

**ICAO***International Civil Aviation Organization***Ninth Meeting of the Aerodromes Operations and Planning Sub-Group (AOP/SG/9)***Bangkok, Thailand, 30 June to 4 July 2025***Agenda Item 2: Review Outcome of Relevant Meetings****OUTCOMES OF CNS SG/29**

(Presented by the Secretariat)

**SUMMARY**

This paper presents the latest outcomes of CNS SG/29 Meeting that may interest the AOP Sub-group.

**1. INTRODUCTION**

1.1 The Twenty-Ninth Meeting of the Communications, Navigation and Surveillance Sub-group (CNS SG/29) of APAC Air Navigation Planning and Implementation Regional Group (APANPIRG) was held at the ICAO APAC Regional Office, Bangkok, Thailand, from **16-20 June 2025**. The Meeting was attended by **100** participants from **23** Member States/Administrations, **2** International Organizations and **3** industry partners. Key documents for the Meeting can be accessed at [this link](#).

1.2 The Tenth Meeting of the System Wide Information Management Task Force (SWIM TF/10) was held from **20 – 23 May 2025** in the ICAO APAC Regional Office, Bangkok, Thailand. The Meeting was attended by **109** participants from **23** States/Administrations, **2** International Organizations and one industry partner. The SWIM TF/10 Meeting report, working papers, information papers, and other resources can be accessed by [this link](#).

1.3 The Twelfth Meeting of the Air Traffic Management Sub-Group (ATM/SG/12) of APANPIRG was held from **23 to 27 September 2024**.

1.4 The Ninth Meeting of the System Wide Information Management Task Force (SWIM TF/9) was held from **14 to 17 May 2024** in the ICAO Asia and Pacific Regional Office, Bangkok, Thailand. The Meeting was attended by **110** participants from **18** States/Administrations, **4** International Organizations and **2** industry partners. The Meeting report, working papers, information papers, and other resources can be accessed by [this link](#).

1.5 This paper shares information about the finalization of APAC Common SWIM Information Services related to AOP SG.

## 2. DISCUSSION

2.1 In the CNS SG/29 Meeting, the ATM section shared the status of proposed content updates of the **APAC Common SWIM Information services**, requested to be reviewed by ATM and AGA experts by the SWIM TF/9 Meeting in 2024.

2.2 Recognizing the need for further discussion on the initial list of recommended services, the ATM/SG/12 Meeting established an Ad-Hoc group to address both technical and operational aspects, with the *Decision AAITF/19-3: Establish APAC Common SWIM Aeronautical Information Services Ad-Hoc Group*. The initial set of outcomes developed by the Ad-Hoc Group was submitted in advance to SWIM TF/10 as a working paper in order to ensure timely input and alignment with their ongoing work.

*Outcomes of the APAC Common SWIM Aeronautical Information Services Ad Hoc Group – APAC Common SWIM AIS Ad Hoc Group (WP/12 of SWIM TF/10)*

2.4. In the SWIM TF/10 Meeting, the APAC Common SWIM AIS Ad Hoc Group presented the outcomes of the discussions held within the Ad Hoc Group. It was informed that experts from several States and international organizations, including IATA, IFAIMA, and ICAO, actively participated in these discussions. Additionally, India contributed an aerodrome expert through the Aerodrome Operations and Planning Sub-Group (AOP/SG) to participate in this task. The group convened **five meetings**, during which it reached consensus on an initial set of services. To facilitate clearer and more focused discussions, the Ad Hoc Group organized the topic into **four** subject areas: airspace-related information, aerodrome-related information, digital NOTAMs, and ATIS and SAR-related information.

2.5. The Meeting was informed that the Ad Hoc Group discussed and agreed to adopt ***AIXM 5.1.1 as the common regional version for APAC***. The group also proposed clearer definitions for prohibited area information, replacing the term “Airspace availability” with “Availability or activation/deactivation or temporarily change of airspace” to enhance understanding. They further proposed expanding the definition of airspace types included in the Airspace Feature Service. Additionally, the group agreed to include REQ/REP as an additional message exchange pattern for the Airspace Management Service. Furthermore, the Ad Hoc Group agreed to include a remark referencing the consideration of Free Route Airspace (FRA) and User Preferred Route (UPR) information in future planning.

2.6. It was added that the group decided to retain Runway Condition Report Service due to operational importance, despite noting possible redundancy with SNOWTAMs. It also agreed to include REQ/REP as an additional message exchange pattern for Aerodrome Feature Service and Digital NOTAM Distribution Service. Besides, the Ad Hoc Group agreed that both ATIS Distribution Service and Search and Rescue Service should be considered for implementation in a future phase, as the information exchange model and message types are yet to be defined and are currently marked as 'TBD'.

2.7. The Meeting noted that matters relating to the Search and Rescue (SAR) service were to be discussed at the Asia and Pacific Search and Rescue Working Group (APSAR/WG) meeting, scheduled for 27–30 May 2025. The ICAO Secretariat of APSAR/WG will inform the SWIM TF of any proposed changes arising from the APSAR/WG discussions. It was added that the outcomes will be reported to relevant meetings, including AAITF/20, AOP/SG/9, and ATM/SG/13.

*Business functionality of APAC Common SWIM Information Services – Hong Kong China (WP/11 of SWIM TF/10)*

2.8. This paper presented the updates on the work of the SWIM TF Task 6 team on Information Services to identify the business functionality to be supported by APAC Common SWIM Information Services for addressing the operational needs in APAC. The Meeting recalled the development of the list of business functionalities for APAC Common SWIM Information Services, along with a recommendation to apply a **three-level prioritization scheme**. It was further noted that SWIM TF/9 agreed for SWIM TF Task 6 lead and relevant experts to present the draft list for coordination with expert groups, including AAITF, APSAR/WG, ATFM SG, FF-ICE Ad-hoc Group, MET/IE WG and SURICG.

2.9. The Meeting was informed that the MET SG/28 meeting held on 8-12 July 2024 reviewed and provided corrections to the proposed business functionalities of APAC Common Meteorological Information Services. In addition, the Second Asia/Pacific FF-ICE Ad-hoc Group Meeting and Workshop (FF-ICE/2) held from 18-20 March 2025 reviewed and updated the list of APAC Common SWIM Flight Information Services related to FF-ICE.

2.10. MET/IE WG/23 held from 25-28 March 2025 identified that subsequent updates to the list of APAC Common SWIM Meteorological Information Services would be required to reflect outcomes from the recent METP/6 Meeting and suggested that the information service priorities be revisited. MET/IE WG/23 agreed that the proposed updates be prepared for further review and consideration by the SWIM TF, including consistent use of the term “information service”.

2.11. SURICG/10 held from 21-23 April 2025, reviewed the list and recognized that SURSG’s inputs may be valuable for the finalization of the list. The list was modified and further consulted with SURSG/4 delegates by email. After incorporating all inputs, the final list of APAC Common SWIM Surveillance Information Services was prepared by the SURICG/10 meeting for consideration by the SWIM TF/10.

2.12. ATFM SG/15 held from 29 April to 2 May 2025 reviewed the portion of APAC Common SWIM Flight Information Services, specifically the “ATFM/A-CDM integrated service” and “Traffic flow status service”. The ATFM SG/15 meeting advised that the terminology used in the list be further verified against the draft PfA of future PANS-ATM (Doc 4444). The ATFM SG/15 meeting agreed to provide a revised list to the SWIM TF/10 meeting. The updates to APAC Common SWIM Flight Information Services related to ATFM and A-CDM, developed by the ATFM SG, were presented as part of WP/32.

2.13. The Meeting recalled the information shared at SWIM TF/9 that IMP is working on an Information Service Definition (ISD) template for subject-matter-expert Panels, e.g., ATMRPP, METP, to develop domain-specific ISDs. It was suggested that the progress of these works in the IMP, ATMRPP, and METP is monitored to align regional descriptions with the global guidance. While considering the need to develop an APAC version of ISDs for some of the APAC Common SWIM Information Services, the Task 6 team will assess whether the necessary ISDs are covered by the templates/guidance developed at the global-level Panels and indicate this information in a new column of the table for APAC Common SWIM Information Services.

2.14. It was added that the first version of the list of APAC Common SWIM Information Services will be incorporated into the APAC SWIM Implementation Guidance Document being developed.

2.15. The Meeting reviewed the proposed initial set of APAC Common SWIM Information Services, as reviewed and updated by MET SG/28, FF-ICE/2, MET/IE WG/23, and SURICG/10. It was added that the APAC Common SWIM Aeronautical Information Services Ad-hoc Group also reviewed and provided updates to the APAC Common SWIM Aeronautical Information Services as presented by WP/12.

2.16. The publication of services with incomplete fields was discussed at length. Various suggestions were considered, including creating a separate table for such services, excluding them from the first version of the list, or including all services with a footnote explaining the presence of “TBD” or “?”. After detailed deliberation, it was agreed that the **first version of the APAC Common SWIM Information Services list will include only those services for which complete information is provided**. Services containing “TBD” or “?” fields will be excluded from the first publication. However, these services will be retained as the working draft for further refinement and reviewed in the future SWIM TF meetings, following coordination with relevant expert groups. **ACTION ITEM 10-4** As a result, the following services were removed:

APAC Common SWIM Aeronautical Information Services		
1.	ATIS distribution service	Provides continuous and automated broadcast of recorded aeronautical information in airport and terminal areas.
2.	Search and rescue service	Allows Rescue Coordination Centres (RCCs) to exchange information with neighbouring RCCs and ATS units for coordination during SAR operations.
APAC Common SWIM Flight Information Services		
3.	ADP Distribution Service	Supports publication and distribution of ATFM Daily Plan (ADP), based on information included in the <a href="#">APAC ADP Exchange Procedure</a> <sup>1</sup> . The published ADP is designed to inform for stakeholders on upcoming demand/capacity constraints and possible ATFM measures.
4.	Flow-Specific ATFM Measure Service	Supports <i>notification</i> of information related to “flow-specific” ATFM measures, i.e. measures whose control mechanisms apply to a “group of flights” on a particular traffic flow. An example is the Minutes-in-Trail (MINIT) requirement applied on an eastbound traffic using A1 from VT*, VV* to RK*.  Recipients of this information should take actions to comply with the ATFM measure contained herein. <sup>2</sup>
APAC Common SWIM Meteorological Information Services		
5.	Special Air Report (ARS) Service	Provides reports of special observations made by aircraft when they encounter special

<sup>1</sup> The ADP template included herein is not updated. The new ADP template had been agreed by the AMNAC group and included into the [AMNAC COP v6.1](#), Appendix D, and was proposed to the ATFM/SG/15 (Apr-May 2025). The meeting agreed that the Secretariat will update the ADP Exchange Procedure to include the new template, which has already been supplied by AMNAC core team post-meeting.

<sup>2</sup> Common operating procedures for this group of ATFM measures (e.g., MINIT, MIT, MDI, Re-Route, Level Capping) have not been developed for the APAC region yet, and should be developed before finalizing the information service to support the operations.

		weather phenomena, such as moderate/severe turbulence or icing. (Note: Currently, there is no plan to implement this information service at the MET Panel)
6.	MET derived from Mode S DAPs Service	Provides upper air winds and temperatures derived from Mode S Downlinked Aircraft Parameters (DAPs) (e.g., true airspeed, ground speed, magnetic heading, true track angle) and facilitates exchange of derived winds and temperatures among MET service providers.

*Table 1- List of APAC Common SWIM Information Services removed from the first adopted version*

2.17. It was noted that the information exchange model identified for one of the APAC Common SWIM Surveillance Information Services is ASTERIX Cat 21+FPL (payload in JSON or RAW format. It was highlighted at the Meeting that the RAW format of FPL does not exist. The ICAO Secretariat was requested to share this observation with SURSG for further review and clarification.  
**ACTION ITEM 10-5**

2.18. Regarding the suggestion in WP/19 to include a reference for each information service as part of the Task 6 activities, the Meeting discussed the value and potential benefits of the proposal. It was also considered whether such a reference should be added in a separate column or integrated into an existing one. After detailed deliberation, the Meeting agreed to the proposal and requested Task 6 leads to include reference(s) for each information service in the brief description column, where such information is available. **ACTION ITEM 10-6**

2.19. The updates provided by FF-ICE/2 to add REQ/REP in some APAC Common SWIM Flight Information Services were discussed. To support harmonized service implementation, the Meeting highlighted the need for clarification on how REQ/REP should be implemented. Particularly, the distinction between synchronous REQ/REP and asynchronous REQ/REP was noted as essential for facilitating discussion within the FF-ICE Ad-Hoc Group. Accordingly, SIPG, together with China, Japan, and the Republic of Korea, was requested to develop a clear explanation and guidance for further review and discussion of the FF-ICE Ad-Hoc group. **ACTION ITEM 10-7**

2.20. The Meeting recommended that States/Administrations submit suggestions regarding any services to the relevant expert groups. Any subsequent modifications to services, if deemed necessary by the expert groups, could then be proposed to the SWIM TF for consideration at its future meetings.

2.21. The Meeting conducted a detailed review of each service included in the list of APAC Common SWIM Information Services. It was observed that the services were described at varying levels of granularity. For instance, some services within a particular information domain appeared to be divisible into multiple distinct services. The Meeting also noted differing levels of understanding among expert groups regarding SWIM information services and the information required to be filled in the template. However, it was agreed that the review activity undertaken by the relevant expert groups has enhanced overall understanding and supported the groups in visualizing SWIM services in their respective future aviation concepts.

2.22. The Meeting discussed a need for clear guidance to States/Administrations on the proposed first version of Common SWIM Information Services that it is considered a guidance document for States/Administrations to support their SWIM development and implementation. Additionally, it was agreed that clarification as proposed in Flimsy/04 of SWIM TF/10 should also be provided as part of the first version of the list to ensure the same understanding on the use of these APAC Common SWIM Information Services.

2.23. The Meeting discussed various proposals to improve the APAC Common SWIM Information Services list. Australia consolidated the key suggestions for enhancement into Flimsy/02 and proposed that APANPIRG subsidiary bodies regularly review the APAC Common SWIM Information Services document and notify the SWIM TF of any new or changes to existing business requirements for APAC Common SWIM information services. A draft conclusion was proposed for these proposed requirements. In addition, by Flimsy/04, Australia proposed that the SWIM TF adopt a Draft Decision to clarify that, based on the business requirements articulated by Expert Groups to date, the SWIM TI being designed and provisioned at this time is not specified to support the provision of aircraft separation.

2.24. The Meeting suggested that Task 6 Leads consider information shared in Flimsy/02 and draft a guidance document to provide better instructions for other contributory bodies in reviewing and updating the list of APAC Common SWIM Information Services if deemed necessary. It was also suggested that other APANPIRG contributory bodies regularly review the APAC Common SWIM Information Services document and notify the SWIM TF of any new or changes to existing business requirements for APAC Common SWIM information services. These suggestions were agreed to be communicated as part of the guidance document to be developed. **ACTION ITEM 10-8** ICAO Secretariat was requested to coordinate with other contributory bodies on the proposed regular review process, sharing the significance of the updated APAC Common SWIM information services. **ACTION ITEM 10-9**

2.25. The list of APAC Common SWIM Information Services finalized by the Meeting is provided in **Appendix A**. The Meeting agreed to publish the list as the first version and present the revised list for consideration by CNS SG/29 through the following Draft Decision and subsequent adoption by APANPIRG/36. The proposed decision was adopted by the CNS SG/29 Meeting. After APANPIRG/36's adoption of the proposed Draft Decision, the list of APAC Common SWIM Information Services will be uploaded to the ICAO APAC e-document portal. **ACTION ITEM 10-10**

<b>Draft Decision CNS SG/29/06 (SWIM TF/10/02) - Adoption of APAC Common SWIM Information Services, v1.0</b>			
What: The first version of APAC Common SWIM Information Services, provided in <b>Appendix A</b> , is adopted for immediate use by APAC States/Administrations. The set of APAC Common SWIM Information Services and the associated performance of SWIM Technical Infrastructure underpinning these services are not specified to support the provision of aircraft separation.		Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical	
Why: To assist APAC States/Administrations in planning and implementing their SWIM information services.		Follow-up:	<input type="checkbox"/> Required from States
When:	20-Jun-25	Status:	Draft to be adopted by PIRG
Who: <input checked="" type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other: MET SG, ATM SG, AOP SG			

**3. ACTION BY THE MEETING**

3.1 The Meeting is invited to:

- a) note the information contained in this paper;
- b) review APAC Common SWIM Aeronautical Information services having incomplete fields related to AOP SG and share the final version with the SWIM TF Meeting to add in the next version of APAC Common SWIM Information Services document;
- c) regularly review the APAC Common SWIM Information Services document and notify the SWIM TF of any new or changes to existing business requirements for APAC Common SWIM information services; and
- d) discuss any relevant matters as appropriate.

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**Business Functionality of APAC Common SWIM Information Services**  
**(Updated by MET SG/28, FF-ICE/2, MET/IE WG/23, SURICG/10, AAITF/19 and ATFM SG/15)**

**First Version (May 2025)**

*(Editorial note – changes arising from MET SG/28, FF-ICE/2, MET/IE WG/23, SURICG/10, AAITF/19 and ATFM SG/15 are indicated with ~~strikethrough~~ and **highlighted** text.)*

***Purpose.**– This list of APAC Common SWIM Information Services, including associated priorities, provides States/Administrations with guidance on anticipated services to support their planning and implementation of SWIM.*

***Notes.**– ~~Priority of Recommended s~~Services in ~~Initial~~ APAC Common SWIM Information Service (IS) ((1)/(2)/(3)):*

- Priority (1): Recommended for region-wide implementation for region-wide benefits
- Priority (2): Recommended for implementation as much as practicable
- Priority (3): Additional information services without common regional requirements and not included as a part of common regional information services

<b>Business functionality of the information service</b>	<b>Brief description of the service</b>	<b>Type of information to be exchanged</b>	<b>Information exchange model / Message type</b>	<b>Message exchange pattern</b>	<b>Priority of Recommended Service in Initial APAC Common SWIM IS (1) / (2) / (3)</b>
APAC Common SWIM Aeronautical Information Services					
Airspace management service	Exchanges of airspace status information between ASM Support System and Air Traffic Control (ATC) System. The sharing of airspace availability and airspace structure in real-time will contribute to a more efficient execution of the flight as information impacting the trajectory will be exchanged.	<del>Airspace availability,</del> Availability or activation/deactivation or temporarily change of airspace, restricted area, danger area, search and rescue regions	AIXM	Pub/Sub or Req Reply	2



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Business functionality of the information service	Brief description of the service	Type of information to be exchanged	Information exchange model / Message type	Message exchange pattern	Priority of Recommended Service in Initial APAC Common SWIM-IS (1) / (2) / (3)
Airspace feature service	Provides the characteristics of the three-dimensional airspace, described as horizontal projection with vertical limits, and their relevance to air traffic.	FIR/UIR boundaries, waypoints, enroute ATS routes, SIDs and STARs, nav aids, procedures, and other airspace not limited to restricted area, prohibited area, danger area, search and rescue regions (Remarks – Other data published in the AIP may be included)	AIXM	Pub/Sub or Req Reply	2
Aerodrome feature service	Provides current and/or planned airport layout features, such as aerodrome mapping data, runway, taxiway, passenger facilities.	Runways, movement areas, aerodrome services, nav aids, instrument landing systems, Aerodrome location, communication facilities (frequencies)	AIXM	Pub/Sub or Req Reply	2
Runway Condition Report service	Provides runway surface conditions and contaminants (least to most slippery) that are directly correlated to aircraft take-off and landing performance.	Global Reporting Format (GRF) for runway surface conditions	AIXM	Pub/Sub or Req/Reply	2
Digital NOTAM distribution service	Provides aeronautical information in accordance with the Digital NOTAM Specification, such as runway closure.	Digital NOTAM (e.g. Special activity airspace (SAA) NOTAMs, or other types of NOTAMs)	AIXM	Pub/Sub or Req Reply	2
APAC Common SWIM Flight Information Services					
GUFU service	GUFU (Globally Unique Flight Identifier) generation and provision	GUFU	FIXM	Req/Reply	1
ATFM/A-CDM integrated service	Allows exchanges of flight plans and A-CDM milestone parameters among different stakeholders (such as arrival/departure ATFM units, airlines and airport operators) to connect A-CDM process to ATFM operations.	CLDT, TOBT, CTOT, CTO, TTOT, TSAT, etc.	FIXM	Pub/Sub Req/Reply	4

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Business functionality of the information service	Brief description of the service	Type of information to be exchanged	Information exchange model / Message type	Message exchange pattern	Priority of Recommended Service in Initial APAC Common SWIM-IS (1) / (2) / (3)
FF-ICE filing service	Provides a means to submit, update or cancel flight plans through a SWIM-based interface using FIXM.	Flight plan for registration, update or cancellation	FIXM	Req/Reply Pub/Sub	1
FF-ICE data-publication service	Provides harmonised sharing of flight plan information in a global standard supporting common situation awareness.	Flight plan information for publication	FIXM	Pub/Sub	2
FF-ICE trial service	Allows operators to test the effect of a potential change in a flight plan prior to committing to the change.	Proposed changes in a flight plan	FIXM	Req/Reply	2
FF-ICE flight data request service	Allows an operator to request the current status of a flight plan, or an ANSP can request an operator to submit the latest version of their flight plan.	Current status of a flight plan, a copy of flight plan or supplementary plan	FIXM	Req/Reply	1
FF-ICE notification service	Provides notification of a change in flight state, such as Departure (DEP) and Arrival (ARR) Air Traffic Service (ATS) messages.	ARR, DEP messages	FIXM	Pub/Sub Req/Reply	1
FF-ICE planning service	Allows operators to submit preliminary flight plans for early Air Traffic Flow Management (ATFM) planning and to obtain feedback regarding restrictions/constraints affecting the flight.	Preliminary flight plan for early ATFM planning	FIXM	Req/Reply Pub/Sub	2
Flight-Specific ATFM Measure Service	Supports <i>notification</i> of information related to “flight-specific” ATFM measures, i.e. measures whose control mechanisms apply to a single flight. An example is the Ground Delay Program (GDP), whose control mechanism is a Calculated Take-Off Time (CTOT), or an ATFM measure for airborne flight,	CTOT, CTO, CLDT, and fields currently included in <a href="#">APAC</a>	FIXM	Pub/Sub Req/Reply	1

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Business functionality of the information service	Brief description of the service	Type of information to be exchanged	Information exchange model / Message type	Message exchange pattern	Priority of Recommended Service in Initial APAC Common SWIM-IS (1) / (2) / (3)
	whose control mechanism is a Calculated Time Over (CTO).  Recipients of this information should take actions to comply with the ATFM measure contained herein.	<a href="#">AFTN/AMHS-Based ICD for ATFM<sup>1</sup></a>			
ATFM/A-CDM Integration Service	Supports exchanges of flight-specific ATFM measure information and A-CDM milestone parameters among stakeholders, including arrival/departure ATFM units, airspace users, and airport operators, to integrate A-CDM process with ATFM operations.	ATFM measure information: CTOT  A-CDM departure planning information: TOBT, TTOT, TSAT	FIXM	Pub/Sub Req/Reply	1
APAC Common SWIM Meteorological Information Services					
FOR AERODROME					
METAR/SPECI information service	Provides of IWXXM-formatted METAR/SPECI product specified in ICAO Annex 3.	Provision of the existing Annex 3 product via an information service in Annex 3. Information service will be enabled through Amendment 81 to Annex 3 as recommended practice with applicability from Nov 2024.	IWXXM	Pub/Sub Req/Reply	1
TAF information service	Provides of IWXXM-formatted TAF product specified in ICAO Annex 3.		IWXXM	Pub/Sub Req/Reply	1
Aerodrome Meteorological Observation Information Service observation information service	Provides continuous observations of weather parameters at an aerodrome. Advanced meteorological SWIM (MET-SWIM) service being developed by MET Panel.	To be introduced as recommended practice in Annex 3 (Amd 8483) in Nov 2030 <sup>2</sup> tentatively (Note: Level of standardisation needs to be considered, as different	IWXXM	Pub/Sub or Req/Reply	2*

<sup>1</sup> Based on the conclusion from ATFM/SG/15, an amendment to this ICD will be proposed in which a more structured use of REGUL and REGCAUSE fields will be introduced. This proposal is expected to be tabled at the upcoming CNS/SG meeting.

\* Will become Priority (1) when it is introduced as recommended practice in Annex 3 tentatively in Nov 2030

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Business functionality of the information service	Brief description of the service	Type of information to be exchanged	Information exchange model / Message type	Message exchange pattern	Priority of Recommended Service in Initial APAC Common SWIM-IS (1) / (2) / (3)
Aerodrome Meteorological Forecast Information Service <del>forecast information service</del>	Provides information of the expected meteorological conditions, including probability, at an airport during a specified period. Advanced meteorological SWIM (MET-SWIM) service being developed by MET Panel.	aerodrome information services may be required for different use cases.)	IWXXM	Pub/Sub or Req/Reply	2*
FOR ENROUTE					
SIGMET information service	Provides of IWXXM-formatted SIGMET product specified in ICAO Annex 3.	SIGMETs for thunderstorm, tropical cyclone, turbulence, icing, mountain wave, duststorm, sandstorm, volcanic ash and radioactive cloud	IWXXM	Pub/Sub Req/Reply	1
AIRMET information service	Provides of IWXXM-formatted AIRMET product specified in ICAO Annex 3.	Provision of the existing Annex 3 product via an information service	IWXXM	Pub/Sub Req/Reply	42
Tropical Cyclone Advisory information service	Provides of IWXXM-formatted Tropical Cyclone Advisory product specified in ICAO Annex 3.  (Designated provider: States with Tropical Cyclone Advisory Centre)		IWXXM	Pub/Sub Req/Reply	1
Volcanic Ash Advisory information service	Provides of IWXXM-formatted Volcanic Ash Advisory product specified in ICAO Annex 3.  (Designated provider: States with Volcanic Ash Advisory Centre)		IWXXM	Pub/Sub Req/Reply	1
Space Weather Advisory information service	Provides of IWXXM-formatted Space Weather Advisory product specified in ICAO Annex 3.  (Designated provider: States with Space Weather Advisory Centre)		IWXXM	Pub/Sub Req/Reply	1
Volcano Observatory Notice for Aviation	Provides of IWXXM-formatted VONA specified in ICAO Annex 3. Provision of VONA will become the		IWXXM	Pub/Sub Req/Reply	2

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Business functionality of the information service	Brief description of the service	Type of information to be exchanged	Information exchange model / Message type	Message exchange pattern	Priority of Recommended Service in Initial APAC Common SWIM-IS (1) / (2) / (3)
(VONA) information service	is a recommended practice in Annex 3 (Amd 82) in 2025.  (Designated provider: States with a designated State Volcano Observatory)				
Quantitative volcanic ash (QVA) concentration information (QVA) service	Provides detailed information of significant volcanic ash in the atmosphere, including probabilities of ash concentration thresholds over space and time. Advanced meteorological SWIM (MET-SWIM) service being developed by MET Panel.  (Designated provider: States with VAAC Volcanic Ash Advisory Centre (VAAC))	QVA grids grid point gridded forecasts including probabilities, and IWXXM QVA objects. To be introduced as A recommended practice for significant ash clouds in Annex 3 (Amd 82) in Nov 2025 tentatively for VAACs in a position to do so from Nov 2025, and for all VAACs from Nov 2026.	Gridded data (e.g. NetCDF), IWXXM	Pub/Sub or Req/Reply	12 <sup>#</sup>
WAFC (World Area Forecast Centres) gridded grid point forecast service	Provides global gridded weather forecasts.  (Designated provider: WAFCs (UK and US))	Global gridded forecasts of CB, icing, turbulence, upper winds, upper-air temperatures and humidity, flight level and temperature of tropopause, and direction, speed and flight level of maximum wind	Gridded data in GRIB2	Pub/Sub or Req/Reply	1
WAFC significant weather (SIGWX) forecast service	Provides global WAFC SIGWX data sets with coverage expressed in polygons.  (Designated provider: WAFCs (UK and US))	Significant weather forecast such as tropical cyclone, severe squall lines, turbulence, icing, etc.	IWXXM	Pub/Sub or Req/Reply	1
Satellite image service	Provides satellite observational information.	Satellite derived MET information (e.g. significant convection)	Gridded format (e.g. NetCDF) and image format	Req/Reply	2

<sup>#</sup> Will become Priority (1) from Nov 2026

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Business functionality of the information service	Brief description of the service	Type of information to be exchanged	Information exchange model / Message type	Message exchange pattern	Priority of Recommended Service in Initial APAC Common SWIM-IS (1) / (2) / (3)
Weather radar image service	Provides two- or three-dimensional radar observational information.	Weather radar reflectivity to visualise the intensity of convection	Gridded format (e.g. NetCDF) and image format	Req/Reply	2
APAC Common SWIM Surveillance Information Services					
Surveillance data <b>only</b> sharing service	Provides surveillance data of aircraft. <del>Provides three-dimensional position, time and identification of aircraft and other data as appropriate.</del>	<del>Position</del> latitude, longitude, altitude, flight level, ground speed (optional), track angle, magnetic heading (optional), call sign, Mode S address, target identification, target address, <b>mode 3/A code</b> (optional), <b>date</b> , time of message reception for position, <del>data quality</del> , quality indicators, <del>Mode S DAP</del> , <b>SAC, SIC</b>	ASTERIX Cat 21 (payload in JSON or RAW format)	Pub/Sub	<del>21</del>
Surveillance data with flight plan information sharing service	Provides surveillance data of aircraft with flight plan information.	globally unique flight identifier, aircraft identification, departure aerodrome, destination aerodrome, aircraft type (optional), wake turbulence category (optional) latitude, longitude, flight level, ground speed (optional), magnetic heading (optional), target identification, target address, mode 3/A code (optional), date, time of message reception for position,	ASTERIX Cat 21+FPL (payload in JSON or RAW format)	Pub/Sub	2

AOP/SG/9  
Appendix A to WP/29

Business functionality of the information service	Brief description of the service	Type of information to be exchanged	Information exchange model / Message type	Message exchange pattern	Priority of Recommended Service in Initial APAC Common SWIM-IS (1) / (2) / (3)
		quality indicators, SAC, SIC			