



# ICAO

## The Seventh Meeting of System Wide Information Management Task Force (SWIM TF/7)

Bangkok, Thailand, 09 – 12 May 2023

Agenda Item 3: Updates on the assigned tasks by task leads/contributors including progress report and issues

**a) Implementation Planning**

- Task 1: Regional Implementation Philosophy & Roadmap

### SWIM Task Force Work Programme Timeline

(Presented by Task 1 – China, Japan, Singapore, and Thailand)

#### SUMMARY

This paper presents the updated SWIM TF work programme in accordance with the expected deliverables from the Task groups and proposes the way forward to be able to meet the 2024 Asia/Pacific SWIM implementation timeline.

## 1. INTRODUCTION

1.1 The Thirty-Third Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/33), which was held on 22 – 24 November 2022, adopted, through Conclusion APANPIRG/33/9, the Asia/Pacific SWIM Implementation Timeframe to be between 2024 and 2030 with 2030 being the target timeline for implementation completion.

1.2 To support the implementation of SWIM within the Asia/Pacific region in accordance with the Conclusion APANPIRG/33/9, the SWIM TF Task Leads Meeting held on 2 December 2022 agreed on the target to have a set of regional implementation guidance materials ready for adoption by the SWIM TF/8 in 2024. These regional implementation guidance materials will be based on the various deliverables of the Task groups that are relevant to the implementation of SWIM.

1.3 At the SWIM TF Task Leads Meeting aforementioned, it was discussed that, to ensure the readiness of the regional implementation guidance materials at the SWIM TF/8 timeframe as agreed, a collation of the various deliverables from different Task groups together with the associated deadlines for each deliverable was necessary. The job of collating these deliverables to create the SWIM TF work programme timeline was then assigned to Task 1.

## 2. DISCUSSION

2.1 In January 2023, the leads of Task 2, Task 3, Task 4, Task 5, Task 6 and Task 8 were requested to update and/or record their deliverables and associated timelines. These tasks were chosen as their deliverables have a direct impact on the implementation of the Asia/Pacific SWIM. The updated deliverables and timelines can be found in **Appendix A**. **Appendix B**, a draft SWIM TF work programme timeline was then created based on these inputs.

**Agenda Item 3**

09-12/05/23

2.2 From the gathered inputs in as shown in **Appendix A**, a significant gap on deliverables related to security services was observed. Specifically, the inputs received from Task 3 did not have timelines attached. Given that this task is related to security services, a key component in SWIM implementation, the planned deliverables and their associated timelines of Task 3 are needed. However, it was observed that this might be because of the lack of Asian contributor(s) to this Task group. Without the views from Asia side, it would be challenging to conclude the security services specifications, i.e. Task 3 deliverables and timelines, for the implementation of SWIM in the Asia/Pacific region.

2.3 With reference to **Appendix A**, it can also be noted that there are no deliverables focused on producing and editing the consolidated regional SWIM Implementation Guidance material. Currently, this task is being handled by the ICAO Secretariat alone and not a specific Task group. This is not considered as a tenable position. A group responsible for gathering the guidance materials produced by all the related Task groups and consolidating/editing into a coherent document for review and adoption by the SWIM TF/8 in 2024 with support of the ICAO Secretariat is needed.

<b>Decision SWIM/TF/07/XX – Formation of an Editorial Task group for the Asia/Pacific SWIM Implementation Guidance</b>	
What: To establish an Editorial Task group under SWIM TF, through coordination with other Task groups, to create the consolidated Asia/Pacific regional SWIM implementation guidance with support of the ICAO Secretariat.	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 ensure the readiness of the Asia/Pacific regional SWIM implementation guidance in time for review and adoption by the SWIM TF/8 in 2024.	Follow-up: <input type="checkbox"/> Required from States
When: 12-May-23	Status: Draft to be adopted by Subgroup
Who: <input type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other: XXXX	

2.4 With reference to **Appendix B**, it was observed that several deliverables would only be available in 2024 with one deliverable targeted at the end of 2024, which is after the anticipated dates for the SWIM TF/8 meeting.

2.5 It is considered that an opportunity for the SWIM TF to review the draft guidance materials and provide the immediate feedback would be more beneficial than presenting all the draft materials at once for the review of the SWIM TF/8. Therefore, an additional SWIM TF plenary session is proposed to be held in the 2nd half of 2023. It is believed that this additional plenary session would also provide a better chance for the adoption of these materials at the SWIM TF/8.

<b>Decision SWIM/TF/07/XX - Additional SWIM TF Plenary Meeting in the 2nd Half of 2023</b>	
What: To arrange the additional SWIM TF plenary meeting in the 2nd half of 2023 to review the draft Asia/Pacific regional SWIM implementation guidance.	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 provide an opportunity for the SWIM TF to review and provide immediate feedback on	Follow-up: <input type="checkbox"/> Required from States

the draft regional SWIM implementation guidance materials developed by Task groups.		
When:	12-May-23	Status: Draft to be adopted by Subgroup
Who:	<input type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other: XXXX	

2.6 Given the amount of work to be done between now and the SWIM TF/8 meeting, and the expected timeline for deliverables as shown in **Appendix B**, there is a chance that the Asia/Pacific regional SWIM implementation guidance with the planned contents may not be ready by then. The alternative is to have a phased publication of the document where only contents considered crucial for the initial implementation of SWIM are made available first.

**3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) discuss the proposals on the formation for an editorial group and the additional SWIM TF plenary meeting in the 2nd half of 2023, and agree to Decisions proposed in Paragraph 2.3 and 2.5; and
- c) discuss any relevant matter as appropriate.

-----

Task Group	Objective and Scope	Deliverable Description	Proposed Deadline
Task 1: Regional Implementation Roadmap	Develop and maintain the Asia/Pacific regional roadmap for SWIM implementation, including SWIM technical infrastructure, SWIM governance, aeronautical information service, flight information service, and weather information service	SWIM Implementation Roadmap (Final)	2024
Task 2: Regional SWIM Infrastructure	<ul style="list-style-type: none"> <li>• Define the high-level APAC SWIM Architecture including policies on implementation and distribution of SWIM services</li> <li>• Define the requirements for the APAC SWIM Infrastructure with the goal of ensuring technical interoperability</li> <li>• Outline policy to ensure backwards compatibility with non-SWIM capable entities</li> <li>• Develop a roadmap for the implementation of APAC SWIM Infrastructure</li> </ul>	Regional SWIM Architecture Design Model and Technical Infrastructure Profile	2018~2020: SWIM Architecture Options 2021~2022: SWIM Interface Bindings 2023~2024: Profile and Usecase
Task 3: Security Service	<ul style="list-style-type: none"> <li>• Advises TF Chair and Task Leads in the area of cybersecurity for APAC. Specific objectives include:</li> <li>• Determining the scope of security responsibility of SWIM, consistent with SWIM technical infrastructures envisioned by the ICAO Information Management Panel (IMP) and the APAC regional network infrastructures including the CRV.</li> <li>• Proposing a trust framework to ensure that the correct information is sent to the correct users, considering identity and access management initiatives (IAM) from member states.</li> <li>• Ensures interoperability of trust frameworks within APAC region and with other ICAO regions.</li> <li>• Developing SWIM Cyber Security Architecture Framework and SWIM security strategy for the Asia-Pacific Region. Analyses and capture SWIM security risks.</li> <li>• Provide security guidelines and best practices to be incorporated in SWIM APAC Governance activities.</li> </ul>	<ul style="list-style-type: none"> <li>•APAC SWIM Security Scope and Context (Working Paper)</li> <li>•APAC SWIM PKI Trust Framework (Working Paper)</li> <li>•Cyber Security Architecture Framework for SWIM in ICAO Asia-Pacific Region (Final, working Paper)</li> </ul>	

Task 4: Regional Information Exchange Models	Support APANPIRG WG/TF regarding information exchange models and examine if any extension to the existing information exchange models, i.e. AIXM, FIXM, and IWXXM, and/or the new information exchange model(s) are required to support the Asia/Pacific regional operational requirements	A list of common set of SWIM information services with data catalog.	2024
Task 5: Registry and Governance Policies	<p>I. Establish a robust and sustainable Governance model to ensure that a common set of policies, rules, and standards for identifying, designing, implementing, discovering, and operating SWIM-enabling components is consistently applied and enforced throughout the APAC.</p> <p>II. Develop or adopt standards, policies, and procedural guidelines to support the functional requirements for implementing all aspects of service-oriented development in the context of APAC SWIM.</p> <p>III. Facilitate visibility and control for insight into all APAC SWIM-enabled services by supporting developments of flexible mechanisms for service discovery, including, but not limited to, service registries</p>	<ol style="list-style-type: none"> <li>1. WP SWIM Discovery Services: Status, Plans, Demo (Timeline: May 2023)</li> <li>2. Enabling SWIM Service Composition with REST-based API (Timeline: May 2023).</li> <li>3. WP APAC SWIM Model-driven Framework: First Draft (Timeline: May 2023)</li> <li>4. SWIM Discovery Service Implementation Specification version 2.0 (Timeline: May 2024)</li> <li>5. Prototype of SDS network based on SDS 2.0 (Timeline: May 2024) Note: this item is dependent on item</li> <li>6. APAC SWIM Model-driven Framework: Prototype (Timeline: December 2024)</li> </ol>	
Task 6: Information Services	To develop and define the APAC version of the SWIM information service overview specifications and APAC version of data catalogue for information services based on operational needs in APAC.	2. WP Enabling SWIM Service Composition with REST-based API (Timeline: May 2023)	
Task 8: SWIM Services and Application Validation	<ul style="list-style-type: none"> <li>• Construct a platform for SWIM service and application validation</li> <li>• Support the implementation of SWIM service and applications</li> <li>• Support the demonstration of SWIM based operations</li> </ul>	Report on SWIM Service and Application Validation	2019~2020: FF-ICE/R1 2022~2023: SWIM Registry

# Proposed SWIM Task Force Timeline

