languages with simultaneous interpretation.

6. Opening

- 6.1. Ms. Lucy Wanjiku Mbugua, the ICAO Regional Director for the ICAO Eastern and South Africa (ESAF) Office opened the meeting.

- 6.2. The Regional Director extended her heartfelt appreciation to the Administrations and Organizations for facilitating the participation of their experts in the meeting. She thanked Mr. Issoufou Abdoulaye (Niger) and Ms. Nokuthula Phakathi (South Africa), Chairperson and Vice-Chairperson of the Sub-Group for their leadership and the support provided so far to IIM Sub-Group activities.
- 6.3. The Regional Director reminded the meeting on various Conclusions and Decisions of the APIRG/27 meeting that called for actions, including the coordinated planning and the development of a seamless air traffic management (ATM) system, the alignment of regional Plans and Programmes on the latest editions the Global Aviation Safety Plan and the Global Air Navigation Plan, the support to foster regional progress on key priorities and challenges, the improvement of the management of Air Navigation Deficiencies, the implementation of Projects as well as ASBU elements.
- 6.4. The Regional Director further acknowledged the support received from the stakeholders, particularly the industry who, through several initiatives and other assistance activities continue to collaborate with the ICAO Regional Offices on AIM, CNS and MET issues affecting the Region. She concluded with a call for States' commitment, towards making a difference in the AFI Region and ultimately meeting the IIM/SG mandate.

7. Agenda

7.1. The meeting adopted the following agenda:

- Agenda 1. Adoption of the Agenda and the Work Programme, and Election of the Chairperson and Vice-Chairperson of the Sbu-Group**
- 1.1. Adoption of the agenda and the work programme
 - 1.2. Election of the Chairperson and Vice-Chairperson
- Agenda 2. Status of implementation of Conclusions and Decisions of the IIM/SG7 Meeting, and the Joint Session of APIRG/27 and RASG-AFI/10 and APIRG/27 Meeting applicable to the Sub-group.**
- 2.1. Review of the Conclusions/Decisions of the Sixth Meeting of the Infrastructure and Information Management Sub-Group (IIM/SG7)
 - 2.2. Review of the Conclusions/Decisions of the Joint Session of APIRG/27 and RASG-AFI/10 as well as APIRG/27 Meeting applicable to IIM/SG
- Agenda 3. Achievements in Infrastructure and Information Management**
- 3.1. Update on the Status of the Regional Air Navigation Plan
 - 3.2. Status of implementation of BBBs related to AIM, CNS and MET areas
 - 3.3 Status of implementation of ASBU elements in AIM, CNS and MET areas
 - 3.4. Progress in the implementation of AASPG IIM Projects
 - 3.5. Reframing IIM Projects for alignment with Results-Based Approach
 - 3.6 Reporting on Planning and implementation by States and Stakeholders

3.5. Other Air Navigation initiatives

- Agenda 4. Air Navigation Deficiencies**
 - Agenda 5. Implementation challenges of the Sub-group**
 - Agenda 6. Activities to be coordinated with the AASPG AAO and SMO Subgroups**
 - Agenda 7. Proposed recommendations/actions to be taken by ICAO HQ**
 - Agenda 8. Review of the Terms of Reference and Work Programme of the Subgroup**
 - Agenda 9. Any others business**
 - Agenda 10. Conclusions/Decisions of the Eight Meeting of the Infrastructure and Information Management Sub-Group (IIM/SG8)**
- Closing Ceremony**

8. Summary of Draft Conclusions and Decisions

8.1. The Summary of draft Conclusions and Decisions is provided in **Appendix 2** to this report.

PART II REPORT ON THE AGENDA ITEMS

Agenda Item 1: Adoption of the Agenda and the Work Programme, Election of the Chairperson and Vice Chairperson

1.1. Under this agenda item, the meeting discussed and adopted the agenda and the work programme proposed by the Secretariat and elected its Chairperson and Vice Chairperson. The meeting agreed on the following.

<i>Draft IIM/SG8 Decision 8/01: Election of the Chairperson and Vice-Chairperson of the Sub-Group</i>					
Why:	<i>That, in order to guide the activities of the IIM Sub-Group,</i>				
What:	<i>The following Officials were elected:</i> <ul style="list-style-type: none"> • <i>Eng. Mukuka Besa, Senior Inspector – AIS/ PANS-OPS, Zambia Civil Aviation Authority as Chairperson; and</i> • <i>Ms. Joyce Asante, Director Air Traffic Safety Engineering, Ghana Civil Aviation Authority as Vice-Chairperson.</i> 				
Who:	<i>IIM/SG8</i>				
When:	<i>4 August 2025</i>				
Implementation following-up					
Follow-up required	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Metrics	Metric 1: <i>AASPG/I Report</i>	Means to collect	Mean 1:

Agenda Item 2: Status of the implementation of Conclusions and Decisions of the IIM/SG7 Meeting, the Joint Session APIRG/27 and RASG-AFI/10 Meetings, and the APIRG/27 Meeting applicable to the Sub-group

Conclusions/Decisions of the Seventh Meeting of the Infrastructure and Information Management Sub-Group (IIM/SG7)

- 2.1. The meeting discussed progress made in the implementation of the Conclusions and Decisions adopted during the seventh Infrastructure and Information Management Subgroup (IIM/SG7) meeting, held in Dakar from 5 to 8 August 2024.
- 2.2. It was noted that the seventh IIM/SG meeting adopted three (3) Conclusions and five (5) Decisions. The implementation of the three Conclusions and one Decision is in progress while four Decisions are fully implemented. The details on the implementation status of the Conclusions and Decisions are provided in **Appendix 3** to this report.

Review of the Conclusions and Decisions of the Joint Session APIRG/27 & RASG/AFI 10 and the APIRG/27 Meetings applicable to the Sub-group

- 2.3. The meeting was provided with the progress made in implementing the Conclusions and Decisions adopted during the Joint Sessions of the APIRG/27 and RASG-AFI/10 meeting, as well as those from the APIRG/27 meeting applicable to the IIM/SG. It was noted that the Joint Session adopted six (6) Decisions and five (5) Conclusions while the APIRG/27 meeting adopted ten (10) Conclusions and eleven (11) Decisions. Of these, seventeen (17) Conclusions and/or Decisions were applicable to the IIM/SG with 80% 'In progress' and 20% completed. The implementation status of the Conclusions and Decisions pertaining to the Subgroup is provided in **Appendix 4** to this report.

Agenda Item 3: Achievements in Infrastructure and Information Management

Status of implementation of BBBs related to AIM, CNS and MET areas

- 3.1. The meeting was updated on the status of implementation of Basic Building Blocks (BBBs) in the AFI region. The presentation included figures on the level of States safety oversight on BBBs as provided in **Appendix 5** to this report.
- 3.2. The meeting discussed the status of BBBs in the Region and expressed concern regarding the low level of BBBs safety oversight. It also emphasized the need to have a clear picture of the actual implementation status of BBBs by Air Navigation Service Providers (ANSPs) in the Region. The meeting recommended exploring alternative mechanisms to collect reliable data on BBBs implementation by ANSPs. Accordingly, the following decision was formulated:

Draft IIM/SG8 Decision 8/02: Effective reporting on the implementation of the Basic Building Blocks (BBBs)	
Why:	<i>That, considering the low level of information on the implementation of the Basic Building Blocks (BBBs) in the region,</i>
What:	<i>the Secretariat to propose a mechanism to assist States in monitoring and reporting on the implementation of the BBBs by the end of December 2026.</i>

Who:	<i>Secretariat</i>				
When:	<i>31 December 2026</i>				
Implementation following-up					
Follow-up required	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Metrics	Metric 1: <i>Monitoring and reporting tool</i>	Means to collect	Mean 1: <i>SL to States</i>

Status of implementation of ASBU elements in AIM, CNS and MET areas

Actions taken on APIRG/27 Conclusions 27/16 and 27/17

- 3.3. The meeting was updated on actions taken on the *APIRG/27 Conclusion 27/16 – Monitoring of ASBU planning and implementation in the AFI Region* and on the *APIRG/27 Conclusion 27/17 – Establishment of National Air Navigation Coordination Committees*.
- 3.4. The meeting recalled that after a series of workshops with the focal points of States and Organizations, the AFI Air Navigation Deficiencies Database (AANDD) was officially launched through a webinar organized by the Secretariat on 17 May 2023, for the management of air navigation deficiencies, in line with the Uniform methodology for the identification, assessment and reporting of deficiencies.
- 3.5. While States and Organizations have been requested to fully participate and play their roles under the uniform methodology, several factors could impede their level of involvement in the process of air navigation deficiencies management, including:
- ineffectiveness of national coordination committees;
 - insufficient awareness of some focal points; and
 - change of employment for some nominated focal points and their non-replacement.
- 3.6. The meeting, noting that the ASBU monitoring in the AANDD platform is new, requested a specific training to enable the effective use of the system. It welcomed the workshop planned by the ICAO Regional Offices on the management of air navigation deficiencies and the monitoring of ASBU implementation, through the AANDD, scheduled from 15 to 18 September 2025.
- 3.7. The meeting was also informed about the ESAF ASBU Data input Workshop held in Kenya, from 16 – 20 June 2025 and the accessibility of ESAF ASBU Dashboard through the iSTARS platform.
- 3.8. The meeting urged States to establish, as appropriate, effective national committees called for by the *APIRG/27 Conclusion 27/17*. States and Organizations were encouraged to confirm, if not yet done so, the nomination of their AANDD Focal points to the ICAO Regional Offices; and ensure their effective participation in the planned workshop.
- 3.9. Some ANSPs expressed concern about not having the necessary permissions to access the AANDD Platform to update their States' planning and implementation data. The meeting recalled that the updating of States' data related to the regional air navigation plan is the responsibility of States. Hence the meeting emphasized on the importance for States to involve the ANSPs in the process, through the effective establishment their national committees.

Status of ASBU elements in CNS, AIM and MET fields

- 3.10. The level of implementation of ASBU elements in the region was presented, highlighting a low level for some elements. The status of the ASBU elements is provided in **Appendix 6** to this report. The meeting encourages States to pursue their efforts in ASBU implementation.
- 3.11. Concerns were raised regarding the accuracy of data which is not reflecting implementation efforts made by Service providers. Specifically, some ANSPs complained about the level of their involvement in the data collection in their respective States.
- 3.12. States were encouraged to improve their coordination mechanism, based on APIRG Conclusion 27/17, to involve their Service providers in the provision of data on planning and implementation.

Revision of Applicable ASBU elements in the Volume III of the AFI eANP

- 3.13. The meeting recalled the endorsement by APIRG/25 of ASBU Elements identified in the areas of AOP, ATM, SAR, CNS, AIM and MET, through the Decision 25/10.
- 3.14. The meeting also recalled the establishment of the AFI ATM Master Plan Project Management Team (AAMP PMT) by the APIRG/23 to develop the AFI ATM Master plan, required to provide the roadmap for the implementation of a seamless AFI ATM system. The project team released in 2023 the Version 1 of the AFI ATM Vision 2045, future Concept of Operations (CONOPS) document which formulates and describes the evolution of future AFI ATM system, as part of the AFI ATM Master plan.
- 3.15. The meeting emphasized the importance of aligning the AFI Regional Air Navigation Plan with the vision and performance objectives outlined in the strategic documents being finalized by the AAMP PMT.
- 3.16. To ensure consistency between eANP Volume III, the AFI ATM Master Plan, the AFI ATM Vision 2045, and future CONOPS, the meeting recommended that the IIM and AAO Subgroups, in line with their mandates, revise the ASBU elements applicable to the AFI Region. The revised elements will inform the next update of eANP Volume III for submission to AASPG. Accordingly, the meeting formulated the following Decision:

<i>IIM/SG8 Decision 8/03: Revision of ASBU elements in Volume III of AFI eANP</i>	
Why:	<i>That, to ensure the alignment of the volume III of the eANP with the vision and performance objectives contained in the AFI ATM Master plan and the AFI ATM Vision 2045 and future CONOPS strategic documents under finalization by the AFI ATM Master Plan Project Team,</i>
What:	<i>The Secretariat to:</i> <i>a) Coordinate with the AAO Subgroup Secretariat and the AFI ATM Master Plan Project Team, to undertake a revision of the ASBU elements applicable in the AFI Region; and</i> <i>b) Propose a subsequent amendment of Volume III of eANP, for submission to the AASPG, by 30 August 2026.</i>
Who:	<i>Secretariat</i>
When:	<i>.a), b) 30 August 2026</i>

Implementation following-up					
Follow-up required	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Metrics	Metric 1: <ul style="list-style-type: none"> Revised ASBU applicable elements Draft update of Vol II of eANP 	Means to collect	Mean 1: <i>SL to States</i>

Implementation of ASBU elements and Achievements of IIM Projects

3.17. The Meeting was provided with the achievements of IIM Projects, acknowledged the progress made, and provided guidance to further support States in implementing ICAO SARPs and ASBU elements in CNS, AIM, and MET areas.

For Communication, Navigation and Surveillance related Projects

- 3.17.1. The COM 1 project on Ground/Ground Communication (ATS/DS, AIDC, VoIP) achieved the revision of key documents including the completion of the draft AIDC guide, and launched a survey to assess implementation across States in the AFI region. Challenges include limited expert participation, the need to validate the action plan and budget, and the importance of reinforcing the project team for effective implementation.
- 3.17.2. The COM 2 project supports States of the AFI in transitioning from AFTN to AMHS. Key achievements include monitoring implementation progress and launching a regional survey. Challenges identified include low interconnection rates, insufficient training, limited infrastructure readiness, lack of AMC registration, outdated contact details, and delays in service restoration. The project recommends timely feedback from States and designation of experts to lead support activities.
- 3.17.3. The COM 4 project aims to implement an integrated telecommunications infrastructure across the AFI region. Achievements include project documentation, a questionnaire, and assessment of VSAT networks. Ongoing actions focus on improving interoperability, drafting IP VPN procedures, upgrading AFISNET links, and preparing for the transition to ATN/IPS.
- 3.17.4. The COM 5 project focuses on assessing and enhancing cyber resilience in Air Navigation Services in the AFI region. Key achievements include the development and update of the AFI ANS Cyber Resilience Framework and the successful conduct of an ICAO regional aviation cybersecurity workshop in Nairobi in October 2025. The seminar gathered over 115 participants and promoted awareness, collaboration, and best practices in aviation cybersecurity across the region.
- 3.17.5. The Surveillance Project supports the implementation of interoperable and performance-based surveillance systems in the AFI region. Key achievements include a regional infrastructure survey, a Mode S and 24-bit address workshop, and a draft update of the AFI Surveillance Strategy. Future initiatives focus on space-based ADS-B, integrated surveillance systems, and UAS monitoring. Challenges include limited expert participation, which has slowed progress and technical coordination.

- 3.17.6. The SPEC project focuses on protecting aeronautical frequency spectrum from harmful interference. Key achievements include updating project documentation to address 5G impacts, developing collaboration templates between CAAs and regulators, and hosting regional workshops on ICAO tools and frequency management.
- 3.17.7. The meeting expressed the need for workshops to be organized by ICAO to assist States in preparing for WRC-27 and to promote ICAO's position for the conference.
- 3.17.8. The meeting noted that no progress reports were received for the COM 3 Project on the implementation of Air/Ground communication (HF/VHF voice, data, CPDLC), nor for the NAV Project focused on the deployment of conventional Nav aids and GNSS (Core and Augmented) to support PBN implementation.

For Aeronautical Information Management related Projects

- 3.17.9. APIRG/25 adopted AIM Projects 4 and 5 under IIM/SG to enhance monitoring of aeronautical information quality, improve NOTAMs, and support the implementation of aerodrome mapping and instrument flight procedure data sets. APIRG/26 recognized challenges in project team composition, particularly the shortage of expertise in flight procedure design and aeronautical charting and tasked the Secretariat to establish clear criteria for nominating qualified experts.
- 3.17.10. IIM/SG7 reviewed and endorsed the proposed selection criteria, issuing Decision 7/02 directing the Secretariat to circulate them to States and Organizations. In response, the Secretariat disseminated the criteria through State Letter T17/6.11 C-0153 dated 11 March 2025, inviting nominations of subject matter experts for both AIM Projects 4 and 5.
- 3.17.11. As a result, twelve States and two Organizations nominated twenty-four candidates. Following assessment, two project teams of eleven experts each were established, and activities were officially launched via a webinar on 30 July 2025. The meeting commended the Secretariat for operationalizing the projects, acknowledged the contributions of States and Organizations in nominating experts, and encouraged the project teams to begin their work.

For Aeronautical Meteorological (MET) related Projects

- 3.17.12. Of the five MET projects, two (MET 3 and 4) reported progress. MET 3 delivered a Concept of Operations for Space Weather Services, an AIC on Annex 3 requirements, revised project costs, and workshops on space weather implementation. MET 4 completed a survey on MET competency status and held a workshop on competency standards. However, low participation of experts, limited training resources, and weak regulatory adoption remain key challenges, highlighting the need for stronger State commitment, increased funding, and sustained expert support.
- 3.17.13. The meeting noted that no progress reports were received from MET Project 1 *on the Provision of global, regional, and local meteorological products/Information*, MET Project 2 *on the Provision of meteorological information in the ICAO Meteorological Information Exchange Model (IWXXM) format* and MET Project 5 *on the Mitigation of the deficiencies related to the availability of the OPMET data in the AFI region*.

Reframing AASPG IIM projects

- 3.18. The Twentieth APIRG Meeting (APIRG/20, Yamoussoukro, Côte d'Ivoire, 30 November–2 December 2015) endorsed the initial set of projects identified by Sub-groups and tasked the Secretariat to develop a consolidated catalogue in a standard format.
- 3.19. The Twenty-first Meeting (APIRG/21, Nairobi, Kenya, 9–11 October 2017) established the consolidated catalogue with standardized project descriptions. Since then, projects have recorded notable achievements as presented in **Appendix 7**. However, the AFI Region continues to face persistent implementation challenges in CNS, AIM, and MET, repeatedly highlighted by APIRG, IIM/SG and other monitoring bodies. Low project performance stems from the lack of robust results framework, resulting in vague objectives, unclear deliverables, weak monitoring and evaluation, limited ownership and coordination, blurred accountability, and uncontrolled project timelines.
- 3.20. Considering the above, broad consensus emerged on adopting results-based project management (RBM) to define clear outcomes, strengthen performance monitoring, and ensure alignment with the ICAO GANP and the AFI Regional ANP. Accordingly, existing projects were reviewed and reframed into RBM-based projects proposals in CNS, AIM, and MET as provided in **Appendices 8 to 12** for CNS related projects, **13 to 14** for AIM related projects and **15 to 18** for MET related Projects.
- 3.21. The meeting examined these proposals and provided guidance for their consolidation and submission to AASPG through the Programme Review and Coordination Committee. The following Decision was formulated.

Draft IIM/SG8 Decision 8/04: Endorsement of the restructured IIM-SG projects in CNS, AIM and MET					
Why:	<i>That, to effectively enhance the support to States in implementing ICAO SARPs and ASBU elements through the project management approach,</i>				
What:	<p><i>a) The proposed results-based projects derived from the restructuring of existing CNS, AIM and MET projects, as presented in Appendices 8 to 18 to this report, are endorsed; and</i></p> <p><i>b) Considering that the results-based IIM projects stem from the restructuring of the existing IIM projects, the activities of the latter listed in Appendix 19 are dissolved.</i></p>				
Who:	AASPG				
When:	November 2025				
Implementation following-up					
Follow-up required	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Metrics	Metric 1: AASPG Report	Means to collect	Mean 1:

Project on the Implementation of Competency-Based Training Standards for AIS personnel

- 3.22. The meeting noted that a roadmap for transitioning from Aeronautical Information Services (AIS) to Aeronautical Information Management (AIM) has been developed, following Doc 9750 guidance. The transition introduces new products and services, focusing on timely, high-quality data distribution to enhance safety, efficiency, and cost-effectiveness.
- 3.23. AIM has increased reliance on digital technologies, making digital data the core of all AIS processes. Annex 15 requires automation and data set distribution via information services, as detailed in PANS-IM (Doc 10199).
- 3.24. The global Air Traffic Management system’s dependence on digital aeronautical data requires AIS personnel to maintain competence in information systems, data models, exchange formats, and overall computer literacy. Annex 15 mandates clearly defined knowledge, skills, and abilities for each AIS function, with personnel receiving appropriate training.
- 3.25. The Manual on Aeronautical Information Services Training (Doc 9991) guides AIS providers in applying the ICAO competency framework to develop models tailored to regulatory, operational, technical, and organizational needs.
- 3.26. To assist AFI States in implementing these competency models, the meeting reviewed the draft project “Implementation of Competency-Based Training Standards for AIS Personnel in the AFI Region,” recognizing its relevance and providing guidance for finalization and submission to the AASPG via the PRCC. The meeting formulated the following Decision.

<i>Draft IIM/SG8 Decision 8/05: Endorsement of the AIM project on the Implementation of Competency-Based Training Standards for AIS personnel</i>					
Why:	<i>That, to assist States in implementing ICAO provisions in respect of competencies, knowledge, skills and abilities required for AIS functions, through a competency model and specific regulatory requirements on qualifications and training of AIS personnel,</i>				
What:	<i>the project on “the Implementation of Competency-Based Training Standards for AIS personnel (AIM-CBTS)”, as presented in Appendix 20 to this report, is endorsed</i>				
Who:	<i>AASPG</i>				
When:	<i>November 2025</i>				
Implementation following up					
Follow-up required	Yes <input type="checkbox"/>	Metrics	Metric 1: <i>AASPG Report</i>	Means to collect	Mean 1:
	No <input checked="" type="checkbox"/>				

Calibration of surface-based meteorological instruments and Strengthening Wind Shear Warning Capabilities for Safer Aviation Operations in the AFI Region

- 3.27. The meeting emphasized that accurate meteorological observations and timely warnings are essential for the safety, regularity, and efficiency of international air navigation. ICAO Annex 3 and WMO regulations require States to ensure calibration and traceability of surface-based meteorological sensors, and to provide reliable information on hazardous phenomena through

effective warning and reporting networks. Despite progress, ICAO USOAP findings and ICAO/WMO mission reports highlight persistent gaps in the AFI Region, particularly in MET sensors/instruments calibration and wind shear (WS) reporting at aerodromes.

3.28. Regarding the Calibration and Control of Surface-Based MET Sensors, Annex 3 mandates integrated automatic systems with calibrated displays at Air Traffic Units, traceable data, and regular maintenance. Many States in the AFI region are yet to comply fully; most lacking certified reference instruments, documented procedures, and regular traceable calibration. Calibration is often irregular or outsourced, and poorly integrated into MET Quality Management Systems (QMS). To assist States in establishing operational mechanisms for regular control and calibration of surface-based MET instruments, the meeting reviewed the proposed draft project on ‘*Calibration and Control of Surface-based MET Sensors and Instruments (AFI-METCAL)*’ as provided in **Appendix 21**, recognizing its relevance and providing guidance for finalization and submission to the AASPG via the PRCC.

3.29. Regarding the Wind Shear Warning Capabilities, the meeting recalled that Annex 3 requires States to issue WS warnings at aerodromes where conditions warrant. However, capacity and infrastructure are uneven across the region. Many States lack operational WS detection systems, trained personnel, and coordinated procedures for handling WS events. To address these issues, the meeting acknowledged the proposed project on ‘*Strengthening Wind Shear Warning Capabilities in the AFI Region AFI-WARN*’ as provided in **Appendix 22** to this report and encouraged the Secretariat to finalize and submit the Project Definition to the AASPG through the PRCC.

3.30. In the view of the above, the following Decision was formulated.

<i>Draft IIM/SG8 Decision 8/06: Endorsement of MET project on calibration of surface-based meteorological sensors and instruments and Project on Strengthening Wind Shear Warning Capacity for Safer Aviation Operations in the AFI Region</i>					
Why:	<i>That, to assist States in strengthening the accuracy, traceability, and reliability of meteorological observations, as well as in enhancing Warning and Reporting Wind Shear events in the AFI Region,</i>				
What:	<i>The projects on Calibration of surface-based meteorological sensors and instruments (AFI-METCAL) and on Strengthening Wind Shear Warning Capacity for Safer Aviation Operations in the AFI Region (AFI-WRN) as presented in Appendices 21 and 22 are endorsed.</i>				
Who:	AASPG				
When:	30 November 2025				
Implementation following-up					
Follow-up required	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Metrics	Metric 1: <i>AASPG Report</i>	Means to collect	Mean 1:

Reporting on Planning and implementation by States and Stakeholders

Moving from Magnetic to True North

- 3.31. Nigeria updated the meeting on the ongoing plan to transition from Magnetic North to True North. In December 2022, ICAO conducted a survey (Ref: AN 11/57-22/87) to gauge States' and industry stakeholders' support for the transition and to identify potential challenges.
- 3.32. The survey received 564 responses from a wide range of stakeholders, including civil aviation authorities (CAAs), air operators, air navigation services providers (ANSPs), aerodrome operators, original equipment manufacturers (OEMs), flight procedure design organizations, training organizations and military. Results showed 61% support, 9% opposition, and 30% neutrality toward the transition.
- 3.33. Annex 4 to the Chicago Convention recommends reviewing magnetic variation every five years. The meeting noted the challenges raised in implementing True North and encouraged ICAO Regional Offices to raise awareness in the AFI Region and support the design of a transition plan. States were urged to join preparatory meetings, develop training plans for all relevant personnel, and prioritize registering aircraft with True North capability.

Update on the implementation of the IWXXM in the AFI Region

- 3.34. The meeting received an update on the global and regional implementation of the ICAO Meteorological Information Exchange Model (IWXXM), which enables the digital representation and exchange of aeronautical meteorological information. It recalled the provisions of Annex 3 to the Chicago Convention, which since Amendment 78 has required the gradual transition from the Traditional Alphanumeric Code (TAC) to IWXXM. The meeting further noted that Amendment 82, applicable in November 2025, restructures Annex 3 to support the migration of aeronautical meteorological information from a "product-centric" to an "information-based" environment under System-Wide Information Management (SWIM), in alignment with the Global Air Navigation Plan (GANP).
- 3.35. The meeting reviewed the results of a survey presented by the ICAO Working Group on the Exchange of Meteorological Information (WG-MIE) to the Sixth Meeting of the Meteorology Panel (METP/6). The survey revealed that 101 of ICAO's 193 Member States (52.3%) currently have IWXXM data routed to the EUR region and made available on SADIS. However, not all these States generate their own IWXXM messages, as some rely on translations provided by other States. The meeting expressed concern that no IWXXM messages are available on SADIS in the AFI Region. At the same time, it commended South Africa for the successful migration from the AFTN to the AMHS network, while noting with concern the absence of an AMHS link between the two Regional OPMET Data Banks/Inter-regional OPMET Gateways (RODBs/IROGs) in Dakar and Pretoria.
- 3.36. To address these challenges, the meeting agreed to establish a dedicated consultation between South Africa, Senegal, and ASECNA to identify immediate, medium-term, and long-term solutions for the effective implementation of IWXXM in the Region. Based on the outcomes of this consultation, the meeting formulated the following Conclusion.

Draft IIM/SG8 Conclusion 8/07: Implementation of the IWXXM in the AFI Region

Why:	<i>That, considering the lack of the implementation of the ICAO Meteorological Information Exchange Model (IWXXM) in the AFI Region as well as the need for transitioning to the exchange of the operational meteorological data in digital format,</i>				
What:	<ul style="list-style-type: none"> a) <i>The Inter-Regional OPMET Gateways (IROGs) of Dakar and Pretoria are urged to coordinate the interconnexion of the network by June 2026;</i> b) <i>IROG Dakar to migrate from asynchronous protocols to the internet protocol (IP) by June 2026;</i> c) <i>ASECNA is urged to:</i> <ul style="list-style-type: none"> i. <i>upgrade the Air Traffic Services (ATS) Message Handling System (AMHS) of Dakar to the File Transfer Body Part (FTBP) capability by June 2026;</i> ii. <i>expedite the implementation of the Regional OPMET Data Bank (RODB) IWXXM capability by June 2026; and</i> iii. <i>proceed with the establishment of a VPN link between the RODB Dakar and RODB Pretoria by June 2026.</i> d) <i>Senegal and South Africa, the host of the two OPMET regional databases, to fast-track the planning and operational tests of the AMHS FTBP and IWXXM format by June 2026;</i> e) <i>AFI MET Bulletin Compiling Centers (BCCs) to expedite the planning and operational deployment of the AMHS FTBP and IWXXM exchanges by December 2026; and</i> f) <i>The Secretariat to:</i> <ul style="list-style-type: none"> i. <i>Coordinate with ASECNA and SAM Region to assess the feasibility of installing REDIGII Node in Dakar to enhance CNS capability across the AFI Region; and</i> ii. <i>organize a workshop/seminar on AMHS by the November 2026.</i> 				
Who:	<ul style="list-style-type: none"> . a) and b) <i>IROGs Dakar and Pretoria</i> . c) <i>ASECNA</i> . d) <i>Senegal and South Africa</i> . e) <i>BCCs States</i> . f) <i>Secretariat</i> 				
When:	<ul style="list-style-type: none"> . a), b), c), d) <i>30 June 2026</i> . e) <i>31 December 2026</i> . f) <i>30 November 2026</i> 				
Implementation following-up					
Follow-up required	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Metrics	Metric 1: <i>AFI Region with IWXXM capability developed</i>	Means to collect	Mean 1: <i>SL to States</i>

Harmonizing Regional Air Navigation

3.37. The future ATM environment should enable safe and efficient aircraft operations with minimal avionics changes, across all regions. However, fragmented development of ATC systems by individual States and ANSPs has created uneven capabilities, limiting global interoperability. ICAO's GANP and ASBU framework call for harmonized deployment of technologies to achieve seamless airspace, but timelines vary widely between and within regions.

3.38. In the AFI region, many projects lag behind global targets, especially in critical areas such as ATFM, trajectory-based operations, AIS/AIM transition, SWIM, and digital communications. These disparities reduce the benefits of investments, limit operational efficiency, and discourage further airline investments. IATA's URATS guidance complements the GANP by setting clear user requirements for CNS/ATM systems, aiming to align infrastructure with operational needs.

3.39. To accelerate progress, IATA emphasizes key priorities requiring close coordination, including civil-military cooperation and flexible use of airspace, direct routing and free route airspace, effective ATFM, and full implementation of AIM under global standards. These measures are essential for cost-effective, predictable, and fuel-efficient operations, ensuring that AFI States and ANSPs can deliver sustainable improvements and move towards seamless air navigation.

Implementation of Wide Area Multilateration (WAM) surveillance System in the Gulf of Guinea

3.40. The meeting was recalled that the growing volume of flight operations and airspace complexity in the Gulf of Nigeria required dedicated communication, navigation, and surveillance (CNS) systems to ensure safe and efficient management of low-level helicopter operations supporting oil and maritime activities.

3.41. The deployment of Wide Area Multilateration (WAM) will provide enhanced CNS capabilities, strengthen Search and Rescue operations, and improve the management of unmanned aircraft systems (drones). The initiative covers assessments of existing CNS/ATM, security, and SAR systems; deployment of modern CNS facilities; airspace redesign and PBN implementation; establishment of air traffic and maritime control centers; and WGS'84B surveys of helipads, airstrips, and obstructions.

3.42. In April 2018, Nigeria launched the deployment with 95% completed and full operational status expected by the last quarter of 2025. The meeting commended Nigeria's progress and encouraged State to share their experiences.

Flight and Flow Information for a Collaborative Environment (FF-ICE) Developments in the United States

3.43. The meeting received an update on the implementation of the FF-ICE in the United States of America (USA). Since the inception of FF-ICE in 2008, the Federal Aviation Administration (FAA) has played a leading role in developing the concept, contributing to ICAO Doc 9965, and validating it through prototypes, demonstrations, and international collaborations. To operationalize FF-ICE in the U.S., the FAA established the Common Support Services–Flight Data (CSS-FD) program, designed to enhance flight data management and implement FF-ICE/R1 services in two phases, including advanced planning, data management, and future integration with other FAA systems. The FAA has also validated FF-ICE provisions globally through initiatives such as the 2018 International Interoperability Harmonization and Validation project.

3.44. At the global level, ICAO's AN-CONF/14 recognized the need to transition from FPL2012 to FF-ICE by 2034, endorsing recommendations to phase out legacy systems and advance collaborative information services. Following APIRG/26, the AASPG FF-ICE Project Team was launched in 2024 to drive implementation across the region. The FAA continues to share its expertise through regional workshops, prototype demonstrations, and collaboration in ICAO panels to ensure global readiness for FF-ICE. It welcomes closer cooperation with the AASPG FF-ICE Project Team to share lessons learned and support the smooth transition toward enhanced flight planning and collaborative decision-making.

World Meteorological Organisation (WMO) activities of relevance to ICAO (Chinga)

3.45. The meeting received an overview of activities of the World Meteorological Organization (WMO) of relevance to ICAO. WMO's RA I Committee on Services (CoS), through its Working Group on Aeronautical Meteorology and Cost Recovery (RA I-WG-Aero), oversees aviation meteorological services in Africa. In 2024, WMO held an Aviation Meteorology Training Seminar in Pretoria with the UK Met Office and South African Weather Service. In August 2025, it supported the ESAF Regional Workshop on Aeronautical Meteorology in Nairobi, focused on service delivery transformation and climate resilience. WMO is also expanding the AMDAR Programme in Africa with Ethiopian Airlines and the Ethiopian Meteorological Institute, while rolling out the Early Warnings for All (EW4All) initiative in 24 African countries to strengthen early warning systems and aviation safety. It also provided links to WMO resources.

3.46. The meeting recognized the vital role that WMO play in supporting aeronautical meteorology across Africa, in alignment with ICAO's strategic objectives. The meeting then encouraged the continued collaboration between the two Organizations in the implementation of aeronautical meteorological standards in the Region.

Other Air Navigation initiatives

Progress Report of RBIS Project

3.47. The meeting received an update on the AIM RBIS project. Since its extension, eleven assistance missions were conducted between September 2023 and June 2025 in Benin, Côte d'Ivoire, DRC, Guinea, Mauritania, Nigeria, Liberia, Senegal, Sierra Leone, and Togo, with Gabon scheduled for August 2025. These missions, delivered as workshops, built the capacity of CAAs, ANSPs, and airports staff on QMS, AIXM, eAIP, and TOD, supported by generic regulatory and implementation documentation. Most States have submitted action plans, with Roberts FIR (Guinea, Liberia, Sierra Leone) making notable progress in establishing a QMS and acquiring AIXM and eAIP systems. The meeting commended the achievements and encouraged States to pursue full implementation of their action plans.

Progress Report of Codevmet Project

3.48. The meeting was briefed on the progress made by the CODEVMET project since the resuming of project activities in 2021. The achievements include the following:

- Assistance to States – MET Safety Oversight: Nine (9) States (Botswana, Cameroon, Cabo Verde, Côte d'Ivoire, Gabon, Gambia, Senegal, Sierra Leone, Togo) assisted with the enhancement of their MET Safety Oversight Capacity through alignment of national regulations with the ICAO SARPs.
- Assistance to States – QMS Implementation: Support provided to eight (8) States (Cameroon, Cabo Verde, Côte d'Ivoire, Gabon, Gambia, Senegal, Sierra Leone, Togo) for the QMS situational analysis, development of QMS implementation roadmap, and action plans.
- Improvement of OPMET exchange in the Region: Ongoing alignment of the OPMET information exchange procedures and system with the ICAO related SARPs.

- Assistance to States – AMET-B1 Implementation: Remote support provided to six (6) States (Botswana, Cabo Verde, Côte d’Ivoire, Nigeria, and Niger Senegal) and ASECNA in the assessment of AMET-B1 elements status at international airports. Gaps analysis is underway with the view of assisting in developing AMET-B1 implementation action plan.

3.49. The meeting acknowledged the significant progress of the CODEVMET Project and encourage States to leverage on the Project to address ANS deficiencies in MET.

Outcomes of the ACAO/ICAO Radio Navigation Workshop

3.50. The meeting was provided with an update on the outcomes of the ACAO/ICAO Radio Navigation workshop held in Rabat (Morocco) from the 24 to 26 February 2025. The meeting took note of the objectives of the GNSS RFI reporting procedure, actions and responsibilities to be taken by all stakeholders and the proposed GNSS RFI reporting procedure.

3.51. The meeting was also informed that to support aviation stakeholders, especially States and Air Navigation Service Providers (ANSPs), in identifying, assessing, and mitigating the risks associated with Radio Frequency Interference (RFI) affecting GNSS, ICAO developed an implementation Package (iPack). One iPack for GNSS RFI will be ready for implementation by the end of the year.

Update on support initiatives for States with persistent OPMET availability issues

3.52. The meeting received an update on support provided to States with persistent OPMET availability issues. Three States (Liberia, Guinea, Sierra Leone) benefited from assessments of MET infrastructure and services at their international airports, conducted by Senior CNS and MET Experts from 19 to 21 May 2025 in Liberia; from 28 to 30 May 2025 in Sierra Leone and from 2 to 6 June 2025 in Guinea. Key gaps were found in automatic observation and data dissemination, sensor calibration, equipment serviceability, forecasting tools, infrastructure, and staff competency. The mission recommended sensor calibration (with priority on pressure sensors), acquisition of a spare barometer and control tools, procurement of digital instruments for accurate data collection, and implementation of the SADIS API for access to WAFS forecasting and aeronautical data. It also urged the Secretariat to develop dedicated projects to assist States in addressing challenges affecting OPMET quality and availability, as highlighted in the May/June 2025 assessment reports on MET infrastructures and facilities in the three States.

Progress Report on the Update of the AMBEX System and Supporting Procedures

3.53. The meeting reviewed the progress on updating the AFI AMBEX Handbook, the primary reference for OPMET exchange. The current edition (2014, Amendment 4) is outdated, while Annexes 3 and 10 have since undergone major revisions. Persistent challenges in OPMET Exchange remain in the AFI Region, including unavailability, delays, and poor quality of OPMET data, particularly SIGMETs.

3.54. To address these issues, a multidisciplinary CNS/MET team was established under CODEVMET Project to lead the update of the AMBEX Handbook. The team conducted a regional survey (23 May–4 June 2025) to assess State compliance with Annex 3, evaluate OPMET data availability via GTS/AMHS, and identify operational gaps. Inputs were provided by NOCs/BCCs (Dakar, Niamey, Ouagadougou, Lomé), ROC Toulouse, and RODB Dakar and Pretoria. Given the

short timeframe for the survey, the meeting noted that additional information from other NOCs and BCCs would be shared by the Secretariat to support the update of the AFI AMBEX System and Procedures.

3.55. The assessment revealed several shortcomings, notably outdated bulletin headers and routing tables; inactive or missing stations; inconsistent timeliness and completeness of bulletins; limited IWXXM integration due to continued reliance on AFTN and incomplete AMHS implementation; weak AFI communication infrastructure (availability below 97%, poor redundancy, lack of contingency); and gaps in coordination, monitoring, quality control, and staff training.

3.56. The meeting acknowledged the relevance of the recommendations to address the identified shortcomings, urged the team to expedite the update of the Handbook, and emphasized the urgent need to modernize the AMBEX system and procedures to ensure timely, reliable, and globally compliant OPMET information exchange in the AFI Region. It was also noted that additional information from other NOCs and BCCs would be shared by the Secretariat to support the update of the AFI AMBEX System and Procedures. The following Conclusion was formulated accordingly.

<i>Draft IIM/SG8 Conclusion 8/08 Effective Implementation of the AFI AMBEX System and Procedures</i>					
Why:	<i>That, to enhance the implementation and monitoring of the performance of the AFI AMBEX System,</i>				
What:	<i>the Secretariat, to</i> <i>a) support the ongoing update of the AFI AMBEX System and Procedures, in coordination with the NOCs, BCCs and IROGs/RODBs by 31 October 2025;</i> <i>b) circulate the draft Update of AMBEX Handbook to States and stakeholders for their review and contributions by 31 October 2025;</i> <i>c) organise a validation workshop on the Updated AMBEX System and procedures by 30 June 2026; and</i> <i>d) submit the consolidated draft Update AMBEX Handbook to the IIM/SG9 Meeting.</i>				
Who:	<i>Secretariat</i>				
When:	<i>.a), b) 31 October 2025</i> <i>.c) 30 June 2026</i> <i>.d) IIM/SG9 Meeting</i>				
Implementation following-up					
Follow-up required	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Metrics	Metric 1: <i>Update AMBEX Handbook</i>	Means to collect	Mean 1: <i>SL to States</i>

Global developments related to CNS and GIS

3.57. The meeting was briefed on recent developments in CNS and Global Interoperable Systems (GIS) within aviation and digital infrastructure, focusing on global planning, integrated CNS and Spectrum, and interoperability of aviation information exchange systems. Highlights included Annex 10 Amendments (Volumes II & III) adopted with related manuals, major updates to the 8th GANP for endorsement at the 42nd ICAO Assembly, Progress on the Integrated CNS and Spectrum (ICNSS) concept, Launch of the VHF-COM module on the Frequency Finder platform,

as well as the Draft Trust Framework Implementation Manual on cybersecurity and resilience due early 2026.

Minimizing GNSS RFI occurrence through effective regulatory measures and enforcement

3.58. The meeting was updated on the outcome of the ACAO/ICAO Radio Navigation Workshop, held in Morocco, from 24 to 26 February 2025. The workshop aimed to minimize GNSS RFI occurrence through effective regulatory measures and enforcement, Support Air Crews in Operational Risk Reduction and Management, ensure effective support to flight crews while maintaining safety, ensure suitable CNS capabilities are available as required, strengthen capabilities to maintain PBN and optimize operational efficiency by leveraging current technology, achieve Robust Positioning, Navigation, and Timing (PNT) through long-term C-PNT development. As outcomes of the workshop, the feedback received included (but not limited to) some information imposing an unnecessary burden to be filled out street address, ZIP code, etc., pilot not able to determine the affected GNSS elements (GPS, GLONASS, GALILEO, DBS, EGNOS, WAAS, etc) and/or affected constellation frequency (L1, L5 or both) as requested in the form, different status of certain fields (some mandatory, while others can remain optional like “coordinates of the area of occurrence/time” field). In the view of the above, the meeting formulated the following Decision.

Draft IIM/SG8 Decision 8/9: Improvement of the GNSS RFI Risk Management					
Why:	<i>That, to support States, Air Navigation Service Providers (ANSPs) and aviation stakeholders in identifying, assessing and mitigating the risks associated with Radio Frequency Interference (RFI) affecting GNSS,</i>				
What:	<i>the Secretariat to organise a workshop on Radio Navigation by 31 December 2026.</i>				
Who:	<i>Secretariat</i>				
When:	<i>31 December 2026</i>				
Implementation following-up					
Follow-up required	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Metrics	Metric 1: <i>Outcomes of the workshop</i>	Means to collect	Mean 1: <i>SL to States</i>

Outcomes of the Workshop on the provision of information on volcanic eruptions and ash clouds

3.59. The meeting was presented with the outcomes of a WACAF workshop on volcanic eruptions and ash cloud information held in Yaoundé, Cameroon, from 16–20 2025. The workshop aimed to strengthen inter-agency volcanic ash response and aviation safety, following successful exercises in Cabo Verde (2021) and the Democratic Republic of Congo (2023); and targeted VAACs, ACCs, MWOs, AMOs, NOFs, regulators, and other stakeholders. Its objectives were to enhance understanding of volcanic hazards and their aviation impact, improve coordination and communication, and build capacity for timely detection, forecasting, and dissemination of ash cloud information.

3.60. Thirty-four participants from six States (Angola, Cameroon, Côte d’Ivoire, DRC, Liberia, Senegal), ASECNA, and ROBERTS FIR attended. The workshop report is provided in the Appendix. Participants gained a comprehensive understanding of international and regional monitoring and reporting arrangements. Key achievements included identifying challenges and priority areas for improvement, proposing an action plan for drafting and signing a Letter of Agreement (LoA) with a template for stakeholder use, mapping key stakeholders, drafting standard

operating procedures, conducting a volcanic ash safety risk assessment, and preparing a template national volcanic ash contingency plan. The meeting acknowledged the outcomes of the workshop and urged the Secretariat to coordinate a virtual ESAF workshop to develop materials for the use by States, ensuring they reflect a comprehensive and representative picture of the volcanic activities in the AFI region. The following Conclusion was formulated accordingly.

<i>Draft IIM/SG8 Conclusion 8/10: Improvement of the management of the volcanic events in the AFI region</i>					
Why:	<i>That, to assist States in enhancing their capability in the provision of information on volcanic activities in the AFI region,</i>				
What:	<i>the Secretariat to organise a workshop on the development of generic materials on the management of information related to the Volcanic Eruptions and Ash Clouds by 31 December 2026.</i>				
Who:	<i>Secretariat</i>				
When:	<i>31 December 2026</i>				
Implementation following-up					
Follow-up required	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Metrics	Metric 1: <i>Outcomes of the workshop</i>	Means to collect	Mean 1: <i>SL to States</i>

Update on the preparation of the AFI ANS SUMMIT

3.61. The meeting was briefed on the status of the preparation of the AFI ANS Summit as directed by APIRG as well as related implementation actions undertaken by the assigned stakeholders. The AFI ANS Summit, mandated by APIRG to support a harmonized, interoperable, and seamless Air Traffic Management (ATM) system, has made steady progress since early 2024. Preparatory actions include virtual coordination meetings led by IATA, development of a roadmap and terms of reference, and the first WORK@Lab held in June 2024. Following APIRG/27 directives, the Summit framework has been aligned with the AASPG handbook to ensure structured project development and consolidation under a single AASPG-driven mechanism.

3.62. Challenges remain, including limited State participation, time constraints, scarcity of qualified ANS experts, parallel uncoordinated initiatives, and ongoing refinement of reference documents such as the AFI ATM Master Plan and Africa Aviation Infrastructure Gap Analysis. Physical-only meetings limited inclusivity, highlighting the need for hybrid and online modalities to engage all stakeholders under the ICAO “No Country Left Behind” principle.

3.63. To address these challenges, Summit preparations will leverage existing AASPG project teams enhanced with additional State and industry expertise. A three-layer structure has been adopted including PRCC for review, the Secretariat for coordination, and a multidisciplinary expert team for project identification and development. All outputs will be consolidated into a single AFI ANS Projects Catalogue, capturing objectives, timelines, deliverables, resources, and risk management considerations.

3.64. States political and financial engagement on the approved ANS Projects Catalogue will be coordinated by AUC and AFCAC. Continued coordination, alignment with AASPG procedures,

and inclusion of all stakeholders are essential to ensure the Summit delivers meaningful projects that advance seamless and interoperable Air Navigation Systems across Africa.

3.65. In the view of the above and considering the regional priorities as well as the Africa Aviation Infrastructure Gap Analysis, the meeting identified relevant projects in CNS, AIS and MET for inclusion in the AFI ANS Projects Catalogue. The following Decision was formulated accordingly.

Draft IIM/SG8 Decision 8/11: Proposal of inclusion of CNS, MET and AIM Projects to the AFI ANS PROJECTS CATALOGUE	
Why:	<i>That, to foster the preparation of the AFI ANS Summit,</i>
What:	<p>1) <i>The following projects in the areas of CNS, AIM and MET are included in the AFI ANS PROJECTS CATALOGUE.</i></p> <p>a) In the CNS area:</p> <ul style="list-style-type: none"> i. AFI-GGCOM AFI: <i>Regional Ground Communication Modernization</i> ii. AFI NAVMOD AFI: <i>Navigation Modernization Initiative</i> iii. AFI-SPEC: <i>AFI Aviation Spectrum Coordination and Protection Initiative</i> iv. AFI SURVDATA: <i>AFI Surveillance and Data Sharing Enhancement Initiative</i> v. AFI-IATI: <i>AFI Integrated Aeronautical Telecommunication Infrastructure</i> vi. AFI-SWIM: <i>Implementation of System Wide Information Management (SWIM)</i> vii. AFI-COMMOD: <i>Modernization of Air-Ground Communication Infrastructure</i> viii. AFI-ATSEP: <i>Capacity building and harmonization of training for ATSEP</i> ix. AFI-CYRES: <i>AFI Cyber Resilience in CNS/ATM Systems</i> <p>b) In the AIM area:</p> <ul style="list-style-type: none"> i. AIM ADQ: <i>Monitoring of the Aeronautical information quality and Improvement of NOTAM</i> ii. AIM AMDIFP: <i>Implementation of Aerodrome mapping data sets and Instrument flight procedure data sets</i> iii. AIM CBTS: <i>Implementation of Competency-Based Training Standards for AIS personnel in the AFI Region</i> iv. AIM AIXM: <i>Implementation of the AIXM database and electronic AIP</i> v. AIM TOD: <i>Implementation of Terrain and Obstacle Data Set</i> vi. AIM-MET QMS: <i>Implementation of QMS for AIM and MET</i> <p>c) In the MET area:</p> <ul style="list-style-type: none"> i. AFI-AMP-COMP: <i>Strengthening Aeronautical Meteorological Personnel Competency Implementation in the AFI Region</i> ii. AFI-SPWX: <i>Enhancing Space Weather Readiness and Service Provision in the AFI Region</i> iii. DISMET-AFI: <i>Improving OPMET Delivery and MET Products Access in the AFI Region</i> iv. DIGIMET-AFI: <i>Enhancing Digital Exchange of Aeronautical Meteorological Information in the AFI Region</i> v. AFI-METCAL: <i>Calibration and Control of Surface-based MET Sensors and Instruments</i> vi. AFI-WARN: <i>Strengthening Wind Shear Warning Capabilities in the AFI Region</i>

	<p>vii. AFI-SADIS: Implementation of the SADIS API system for the provision of WAFS gridded forecasts and datasets</p> <p>viii. V-AFI: Implementation of aeronautical data link (D-VOLMET) and broadcasting (VOLMET) services</p> <p>ix. ATIS-AFI: Implementation of ATIS (voice-ATIS and D-ATIS)</p> <p>2) The Secretariat to pursue the coordination with States and all stakeholders to explore suitable additional projects as appropriate.</p>				
Who:	<p>1) AASPG</p> <p>2) Secretariat</p>				
When:	/				
Implementation following-up					
Follow-up required	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Metrics	Metric 1: Set of IIM related projects to the AFI ANS PROJECTS CATALOGUE	Means to collect	Mean 1: SL to States

Agenda Item 4: Air Navigation Deficiencies

Status of Air Navigation Deficiencies in CNS, AIM and MET fields

- 4.1. The meeting received an update on the status of air navigation deficiencies managed through the AFI Air Navigation Deficiencies Database (AANDD). According to ICAO, a deficiency is any facility, service, or procedure not compliant with the regional air navigation plan or ICAO SARPs, negatively affecting safety, regularity, or efficiency. Since 2001, ICAO has applied a uniform method for identifying, assessing, and reporting deficiencies. States are therefore required to report deficiencies and corrective actions to the relevant PIRGs.
- 4.2. APIRG/23 endorsed revised minimum reporting areas, while APIRG/25 approved the AANDD online platform for use by States and Organizations. However, APIRG/27 noted the slow pace of identification and management. In 2024, two workshops were held in Dakar on the Regional Air Navigation Plan and deficiencies management. Cameroon and Nigeria shared good practices, including a national committee mechanism.
- 4.3. Currently, about ten deficiencies have been reported through AANDD, with six in AIM, CNS, and MET cases under review by ICAO Regional Offices with three States. The meeting noted the low level of notifications and urged States to actively engage in the timely identification, reporting, and resolution of air navigation deficiencies. It also encouraged awareness activities targeting Users' Organizations, given their direct role in monitoring air navigation services.

Agenda Item 5: Implementation challenges of the Sub-group

Implementation Challenges

- 5.1. The meeting discussed challenges faced by the Infrastructure and Information Management Sub-Group (IIM/SG) in carrying out its activities and emphasized the need for corrective action. The IIM/SG, established under the Africa-Indian Ocean Aviation System Planning and Implementation Group (AASPG), is responsible for supporting the implementation of ICAO SARPs in Communication, Navigation and Surveillance (CNS), Aeronautical Information Management

(AIM), and Aeronautical Meteorology (MET). The Sub-Group operates through a project-based approach as mandated by the AASPG. However, its effectiveness is hindered by persistent challenges, notably insufficient funding and low expert participation. To address these issues, proposed measures include:

- Engaging regional and international partners to support project funding;
- Reviewing and updating project team rosters to retain only active and qualified subject matter experts (SMEs); and
- Establishing regular progress meetings led by Project Team Coordinators (PTCs), with the support of facilitators.

5.2. The meeting urged the Secretariat, States, and stakeholders to collaborate in implementing these actions to ensure the effective and timely delivery of AASPG projects.

Agenda Item 6: Activities to be coordinated with the AASPG AAO/SG and SMO/SG

Activities to be coordinated with the AASPG AAO and SMO

6.1. The meeting discussed areas requiring coordination between the Airspace and Aerodrome Operations (AAO) and Safety Management and Oversight (SMO) subgroups under the Africa-Indian Ocean Aviation System Planning and Implementation Group (AASPG). Particular attention was given to the development of the AASPG Annual Report, led by the AASPG Annual Report Team (AART), which necessitates close collaboration among the AAO, SMO, and Infrastructure and Information Management (IIM) subgroups.

6.2. Additional activities requiring joint involvement of the three subgroups include, but are not limited to, operational safety matters and support for the implementation of Basic Building Blocks (BBBs) in the areas of Communications, Navigation, Surveillance (CNS), Aeronautical Information Management (AIM), and Meteorology (MET).

Development in the South Atlantic Area

6.3. The meeting reviewed recent activities within the South Atlantic (SAT) framework, particularly the outcomes of the SAT Steering Group (SAT SG) and the joint meeting of the SAT Safety Oversight Group (SAT SOG) and SAT Implementation Management Group (SAT IMG). Key points raised included concern over radio frequency interference affecting ADS-B operations, recommendation to include AIM, MET, and SAR services within the SAT Group’s scope, PBCS Implementation (The SAT PBCS implementation plan checklist for the EURSAM corridor was endorsed by SAT IMG with a tentative date of implementation set for 2026). The meeting supported the recommendation to reactivate the CAFSAT Network Monitoring Committee (CNMC) under the ICAO WACAF Office coordination. The following Conclusion was formulated.

<i>Draft IIM/SG8 Conclusion 8/12: Amendment of the SAT Mandate</i>	
<i>Why:</i>	<i>That, to ensure comprehensive support in the implementation of Air Navigation Services in the SAT area,</i>
<i>What:</i>	<i>the SAT Group incorporates the AIS, MET and SAR areas in the scope of its activities by 30 November 2026.</i>
<i>Who:</i>	<i>SAT Group</i>

When:	30 November 2026				
Implementation following-up					
Follow-up required	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Metrics	Metric 1: SAT Group mandate updated with regard to AIS, MET and SAR	Means to collect	Mean 1: Letter to SAT SG

Outcomes of the Fourth Meeting of the AFI Volcanic Ash Exercise Steering Group and the Preparation of the Third Volcanic Ash Exercise (VOLCEX)

- 6.4. The meeting noted the progress of the AFI Volcanic Ash Exercise Steering Group, established by APIRG/24, in coordinating regional volcanic ash preparedness. Following successful exercises led by Cabo Verde (2021) and the Democratic Republic of the Congo (2023), the Fourth Meeting of the Steering Group was held virtually on 1 April 2025. It reviewed past outcomes, defined objectives for the 2025 exercise to be led by Kenya, and endorsed the 2025/2026 work programme. A reporting mechanism was also established to ensure effective follow-up and implementation of lessons learned. The meeting encouraged Kenya and relevant stakeholders to conduct the third exercise in alignment with the objectives approved by the Volcanic Ash Exercise Steering Group.

Implementation of System Wide Information Management in the AFI

- 6.5. The meeting reviewed the framework and rationale for initiating the implementation of ICAO System Wide Information Management (SWIM) in the AFI region. The APIRG/26 meeting (Cotonou, Benin, 6–10 November 2023), endorsed the establishment of the FF-ICE Task Force to prepare the Region for the transition to FF-ICE in 2034 (Decision 26/17). The Task Force developed a Terms of Reference (ToR) and Project Document, later endorsed at APIRG/27 (East London, South Africa, 4–8 November 2024) through Decision 27/03.
- 6.6. The AFI FF-ICE Project was created to support States and ATM stakeholders in achieving a safe, effective, and harmonized transition to FF-ICE. Between IIM/SG7 and IIM/SG8, the FF-ICE PMT also developed the SWIM ToR and Project Document, recognizing SWIM as a key enabler for FF-ICE. The PMT was tasked to finalize these documents for AASPG endorsement.
- 6.7. The meeting reviewed the proposed SWIM Project ToR and Project Document as provided in **Appendix 23 and 24** to this report and formulated the following Decision.

<i>Draft IIM/SG8 Decision 8/13: Endorsement of the project on the Implementation of System Wide Information Management (SWIM)</i>					
Why:	That, to support the timely and harmonized preparation and implementation of SWIM in the AFI region,				
What:	the project on the “Implementation of System Wide Information Management (SWIM)”, as presented in Appendix 24 to this report, is endorsed.				
Who:	AASPG				
When:	November 2025				
Implementation following-up					
Follow-up required	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Metrics	Metric 1: AASPG Report	Means to collect	Mean 1: /

Agenda Item 7: Proposed recommendations/actions to be taken by ICAO HQ

- 7.1. The meeting noted, in its review of the status of the Conclusions and Decisions from the APIRG/27 meeting, that the implementation of Decision 27/12 remains outstanding.

APIRG/27 Decision 27/12 Implementation of RSP in ADS-B environment

That, to foster the global and regional implementation of PBCS, ICAO to analyse the relevance of RSP implementation and monitoring in an ADS-B environment and ensure that the related documents are duly amended and aligned as appropriate (e.g. PBCS Manual (Doc 9869), GOLD (Doc10037), etc.).

- 7.2. A thorough analysis revealed that this Decision necessitates close coordination with ICAO Headquarters (HQ), particularly with the Air Traffic Management Requirements and Performance Panel (ATM RPP), to ensure effective implementation.

Agenda Item 8: Review of the Terms of Reference and the Work Programme of the Sub-Group

- 8.1. The meeting recalled the endorsement, by the Extraordinary Meeting of the APIRG and RASG-AFI (APIRG&RASG-AFI/EO), of the merger of both groups into a single entity, the Africa–Indian Ocean Aviation System Planning and Implementation Group (AASPG), and its organizational structure, through Decision EO/01.
- 8.2. It was further recalled that the APIRG/27 & RASG-AFI/10 Meeting, through Decision 6/02, endorsed the First Edition of the AASPG Procedural Handbook, and through Decision 6/11, approved the Future Work Programme of the AASPG and its Contributory Bodies.
- 8.3. Considering the above, the meeting reviewed the Terms of Reference (ToRs) of the IIM Sub-Group as provided in the AASPG Procedural Handbook with no specific amendment. The Sub-Group then updated its work programme as reflected in **Appendix 25 to this report**. On this basis, the following draft Decision was formulated.

Draft IIM/SG8 Decision 8/14: Future Work Programme of the IIM Subgroup					
Why:	<i>That, to support the implementation of the Subgroup objectives,</i>				
What:	<i>the Work Programme as provided in Appendix 23 is approved.</i>				
Who:	<i>AASPG</i>				
When:	<i>November 2025</i>				
Implementation following-up					
Follow-up required	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Metrics	Metric 1: <i>AASPG/1 Report</i>	Means to collect	Mean 1:

Agenda Item 9: Any other business

- 9.1. Nigeria highlighted the major challenges facing the AFI region due to its heavy reliance on foreign GNSS systems, noting implications for aviation safety, sovereignty, and sustainable infrastructure development.

9.2. The Secretariat recalled that States can mitigate this dependency by adopting multi-GNSS strategies, investing in regional augmentation systems, and strengthening international partnerships.

9.3. The meeting concluded that the AFI region's pursuit of GNSS resilience and sovereignty should be driven by strategic collaboration, technological diversification, and regional capacity-building. By integrating multiple GNSS constellations and developing its own augmentation systems, the region can secure reliable, accurate, and autonomous navigation capabilities.

Agenda Item 10: Conclusions/Decisions of the Eight Meeting of the Infrastructure and Information Management Sub-Group (IIM/SG8)

10.1. The meeting reviewed and adopted four (4) draft Conclusions and ten (10) draft Decisions as per **Appendix 2** to this report.

Closing Ceremony

The closing remarks were delivered by Ms. Ogutu Keziah, representing the Regional Director, ICAO ESAF Office. She expressed sincere appreciation to all members of the IIM Subgroup for their continued support and active engagement in the subgroup's activities. She also extended her gratitude to the entire Secretariat and the chairpersons for their dedication and commended the quality of work accomplished by the Subgroup.

In conclusion, Ogutu Keziah thanked the delegates, the interpreters and the team assistants for their valuable contributions, which greatly contributed to the successful outcome of the session.

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