International Civil Aviation Organization

MIDANPIRG/23 & RASG-MID/13 Meetings

(Cairo, Egypt, 14 – 18 June 2026)

Agenda Items 5.2: Global, Regional and National Air Navigation Plans (GANP, MID ANP and NANPs)

DEVELOPMENT OF THE MID REGIONAL SYSTEM-WIDE INFORMATION MANAGEMENT (SWIM) FRAMEWORK AND COORDINATED CNS/AIM AND MET APPROACH TO THE TRANSITION FROM THE AERONAUTICAL FIXED SERVICE

(Presented by Saudi Arabia)

SUMMARY

This paper proposes the development of the MID Regional System-Wide Information Management (SWIM) Framework, drawing on the outcomes of the Fifteenth Meeting of the CNS Sub-Group (CNS SG/15, Doha, 11–14 May 2026) and the Twelfth Meeting of the AIM Sub-Group (AIM SG/12), in particular AIM SG/12 Draft Decision 12/1 proposing the development of the MID Regional SWIM Framework. The paper sets out a coordinated CNS / AIM and MET task-sharing model for SWIM-supporting infrastructure and SWIM services in the MID Region, drawing on the implementation guidance of the Manual on the System-Wide Information Management (SWIM) Implementation (Doc 10203).

The paper additionally integrates the meteorological-domain driver of the SWIM transition described as part of the proposals for the amendment of Annex 3, the Procedures for Air Navigation Services — Meteorology (PANS-MET, Doc 10157) (ICAO State letter AN 10/1-26/5 refers). These proposals formalize the extended use of the ICAO meteorological information exchange model (IWXXM) and the transition to digital meteorological information exchange under the SWIM framework, with an applicability timeline within ASBU Block 2. The MID Regional SWIM Framework — and in particular its meteorological (MET-SWIM) services workstream — should be aligned with the ICAO GANP timeframe and based on ICAO Doc 10203. A Draft Decision for adoption by MIDANPIRG/23 is proposed.

Action by the meeting is at paragraph 3.

REFERENCES

- Annex 3 — Meteorological Service for International Air Navigation
- Annex 10, Volume II — Aeronautical Telecommunications — Communication Procedures
- Doc 9750 — Global Air Navigation Plan (GANP), Eighth Edition (2025)
- Doc 10039 — Manual on the System-Wide Information Management (SWIM) Concept
- Doc 10157 — Procedures for Air Navigation Services — Meteorology (PANS-MET)
- Doc 10199 — Procedures for Air Navigation Services — Information Management (PANS-IM)
- Doc 10203 — Manual on System-Wide Information Management (SWIM) Implementation
- Doc 10204 — Manual on Aviation Information Security,
- MID eANP (Doc 9708), Volumes I, II and III
- ICAO State letter AN 10/1-26/5 (4 February 2026)
- Draft Report of the Fifteenth Meeting of the MIDANPIRG CNS Sub-Group (CNS SG/15), Doha, 11–14 May 2026
- Draft Report of the Twelfth Meeting of the MIDANPIRG AIM Sub-Group (AIM SG/12)
- Report of MIDANPIRG/22 & RASG-MID/12, Doha, 4–8 May 2025 (Decision 22/19)

1. INTRODUCTION

1.1 System-Wide Information Management (SWIM) is the ICAO concept under which aeronautical, meteorological and flight information is exchanged between authorized stakeholders through interoperable, service-based information sharing. SWIM is reflected at the global strategic level in the Global Air Navigation Plan (GANP) and at the global technical level through the Aeronautical Meteorology (AMET), Flow Information for a Collaborative Environment (FICE), SWIM and Digital Aeronautical Information Management (DAIM) threads of the Aviation System Block Upgrade (ASBU) framework. The technical and operational procedures are published under PANS-IM (Doc 10199), supported by the Manual on the SWIM Concept (Doc 10039), the Manual on the SWIM Implementation (Doc 10203) and the Manual on Aviation Information Security (Doc 10204).

1.2 The ICAO Doc 10203 describes the SWIM global interoperability framework (GIF), within which the scope of SWIM comprises three layers:

a) the information services layer,

b) the information exchange models layer (FIXM for flight information, IWXXM for meteorological information and AIXM for aeronautical information); and

c) the technical infrastructure layer — together with the governance of these layers.

1.3 The network connectivity layer and the SWIM-enabled applications layer are adjacent to, but not part of, SWIM (Doc 10203, 1.2 refers). This layered view underpins the coordinated CNS / AIM and MET task-sharing model proposed in this paper: the CNS domain provides the network connectivity and the technical infrastructure that support SWIM, while the AIM and MET domains lead the information services and the coordination of the information exchange models, with governance crossing the SWIM layers.

1.4 The transition from the legacy Aeronautical Fixed Service (AFS) — in particular the Aeronautical Message Handling System (AMHS) and the underlying ground-ground communication infrastructure — towards SWIM is one workstream within the broader SWIM continuum supporting AIM and FICE, with linkages to the ASBU and Basic Building Block (BBB) frameworks and to the SWIM building blocks (https://ganpportal.icao.int/asbu).

1.5 In parallel with the aeronautical information workstream, the meteorological domain is undergoing its own formally scheduled transition to SWIM. The proposals for the amendment of Annex 3, PANS-MET (Doc 10157) (ICAO State letter AN 10/1-26/5, dated 4 February 2026) formalize the extended use of the ICAO meteorological exchange model (IWXXM) and the transition to digital meteorological information exchange under the SWIM framework.

1.6 The MID Region has been preparing the AFS-to-SWIM transition through two parallel workstreams: the CNS Sub-Group (CNS SG/15) on AFS rationalization, regional internet-protocol networking, and the services-vs-infrastructure governance split (CNS SG/15 Draft Decisions 15/4 and 15/5); and the AIM Sub-Group (AIM SG/12), in particular Draft Decision 12/1 proposing the development of a MID Regional SWIM Framework. This paper integrates the CNS and AIM contributions, accommodates the meteorological-domain transition driven by the Annex 3/PANS-MET proposal for amendments, and proposes consolidating into a single MID Regional SWIM Framework governed by a coordinated CNS/AIM and MET model, with implementation guidance per ICAO Doc 10203.

2. DISCUSSION

2.1 Current AFS environment in the MID Region

2.1.1 CNS SG/15 reviewed the operation of the AFTN / AMHS network in the MID Region. The meeting agreed on Draft Conclusion 15/1 on the efficiency of AMHS network operation, urging MID States to rationalize bilateral inter-regional connections, to update Aeronautical Message-handling system Centre (AMC) data regularly, and to ensure that AMHS systems operate in alignment with that data.

2.1.2 A reliable, well-managed AFS environment is the necessary foundation for the subsequent transition to SWIM. AFS rationalization is governed under the CNS Sub-Group and the MID AMC Steering Group, consistent with the regional structure of AMHS governance.

2.2 Communication infrastructure for SWIM — the MID IP Network

2.2.1 CNS SG/15 reviewed the MID IP Network project, recalling the options for extending the EUROCONTROL New Pan-European Network Service (New PENS) and the APAC Common aeRonautical Virtual Private Network (CRV) to MID States. On this basis, the meeting proposed, through Draft Decision 15/5, the establishment of a MID IP Network Action Group to reassess all options and scenarios and to recommend the most appropriate network architecture, technical infrastructure, registry capabilities, operational governance arrangements, and interoperability with adjacent regions.

2.2.2 A regional internet-protocol-based network is the key enabling infrastructure for SWIM, since SWIM services depend on interoperable, service-oriented data exchange that the traditional message-switching environment cannot provide.

2.2.3 It is noted that the APAC CRV is, by its stated scope, an aeronautical network for Asia-Pacific and Middle East ICAO Members. CRV extension to MID States is therefore not the creation of a new arrangement but the use of an existing one with established governance, financial and operational arrangements (https://www.icao.int/APAC/Join-CRV refers).

2.2.4 In the terms of the SWIM GIF (Doc 10203, 1.2 refers), the regional internet-protocol network is the network-connectivity layer that underlies the SWIM technical infrastructure. The ICAO Doc 10203 notes that, within a SWIM region, the participating stakeholders may share a single technical infrastructure and a single common SWIM registry for the whole region (Doc 10203, 2.4.3.5 refers), and may agree on regional technology standards and policies that complement the global ICAO provisions and contribute to optimal regional interoperability (Doc 10203, 2.4.3.6).

2.2.5 Notwithstanding the above, a decision to establish the MID IP Network Action Group, and to commit the Region to the evaluation of specific network options (extension of New PENS, extension of CRV, or a MID-specific solution), would be premature at the present stage. The selection of a regional IP-network architecture is a long-term, resource-intensive commitment that should be driven by clearly established requirements rather than by the available options. Those requirements can only be defined once the deficiencies of the current AFS / AMHS environment, the existing connectivity, and the data-exchange volumes and patterns to be supported are properly understood.

2.2.6 It is therefore proposed that the establishment of the MID IP Network Action Group under CNS SG/15 Draft Decision 15/5, together with the associated evaluation of network options and scenarios, be deferred to a later stage, to be reconsidered by MIDANPIRG once the gap analysis at paragraph 2.2.6 has been completed and its outcome reviewed by the CNS Sub-Group.

2.2.7 As the immediate priority of the SWIM-supporting infrastructure workstream, and consistent with the principle that a reliable, well-managed AFS environment is the foundation for the transition to SWIM (paragraph 2.1.2 refers), it is proposed that the CNS Sub-Group be invited to focus its activities on conducting a comprehensive gap analysis of the current AFS environment in the MID Region, addressing in particular:

a) the operation of the AFTN / AMHS network in the MID Region and the underlying ground-ground communication infrastructure;

b) the efficiency of the AMHS network deployed in the MID Region;

c) the status of the bilateral and inter-regional connections in the MID Region; and

d) the status of the Aeronautical Message-handling system Centre (AMC) data,

taking into account the relevant provisions and tables of the ICAO MID eANP (Doc 9708) Volume

II, in particular Part III — Communications, Navigation and Surveillance (CNS), Table CNS II-1 (AFTN Plan) and Table CNS II-2 (Required ATN Infrastructure Routing Plan), and reflecting the outcomes of CNS SG/15 on AMHS network efficiency, inter-regional coordination and AMC data management (CNS SG/15 Draft Conclusions 15/1, 15/2 and 15/3 refer).

2.2.8 The outcome of the gap analysis would establish the evidence base for the subsequent definition of the regional IP-network requirements (including capacity, resilience, registry and interoperability requirements) and for the informed reconsideration, at a later stage, of the network options and of the establishment of the MID IP Network Action Group. This sequencing ensures that the Region commits to a network architecture on the basis of demonstrated need and aligned with the SWIM technical-infrastructure and registry requirements of ICAO Doc 10203.

2.3 SWIM services governance and transition

2.3.1 CNS SG/15 reviewed the Terms of Reference of the MID AMC Steering Group and agreed, through Draft Decision 15/4, that the management and development of SWIM services fall under the Terms of Reference of the AIM Sub-Group, while the MID AMC Steering Group supports the development and operation of the SWIM-supporting infrastructure. This services-vs-infrastructure separation is consistent with the global and regional ICAO pattern and practice.

2.3.2 Concurrently, AIM SG/12 agreed that regional efforts and resources should be reallocated toward the development of a MID Regional SWIM Framework for aeronautical information management.

2.3.3 The SWIM governance should consider the lessons learned relevant to the design of the MID Regional SWIM Framework. First, a centralized regional database model — a single regional database, a single cost-recovery mechanism, a sequential migration model — has not worked at the scale of the MID Region over a multi-year horizon (e.g., MID Region AIM Database (MIDAD) Project). Second, the globally endorsed SWIM approach — interoperable, service-based, federated — is fundamentally different from the centralized approach. This conclusion is consistent with Doc 10203, which describes SWIM from an organizational view as a pool of information services shared among collaborating organizations and discoverable through SWIM registries (Doc 10203, 6.2.1 refers), and which envisages a SWIM region as a distributed grouping of national and local initiatives rather than a single centralized system (Doc 10203, 2.4.3 refers). The MID Regional SWIM Framework must therefore be designed as a distributed, services-and-infrastructure framework, not as a centralized database.

2.4 The meteorological-domain transition to SWIM

2.4.1 The meteorological domain has a formally scheduled, dated transition to SWIM that the MID Regional SWIM Framework should consider. The transition to a globally interoperable digital format is regarded as a key enabler for the future global ATM environment under SWIM. The use of information services for the supply of aeronautical meteorological information is considered the first step toward a SWIM-based meteorological service, and the adoption of IWXXM as the single standard exchange format for MET products (e.g., aerodrome routine and special reports (METAR / SPECI), aerodrome forecasts (TAF), space weather advisory, SIGMET, and AIRMET information), is a fundamental step towards an XML-based exchange model for the machine-to-machine exchange of meteorological information.

2.4.2 In the SWIM environment, meteorological information should be exchanged as digital data through information services over Internet Protocol Suites (IPS) using associated communication technologies and standardized services, enabling more dynamic and automated access than the message-switching environment. The initial set of meteorological information services expected to begin global implementation in the current ASBU timeframe includes the aerodrome meteorological observational information service (AMOIS), the aerodrome meteorological forecast information service (AMFIS), WAFS information and space weather advisory information, later extending to the hazardous weather information service (HWIS) (State letter AN 10/1-26/5, Attachment B, refers).

2.4.3 The meteorological transition is sequenced to the ICAO GANP / ASBU block timelines. The ICAO roadmap for the modernization of meteorological information exchange sets out the communication protocols, information exchange services, data addressing, information exchange flow and data aggregation expected during ASBU Blocks 1 to 4.

2.4.4 Two implications for the MID Region arise. First, the meteorological (MET-SWIM) services workstream of the MID Regional SWIM Framework should be sequenced to the Annex 3 / PANS-MET applicability dates, and MID States must begin transitioning to IWXXM and to meteorological information services well before the suspension of TAC and abbreviated plain language. Second, the regional infrastructure choice should support meteorological information services.

2.5 Proposed MID Regional SWIM Framework — governance and Task Sharing

2.5.1 Drawing on CNS SG/15 Draft Decision 15/4, AIM SG/12 Draft Decision 12/1, the global and regional best practices and the implementation guidance of Doc 10203, it is proposed that the MID Regional SWIM Framework be established with the following governance arrangements:

a) the AIM Sub-Group leads the SWIM-AIM services workstream;

b) the MET Sub-Group leads the SWIM-MET services workstream;

b) the CNS Sub-Group, through the MID AMC Steering Group, leads the SWIM-supporting infrastructure workstream and the overall MID Regional SWIM Framework document, consistent with CNS SG/15 DD 15/4, and reporting to MIDANPIRG; **as the immediate priority of this workstream, the CNS Sub-Group conducts the comprehensive gap analysis of the current AFS / AMHS environment described in paragraph 2.2.6**, while the establishment of the MID IP Network Action Group and the evaluation of network options under Draft Decision 15/5 are deferred to a later stage (paragraph 2.2.5 refers);

c) a Joint AIM / MET/ and CNS SWIM Coordination Group is established, chaired alternately by the AIM Sub-Group Chair, MET Sub-Group Chair, and the CNS Sub-Group Chair, to coordinate the SWIM services and infrastructure workstreams and operates as the cross-cutting body that aligns the workstreams and maintains the regional SWIM registry, security and versioning policies.

d) the SWIM Framework workstream is coupled to the multidisciplinary Aviation Cybersecurity Task Force established under MID-RASFG/5, per CNS SG/15 Draft Decision 15/13 (CNS/15 Report §2.7 refers);

e) the Framework, its governance bodies, roles and policies are defined based on the implementation guidance of Doc 10203 (§2.6.4 refers); and

f) the detailed task-sharing arrangements between AIM / MET/ and CNS Sub-Groups are set out in Appendix A to this paper.

2.6 Cybersecurity coupling

2.6.1 SWIM concentrates both the benefits and the cyber-resilience risks of full connectivity. The ICAO Manual on Aviation Information Security provides the framework for managing the information-security dimension of SWIM, complementing PANS-IM (Doc 10199) on the procedural side. Consistent with Doc 10203, the regional governance policies should include an information-security policy applicable to all information services (e.g., encryption of the information).

2.6.2 In the MID Region, the multidisciplinary Aviation Cybersecurity Task Force established under MID-RASFG/5 is the regional cybersecurity coordination body. The MID Regional SWIM Framework workstream is to be formally coupled to this Task Force to ensure that cyber-resilience considerations are addressed throughout the SWIM lifecycle: at Framework design, at service and infrastructure design, during deployment, and in operations.

2.7 **Conclusions**

2.7.1 The transition from AFS to SWIM in the MID Region is an incremental, multi-year process that depends on (a) **a reliable AFTN / AMHS environment, the current status of which should first be established through a comprehensive gap analysis**; (b) the subsequent development of a regional internet-protocol network, the requirements for which should be defined based on the gap analysis; (c) the AIM-domain and MET-domain SWIM services workstreams; (d) explicit AIM / MET / CNS coordination; (e) and cybersecurity coupling. A coordinated regional approach for the MID Regional SWIM Framework, sequenced so that the network-architecture decision follows a clear understanding of the current environment, would deliver this transition in a coherent manner and avoid both fragmented national implementation and the structural complexity observed under the MIDAD Project.

2.7.2 MIDANPIRG/24 should review the status of the MID Regional SWIM Framework as a standing agenda item, with milestones to be set at MIDANPIRG/23 through the following proposed Draft Decisions and Conclusion.

MIDANPIRG DRAFT DECISION 23/XX: DEVELOPMENT OF THE MID REGIONAL SWIM FRAMEWORK

That:

a) the MID Regional SWIM Framework be established, integrating the SWIM-supporting infrastructure workstream led by the CNS Sub-Group (through the MID AMC Steering Group) with two SWIM services workstreams led by the AIM and MET Sub-Groups,

b) the MID Regional SWIM Framework be developed in accordance with the implementation guidance of the Manual on the SWIM Implementation (Doc 10203), including the development of regional SWIM governance bodies and roles and the development of regional SWIM policies, in particular a SWIM registry policy, an information-security policy and an information-service versioning policy;

c) progress on the MID Regional SWIM Framework be reported to MIDANPIRG/24 as a standing agenda item.

MIDANPIRG DRAFT DECISION 23/XX: SWIM GOVERNANCE FRAMEWORK AND REGIONAL SWIM ROADMAP

That:

a) the CNS Sub-Group be designated as the lead body for the MID Regional SWIM Framework document and its reporting to MIDANPIRG, with a target endorsement of the first edition of the Framework at MIDANPIRG/25,

b) the CNS Sub-Group be invited to focus its activities, as the immediate priority of the SWIM-supporting infrastructure workstream, on conducting a comprehensive gap analysis of the current AFS environment in the MID Region, addressing in particular (i) the operation of the AFTN / AMHS network and the underlying ground-ground communication infrastructure; (ii) the efficiency of the AMHS network deployed in the MID Region; (iii) the status of the bilateral and inter-regional connections in the MID Region; and (iv) the status of the Aeronautical Message-handling system Centre (AMC) data, taking into account the ICAO MID eANP (Doc 9708) Volume II, and to report the outcome to CNS SG/16;

c) the establishment of the MID IP Network Action Group proposed under CNS SG/15 Draft Decision 15/5, together with the associated evaluation of the options of extending the EUROCONTROL New PENS service, extending the APAC Common aeRonautical Virtual Private Network (CRV), or implementing a MID-specific

solution, be deferred to a later stage, to be reconsidered once the gap analysis at sub-paragraph (d) above has been completed and its outcome reviewed by the CNS Sub-Group;

d) the MET Sub-Group be designated as a lead body for the meteorological (MET-SWIM) services workstream of the MID Regional SWIM Framework, this workstream being sequenced to the applicability dates of the Annex 3 / PANS-MET amendments;

e) a Joint AIM / MET / CNS SWIM Coordination Group be established, chaired alternately by the AIM Sub-Group Chair, the MET Sub-Group Chair, and the CNS Sub-Group Chair, with terms of reference to be developed by coordination between the Chairs of the three Sub-Groups for endorsement at MIDANPIRG/24, to coordinate the SWIM services and infrastructure workstreams and to report jointly to MIDANPIRG;

f) the MID Regional SWIM Framework workstream be formally coupled to the multidisciplinary Aviation Cybersecurity Task Force established under MID-RASFG/5, with cybersecurity coordination as a standing item of the Joint AIM / MET / CNS SWIM Coordination Group;

g) the task-sharing arrangements set out in Appendix A be endorsed as the basis for the MID Regional SWIM Framework, with refinements to be made by the Joint AIM / MET / CNS SWIM Coordination Group as the Framework develops.

MIDANPIRG DRAFT CONCLUSION 23/XX: TRANSITION TO SWIM-BASED METEOROLOGICAL SERVICE

That MID States be urged to begin the transition to IWXXM and to meteorological information services well before the 2030 date adopted for the discontinuity of traditional alphanumeric codes and abbreviated plain language for MET reports. The transition to the aeronautical meteorological services is considered the first step toward a SWIM-based meteorological service.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) note the status of the transition from the AFS towards SWIM in the MID Region and the proposed development of the MID Regional SWIM Framework, as presented in this paper;

b) note the meteorological-domain driver of the SWIM transition — the proposals for the amendment of Annex 3, PANS-MET (State letter AN 10/1-26/5) and the need to sequence the MID Regional SWIM Framework meteorological services workstream to these amendments;

c) endorse CNS SG/15 Draft Conclusions 15/1, 15/2 and 15/3 and Draft Decision 15/4 relating to the AFS and to the services-versus-infrastructure governance split, and agree that CNS SG/15 Draft Decision 15/5 (establishment of the MID IP Network Action Group and evaluation of the New PENS / CRV / MID-specific network options) be deferred to a later stage; and

d) adopt the Draft Decisions and Conclusion at paragraph 2.7.2.

APPENDIX A

TASK-SHARING MATRIX BETWEEN AIM SUB-GROUP, CNS SUB-GROUP, AND MET SUB-GROUP FOR THE MID REGIONAL SWIM FRAMEWORK

The matrix below sets out the task-sharing between the AIM Sub-Group (AIM SG), MET Sub-Group (MET SG), and the CNS Sub-Group (CNS SG) for the planning, deployment and operation of the MID Regional SWIM Framework. For each workstream, the matrix identifies a single Lead body, the Supporting bodies, the Coordinating arrangements, and the rationale. The roles reflect the four SWIM roles of Doc 10203 (originator, information service provider, information service consumer and regulator; 2.6.1.3 refers). The matrix is endorsed by the Draft Decision at paragraph 2.7.2 (i) as the basis for the Framework, subject to refinement by the Joint AIM /MET/ CNS SWIM Coordination Group as the Framework develops.

Workstream	Lead	Supporting	Coordinating	Rationale
1. SWIM governance framework and regional SWIM Roadmap	CNS SG or AIM SG(*)	AIM SG MET SG MID AMC SG	Joint AIM / MET / CNS SWIM Coordination Group MIDANPIRG (reporting)	Per CNS SG/15 DD 15/4 (SWIM services and infrastructure) and AIM SG/12 (SWIM Framework). The SWIM regional framework should define the roadmap, ASBU harmonization and stakeholder coordination. Governance, roles and policies in accordance with Doc 10203, Chapter 2; the regional construct follows the SWIM-region concept of Doc 10203, 2.4.3. Two SWIM services workstreams and one workstream for the technical and supporting infrastructure. Aligned with the regional and global ICAO pattern. The MID IP Network Action Group, once established at a later stage, will support this workstream (Workstream 2 refers).
2. SWIM-supporting infrastructure — regional IP network	CNS SG	MID AMC SG; AIM SG (service requirements)	Joint AIM / MET/ CNS SWIM Coordination Group; Coordination with adjacent regions (EUROCONTROL for New PENS; ICAO APAC for CRV) through the ICAO MID Office — at a later stage.	Immediate priority: the CNS SG conducts a comprehensive gap analysis of the current AFS / AMHS environment — AFTN / AMHS network operation and the underlying ground-ground communication infrastructure, the efficiency of the AMHS network, the status of bilateral and inter-regional connections, and the status of the AMC data — taking into account the ICAO MID eANP (Doc 9708) Volume II (Part III — CNS; Table

(*) ***MIDANPIRG/23 should decide on the SWIM Framework workstream leader based on the information provided in this WP and the discussion.***

Workstream	Lead	Supporting	Coordinating	Rationale
				CNS II-1 (AFTN Plan) and Table CNS II-2 (Required ATN Infrastructure Routing Plan)). The establishment of the MID IP Network Action Group and the evaluation of network options (New PENS / CRV / MID-specific) under CNS SG/15 DD 15/5 are deferred to a later stage, to be informed by the gap analysis. The IP network is the network-connectivity layer underlying the SWIM technical infrastructure (Doc 10203, 1.2); when defined, it should host the shared regional technical-infrastructure and SWIM-registry capabilities (Doc 10203, 2.4.3.5 refers).
3. SWIM services — AIM (digital AIP, digital NOTAM, AIXM datasets, eTOD, IFP datasets)	AIM SG	MID States AIS providers.	Joint AIM / MET/ CNS SWIM Coordination Group;	Core AIM-domain content under Annex 15 and PANS-AIM. Each service is an information service built on a domain information exchange model (Doc 10203, 1.2).
4. SWIM services — MET (IWXXM, MET-SWIM)	CNS SG (as SWIM Framework owner); MET SG (MET-Domain Technical content)	MID States MET service providers;	Joint AIM / MET/ CNS SWIM Coordination Group;	MET-SWIM is a SWIM service whose technical content is owned by MET SG. Driven by the Annex 3 / PANS-MET amendments (State letter AN 10/1-26/5): extended use of IWXXM, with applicability up to Nov 2030. Initial services: AMOIS, AMFIS, QVA, WAFS and space weather, later HWIS. Access guidelines per Doc 8896. Sequenced to GANP / ASBU Blocks 1–4.
5. SWIM services — FF-ICE flight services; flight-data services; ATFM services	CNS SG (as SWIM Framework owner); ATM SG (FF-ICE and ATFM technical content)	ATM service providers	Joint AIM / MET/ CNS SWIM Coordination Group; ATM SG / AIM SG joint working	FF-ICE is a SWIM service under the FICE thread of the ASBU framework; ATFM data exchange is increasingly SWIM-based. Same logic as MET-SWIM — framework owned by CNS SG, technical content by ATM SG.
6. Standards	CNS SG or AIM	AIM SG (Technical	Joint AIM / MET/ CNS SWIM	PANS-IM is an information-management

Workstream	Lead	Supporting	Coordinating	Rationale
conformance and service certification (PANS-IM Doc 10199; SWIM registry; interoperability profiles)	SG(**)	content) MET SG (Technical content); MID Regional Office (monitoring)	Coordination Group.	procedure document — AIM, MET, and FF-ICE domains. The SWIM registry, information-service overviews and governance policies follow Doc 10203 (Chapters 2 and 4). Infrastructure interoperability requires CNS-domain input; applicable standards include OGC and the Regional Supplementary Procedures (Doc 7030). The service registry is core to a distributed SWIM environment.
7. Cybersecurity and resilience of SWIM	MID-RASFG/5 Aviation Cybersecurity Task Force	AIM SG (SWIM services security); MET SG (SWIM services security); CNS SG (infrastructure security)	Joint AIM / MET/ CNS SWIM Coordination Group (standing item)	Per CNS SG/15 DD 15/13 dissolving the ANS Cybersecurity WG into the multidisciplinary Task Force under MID-RASFG/5. Doc 10204 (Manual on Aviation Information Security) is the primary guidance; the regional governance policies should include an information-security policy applicable to all information services (Doc 10203).
8. AFS rationalization as the foundation for SWIM	CNS SG (via MID AMC SG)	AIM SG (impact on AIM message flows)	Joint AIM / MET/ CNS SWIM Coordination Group Adjacent regions (AFI, APAC, EUR / NAT) per CNS SG/15 DC 15/2	Per CNS SG/15 DC 15/1 (AMHS efficiency), DC 15/2 (inter-regional coordination) and DC 15/3 (capacity-building). AFS / AMHS is CNS-domain by nature; AIM and MET impact recognized. The comprehensive gap analysis of the current AFS / AMHS environment (Workstream 2 and paragraph 2.2.6) — AFTN / AMHS operation and ground-ground infrastructure, AMHS efficiency, bilateral and inter-regional connections, and AMC data status, assessed against the ICAO MID eANP Volume II — is the foundational deliverable that informs the subsequent IP-network requirements and the reconsideration of network options.
9. Capacity-building and training (SWIM-specific)	AIM SG (SWIM services); MET SG (SWIM	ICAO MID Regional Office; MIDANPIRG	Joint AIM / MET/ CNS SWIM Coordination Group (consolidation)	Per CNS SG/15 DC 15/3 (AMHS / AMC capacity-building). SWIM-specific training is a new capacity-building line item, anchored on Doc

(**) ***MIDANPIRG/23 should decide on the SWIM Framework workstream leader based on the information provided in this WP and the discussion.***

Workstream	Lead	Supporting	Coordinating	Rationale
	services); CNS SG (infrastructure and AMHS / AMC)			10039, Doc 10199 and Doc 10203. The Tbilisi SWIM Seminar (23–25 June 2026) feeds this line.
10. Performance monitoring and reporting (KPIs; MID Air Navigation Report; GANP regional dashboards)	RANP/NANP TF (SWIM-services KPIs, and infrastructure KPIs)	ICAO MID Regional Office (consolidation in the MID-Air Navigation Report)	Joint AIM / MET/ CNS SWIM Coordination Group (KPI alignment); MIDANPIRG (reporting)	Based on the GANP 8th Edition performance framework. Standing reporting cadence aligned with the MID Air Navigation Report (MIDANPIRG Conclusion 22/4).
11. Coordination with adjacent regions (EUR, AFI, APAC) and with the global IMP WG-A roadmap	ICAO MID Regional Office	AIM SG; MET SG; CNS SG.	Adjacent ICAO Regional Offices	Inter-regional coordination is the role of the ICAO MID Regional Office. AIM SG, MET SG, and CNS SG contribute technical content. Sequenced to align with adjacent regions — not duplication. Ensuring interoperability between SWIM regions is the principal global-level challenge (Doc 10203, 2.4.3.9 refers).

— END —