International Civil Aviation Organization

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The Tenth Meeting of System Wide Information Management Task Force (SWIM TF/10)

Bangkok, Thailand, 20 – 23 May 2025

Agenda Item 4: Outstanding SWIM TF/7, SWIM TF/8 and SWIM TF/9 Action Items Review
   o   Update of SOWs of Tasks

Agenda Item 7: SWIM Task Force ToR, Programme, Work Plan, and Action Items Review

REVIEW OF SWIM TF ToR, SOW, WORK PLAN, AND OUTSTANDING ACTION ITEMS

(Presented by Secretariat)

SUMMARY

The paper presents the current SWIM TF's Terms of Reference (ToR), the revised SWIM TF's work plan, and the Action List to reflect the latest work status.

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1.   **INTRODUCTION**

1.1   The 20th Meeting of the Communications, Navigation and Surveillance Sub-Group of APANPIRG (CNS SG/20), held in Bangkok, Thailand, from *11 to 15 July 2016,* established System Wide Information Management Task Force (SWIM TF) by the **Decision CNS SG/20 – D3: Establishment of SWIM Task Force**.

1.2   The Sixth Meeting of the APAC SWIM Task Force (SWIM TF/6) held from *17 – 20 May 2022* via Video Teleconferencing (VTC) updated the latest SWIM TF Terms of Reference (ToR). The SWIM TF/6 Meeting resources can be accessed by the link: https://www.icao.int/APAC/Meetings/Pages/2022-SWIM-TF6.aspx.

1.3   SWIM TF also prepares a work plan for various tasks and updates it in a timely manner. In addition, action items are reviewed every year and updated based on the progress in the meeting.

1.4   This paper shares the latest status of the SWIM TF ToR, work plan and action items and requests their updates.

2.   **DISCUSSION**

Terms of Referece (ToR)

2.1   The SWIM TF/5 Meeting in 2021 revised the ToR of SWIM TF, considering the progress made since the establishment of SWIM TF, the update of ICAO global and regional air navigation plans, and the revised task groups adopted at SWIM TF/4. The Meeting endorsed Draft

Decision SWIM TF/05/02- *Revised SWIM TF ToR* for adoption by CNS SG/25, further adopted by CNS SG/25 by **Decision CNS SG/25/04.**

2.2   The SWIM TF/6 Meeting in 2022 reviewed and updated the draft ToR and endorsed the draft decision SWIM TF/06/05 for CNS SG/26 adoption, which was adopted by CNS SG/26 through **Decision CNS SG/26/07**.

2.3   Further meetings of the SWIM TF reviewed the ToR every year. However, no modifications were proposed. The latest ToR of SWIM TF is provided in **Appendix A** to this paper.

Statement of Work (SOW)

2.4   To ensure that the objectives set in the ToR can be achieved, the Statement of Work (SOW) of each Task was updated in the SWIM TF/5 Meeting. The SOW needed to be reviewed to be consistent with the revised SWIM TF ToR adopted by CNS SG/25 in 2021. It was agreed in the SWIM TF/7 (May 2023) meeting by ACTION ITEM 7-14 that all Task Leads will review and modify the SOW to accommodate the latest requirements from SWIM TF ToR and share it with the ICAO Secretariat before the SWIM TF/8 (Nov 2023) Meeting. However, no inputs were received for the SOW till the SWIM TF/8 Meeting.

2.5   The Task description adopted by the SWIM TF/9 (May 2024) Meeting is as follows.

Table 1. Task Scope and Task Leads Update.

Groups	Task No.	Subject/Task	Task Leads
Implementation Planning	1	Regional implementation philosophy & roadmap	David Leow (Singapore) Amornrat Jirattigalachote (Thailand)
SWIM infrastructure	2	Regional SWIM infrastructure	Xiaodong Lu (Japan), Yasushi Iwasawa (Japan) Henry Chan (Hong Kong, China)
	3	Security service	Jim Laymon (USA)
Technical Architecture	4	Development and maintenance of regional information exchange models	Amornrat Jirattigalachote (Thailand) Wen Zhu (USA)
Governance	5	Regional SWIM Governance Framework	~~Dongkie Park (ROK)~~ YoungJin Ha (ROK) Mark Kaplun (USA), Yasushi Iwasawa (Japan) Xiaodong Lu (Japan), Honglei Gao (China)
Information Services	6	Information services	Marco Kok (Hong Kong, China) Vacant
Validation & Demonstration	7	SWIM Demonstration	David Leow (Singapore) Amornrat Jirattigalachote (Thailand)
	8	SWIM services and application validation	Yasushi Iwasawa (Japan) Xiaodong Lu (Japan), Honglei Gao (China), ~~Dongkie Park (ROK)~~

Groups	Task No.	Subject/Task	Task Leads
			YoungJin Ha (ROK)
Coordination and Promotion	9	Monitoring of Panels' work	Yasushi Iwasawa (Japan)
	10	Regional coordination and SWIM-related information sharing	John Moore (IATA)
	11	SWIM implementation education and promotion (New task)	Thomas Green (USA)

2.6   The SWIM TF/7 Meeting was informed that Task 3 required a co-lead from the APAC region in order to be able to better suggest and incorporate the security requirements specific to the APAC region. Similarly, additional support is required for Task 6 and Task 11. The importance of Task 10 in coordinating between SWIM TF and other contributory bodies under APANPIRG was also highlighted. As the revised ToR of SWIM TF has significantly increased the work of SWIM TF, the Meeting was encouraged to nominate Task Leads of Task 10, co-leads of Task 3, Task 6, and Task 11 on a priority basis. Mr. John Moore from IATA agreed to lead Task 10 as done in the past. The Meeting appreciated IATA taking responsibility. Moreover, more contributors were requested for Tasks 1 to 11. To gather as much as possible the different viewpoints from Asia/Pacific Member States and international organizations facing diverse challenges, the SWIM TF/7 Meeting is requested to nominate experts from Member States and organizations to support various activities of Tasks 1 to 11.

2.7   The SWIM TF/9 Meeting further discussed the SWIM TF Task structure and SOW of each task. The proposal to remove Task 1 due to most of the work being taken over by SIPG was considered. The Meeting agreed that Task 1 should be kept, as when the ToR of SIPG is completed, the relevant work under the Task 1 group will still need to be continued. Therefore, it was recommended that the SOW of Task 1 be modified to incorporate the need to develop a detailed SWIM roadmap and include the APANPIRG-approved APAC SWIM implementation timelines for 2024-2030. It was agreed that Task 1 leads will modify the Task 1 SOW and submit it to the ICAO Secretariat before 14 June 2024. The SWIM TF/9 Meeting also requested all Task leads to provide feedback on the review of corresponding SOWs and submit them to the ICAO Secretariat. ACTION ITEM 9-18

2.8   As of 6 May 2024, the SOWs of Tasks 1, 2, 3, 6, 7, 8, 9, and 10 were well received. However, the SOWs of Tasks 4, 5, and 11 are still required to be updated. All SOWs are provided in **Appendix B** to this paper.

Work Plan

2.9   The SWIM TF/1 Meeting prepared the Work Plan for the SWIM Task Force, which outlined the phased approach for SWIM implementation in the APAC region and assigned various tasks to task leads and contributors. The SWIM TF/9 Meeting reviewed the SWIM TF Work Plan and there were no updates to the Work Plan. The latest version of the SWIM TF Work Plan is provided in **Appendix C**.

Action Items

2.10   The Action Items List updated by SWIM TF/9 is provided in **Appendix D** for Meeting review and updates.

3.   ACTION BY THE MEETING

3.1   The Meeting is invited to:

a)   note the information contained in this paper;

b)   review and update ToR, SOWs, and Work Plan;

c)   review and update the Action Items List;

d)   nominate experts to participate in various tasks; and

e)   discuss any relevant matter as appropriate.

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TERMS OF REFERENCE

SWIM Task Force

<u>Objectives:</u> In order to achieve the SWIM thread as specified in the Aviation System Block Upgrade (ASBU) of the Global Air Navigation Plan (GANP), the Asia/Pacific Seamless ANS Plan objectives, and the air navigation systems that are in compliance with ICAO global standards for the conceptualisation and exchange of aeronautical, flight and meteorological information, the SWIM Task Force will:

a) Benchmark the various successful implementations of SWIM in States and regions to promote best practices;

b) Develop and maintain the Asia/Pacific regional roadmap for SWIM implementation, including SWIM technical infrastructure, SWIM governance, SWIM information services;

c) Propose a high-level Asia/Pacific regional SWIM architecture, the corresponding SWIM technical infrastructure requirements, and the implementation approach to construct such architecture principally over CRV and other IP based networks to ensure interoperability among regional SWIM participants, to support transition for non-SWIM capable entities;

d) Develop the Asia/Pacific regional SWIM cyber security architecture framework and SWIM security strategy in line with ICAO International Aviation Trust Framework (IATF);

e) Support APANPIRG WGs/TFs 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;

f) 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, including SWIM registries, is consistently applied and enforced throughout the Asia/Pacific region;

g) Develop and define the Asia/Pacific version of the SWIM information service overview specifications and the Asia/Pacific version of data catalogue for information services based on the regional operational needs;

h) Track and observe SWIM demonstrations and trials within the Asia/Pacific region as well as provide, if required, support for regional SWIM demonstrations;

i) Encourage and support interested APAC Member States to construct a platform for SWIM services and applications validation and to support the implementation of SWIM services and applications;

j) Monitor developments by the IMP and escalate the regional issues as required;

k) Identify, communicate, and liaise with relevant APANPIRG WGs/TFs in regard to SWIM-related activities, including providing support to refine SWIM operational and communications requirements;

l) Develop an educational and promotional materials required to support the regional SWIM implementation to ensure cohesiveness among regional SWIM participants;

m) Assist APAC Member States to implement the Asia/Pacific regional SWIM, as appropriate;; and

n) Undertake any other approved tasks related to SWIM implementation that may arise in the future.

Composition:

The SWIM TF will consist of experts from ATM, AIM, MET, and CNS from Asia/Pacific States and international organizations such as IATA and ICCAIA.

Conduct of the work:

The task force will conduct its work through web conferences, teleconferences, other electronic means of communications, and Face-to-Face meetings.

Reporting:

The group will report to CNS SG.

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Statement of Work
Task 1 Implementation Planning
Task Manager: David Leow and Amornrat Jirattigalachote

Project: SWIM Task Force	
Revision number: 04	**Approved:** Click here to enter a date.

Objective and scope of the project
- Maintain the Asia/Pacific regional roadmap for SWIM implementation.
- Track the work done by the SWIM Implementation ad-hoc Pioneer Group (SIPG) and update the regional roadmap.

Deliverables
- Maintenance of the Asia/Pacific regional roadmap until the SIPG completes the implementation of the Asia Pacific SWIM Technical Infrastructure.

Milestones
- The roadmap is updated according to the SIPG timelines.

Dependencies
- Dependencies with projects supervised by different SG (will be controlled by APANPIRG):
  - AAITF
  - MET/IE WG
  - ATFM SG
  - APA-CDM TF
- Dependencies with projects supervised by the SG (will be controlled by SG):
  - CRV OG
  - SURICG
- Dependencies between tasks in the project (will be controlled by the Task Force):
  - SIPG
- Other dependencies
  - IMP
  - TFP

Task participants

State/Organization	Name	Role/ Responsibility	Email	Phone
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Sri Lanka/Airport & Aviation Services Limited	Asanga Senarath Bandara	Contributor	asanga.eane@airport.lk asangasenarath@gmail.com	+9476824 2654 +9411226 3619

State/Organization	Name	Role/ Responsibility	Email	Phone
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Working arrangements

☐ Face-to-face meetings

☒ Web conferences

☐ Needs an ICAO secured portal, name: Click here to enter text.

☒ Other: E-mail

Statement of Work
Task 2 Regional SWIM Infrastructure
Task Leader: Yukinobu Ryu, Xiaodong Lu, Henry Chan

Project: APAC SWIM Task Force	
Revision number: 03	**Approved:** Click here to enter a date.

Objective and scope of the project

- Define the high-level APAC SWIM Architecture including policies on implementation and distribution of SWIM services
- Define the requirements for the APAC SWIM Infrastructure with the goal of ensuring technical interoperability
- Outline policy to ensure backwards compatibility with non-SWIM capable entities
- Develop a roadmap for the implementation of APAC SWIM Infrastructure

Deliverables

- Develop APAC SWIM Architecture requirements and policy
  - Regional interoperability and connectivity
  - Common aeRonautical VPN (CRV) integration
  - Supporting Regional SWIM information services
  - SWIM mediation and backwards compatibility
  - APAC SWIM Architecture roadmap
- Develop APAC SWIM Infrastructure requirements
  - Messaging requirements
  - Security requirements
  - Technical Infrastructure Management requirements

Milestones

Indicate here the main milestones of the task or give a reference to a planning (Gantt chart etc)

- Milestone 1: Define a CRV-based APAC SWIM Architecture to ensure interoperability during the transition period (Related to the discussion of AMHS/SWIM Gateway Study Group)
- Milestone 2: Develop APAC SWIM Technical Infrastructure Profiles based on the related ICAO documents (Related to the discussion of IMP)
- Milestone 3: Propose an approach to implement secure APAC SWIM Infrastructure by cooperating with Task 3 Security Services (Related to the discussion of TFP and CYSECP)
- Milestone 4: Validate the APAC SWIM Infrastructure implementation via the joint demonstration with other task teams (Related to the discussion of ATMRPP)

Dependencies

Dependencies with projects supervised by different SG (will be controlled by APANPIRG):

- Manual on SWIM, SARPS, PANS and Guidance material from IMP, TFP, CYSECP, CP and ATMRPP

Dependencies with projects supervised by the SG (will be controlled by SG):

- Availability and capability of CRV implementation

Dependencies between tasks in the project (will be controlled by the Task Force):

- Task 3 – Security Services
    - Provide a trust framework for information services
- Task 5 – Governance
    - Integrate SWIM Governance requirements and policy
- Task 6 – Information Services
    - Support the implementation of SWIM Information Services
- Task 8 – SWIM Service and Application Validation
    - Get feedback for interoperability from SWIM Service and Application Validation

Task participants

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Working arrangements

☒ Face to face meetings

☒ Web conferences

☐ Needs an ICAO secured portal, name: Click here to enter text.

☒ Other: Email

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Statement of Work	
Task – 3 Security Services	
Task Manager: Jim Laymon (FAA); TBD	

Project: APAC SWIM Task Force	
Revision number: 01	**Approved:** Click here to enter a date.

Objective and scope of the project

- Advises TF Chair and Task Leads in the area of cybersecurity for APAC. Specific objectives include:
  - o 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.
  - o 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.
  - o Ensures interoperability of trust frameworks within the APAC region and with other ICAO regions.
  - o Developing SWIM Cyber Security Architecture Framework and SWIM security strategy for the Asia-Pacific Region. Analyses and captures SWIM security risks.
  - o Provide security guidelines and best practices to be incorporated in SWIM APAC Governance activities.

Deliverables

- APAC SWIM Security Scope and Context (Working Paper)
- APAC SWIM PKI Trust Framework (Working Paper)
- Cyber Security Architecture Framework for SWIM in ICAO Asia-Pacific Region (Final, working Paper)

Milestones

- Draft Cyber Security Architecture Framework for SWIM in ICAO Asia-Pacific Region by (TBD)
- Working paper on APAC SWIM Security Scope, due TBD
- Working paper on the trust framework for APAC SWIM, due TBD
  - o Survey of IAM Initiatives relevant to APAC SWIM, due TBD
  - o Development of framework, due TBD
- APAC Trust Interoperability Demonstration - Complete
- Cyber Security Architecture Framework for SWIM in ICAO Asia-Pacific Region (Final Version), TBD

Dependencies

Dependencies with projects supervised by different SG (will be controlled by APANPIRG):

- SARPS, PANS & Guidance material from the IMP & other relevant panels (ie, ATMRPP)
- Coordination with CRV OG

Dependencies with projects supervised by the SG (will be controlled by SG):

Dependencies between tasks in the project (will be controlled by the Task Force):

- SWIM Manual Vol. II- Implementation Guidelines provide SWIM Security Capability and Security Non-Functional Qualities requirements in 5.3 under Chapter 5-SWIM Technical Infrastructure (TI).
- Annex 17 – Security (tenth edition, April 2017), Doc 8973 Aviation Security Manual (9th edition, Oct.2014) and Doc 9985 ATM Security Manual (first edition, restricted, 2013) provide guidance for Cyber Security Architecture Framework of SWIM.
- Task 2 - Regional SWIM infrastructure
- Task 5 – Governance
- Task 6 – Information Services

Dependencies with projects at member states:

- SWIM Identity and Access Control projects

Task participants

State/Org-anization	Name	Role/Respon-sibility	Email	Phone
FAA	Jim Laymon	Task Lead	Jim.Laymon@faa.gov	(609) 485-6930
TBD	TBD	Task Lead	TBD	TBD
		Team Member		
…				

Working arrangements

☒ Face-to-face meetings

☒ Needs an ICAO-secured portal, name: SWIM Cyber Security

☒ Teleconference

☒ Other: Internet Cooperative Work

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Statement of Work
Task 4 Technical Architecture
(Development and Maintenance of Regional Information Exchange Models)
Task Manager: Amornrat Jirattigalachote and Wen Zhu

Project: SWIM Task Force	
Revision number:03	**Approved:**Click here to enter a date.

Objective and scope of the project

- 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

Deliverables

- Support APANPIRG WG/TF regarding information exchange models
- Information exchange model gap identification, i.e. to 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 for the Asia/Pacific operational use
- Strategy to maintain the artifacts required to support the regional development and maintenance of information exchange model(s) and the extensions
- Approaches for information exchange model interoperability within the region and with other aviation partners

Milestones

- Now – SWIM TF Dissolution
  - Review of operational requirements on data required to be exchanged to support the Asia/Pacific regional operations
  - Examine if the required data attribute(s) are currently available in the existing information exchange models
  - Develop and test the extension(s) and/or new information exchange model(s), if needed
- SWIM TF/5
  - The first version of strategy to maintain the artifacts required to support the regional development and maintenance of information exchange model(s) and the extensions

Dependencies

- Dependencies with projects supervised by different SG (will be controlled by APANPIRG):
  - ATFM SG
  - APA-CDM TF
  - MET/IE WG
- Dependencies with projects supervised by the SG (will be controlled by SG):
  - None
- Dependencies between tasks in the project (will be controlled by the Task Force):
  - Task 1 Implementation Planning

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- – Task 2 SWIM Infrastructure
- – Task 5 Governance
- – Task 8 SWIM Services and Application Validation
- – Task 10 Regional Coordination and SWIM-related Information Sharing
- • Other dependencies:
  - – Information exchange model change control boards, e.g. FIXM Change Control Board (FIXM CCB)

Task participants:

State/Organization	Name	Role/Responsibility	Email	Phone
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Working arrangements

☐Face-to-face meetings

☒ Webconferences

☐ Needs an ICAO-secured portal, name: Click here to enter text.

☒ Other: E-mail

Statement of Work
Task 5, SWIM Governance
Task Manager: Mark Kaplun (USA), TBD (ROK)

Project: SWIM Task Force	
Revision number: 02	**Approved:** Click here to enter a date.

Objectives

   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.

  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.

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.

Deliverables

   I.   WP: APAC SWIM Service Discovery and Registry Interoperability Approach
  II.   WP: APAC SWIM Governance Policies: Status and Plans
III.   WP: APAC SWIM Service Level Agreement (SLA): Template
IV.   WP: SWIM Interoperability Assessment Matrix (SIAM): Template
  V.   IP: SWIM Metadata standards and taxonomies

Milestones

   I.   Operational deployment of SWIM Discovery Services (SDSs) produced by the FAA and KAC (March 2022)
  II.   Analysis and subsequent updates of SDS/registries network in APAC SWIM (August 2022)
III.   APAC SWIM Governance Policies: Status and Plans (TBD)
IV.   Release of SLA Template (June 2022)
  V.   Release of SIAM Template (July 2022)

Dependencies

Dependencies between tasks in the project (will be controlled by the Task Force):

- Task 2 – Technological solutions and architectural views to be utilized in support of APAC SWIM infrastructure
- Task 3 - Information and analysis about security solutions deployed in APAC regions
- Task 6 - Identified standards and technological approaches to be utilized for service validations

Task participants

State/Organization	Name	Role/Responsibility	Email
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Working arrangements

☐ Face to face meetings

☒ Webconferences

☐ Needs an ICAO secured portal, name: Click here to enter text.

☐ Other: Click here to enter text.

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Statement of Work
Task 6: Information Services
Task Manager: Marco Kok (Hong Kong, China), Jeremy Bienkowski (Australia)

Project: SWIM Task Force	
Revision number: 04	**Approved:** Click here to enter a date.

Objective and scope of the project

- To define the list of APAC Common SWIM Information Services based on operational needs in APAC
- To define the data catalog for APAC Common SWIM Information Services

Deliverables

- Develop the APAC Common SWIM Information Services and determine the priority of implementation for
  - APAC Common SWIM Aeronautical Information Services
  - APAC Common SWIM Flight Information Services
  - APAC Common SWIM MET Information Services
  - APAC Common SWIM Surveillance Information Services
- Develop the associated data catalog for APAC Common SWIM Information Services
- Document the above deliverables related to Information Services in "APAC SWIM Implementation Guidance Document"
- Provide input for the development of the sample use cases for inclusion in the "APAC SWIM Implementation Guidance Document" to demonstrate the operational benefits brought by the various SWIM information services within a State or between States.

Milestones

- Milestone 1: Present the results on the region-wide survey on APAC Common SWIM Information Services in SWIM TF/9 (May 2024)
- Milestone 2: Present the propose list of information to be exchanged via APAC Common SWIM Information Services, with the description of the business functionality, in SWIM TF/9 and seek comments (May 2024)
- Milestone 3: Seek comments from relevant groups (AAITF, ATFM SG, FF-ICE Ad-hoc group, MET/IE WG, SURSG, MET SG, AOP SG, and ATM SG) and subject matter experts on the proposed list of APAC Common SWIM Information Services updated by SWIM TF/9 (Jun 2024 to Apr 2025)
- Milestone 4: Revise the list of initial APAC Common SWIM Information Services and their data catalog based on feedback received from different contributory bodies and present it in SWIM TF/10 for further consideration (May 2025)

- Milestone 5: Monitor the global development of Information Service Definition (ISD) template for subject-matter-expert Panels, e.g. ATMRPP, METP, which is being progressed by IMP; and develop domain-specific ISDs for APAC Common SWIM Information Services according to the agreed priority of each service, with regional descriptions aligned with the global guidance (Nov 2025)

Dependencies

- Task Group #5 (Governance) – the work on interoperability of Registry and service discovery, which provides recommendations on the Information Service Overview.

Task participants

State/Organization	Name	Role / Responsibility	Email
Hong Kong China / HKO	Mr. Marco Kok	Co-Lead	mhkok@hko.gov.hk
Australia / Airservices Australia	Mr. Jeremy Bienkowski	Co-Lead	Jeremy.Bienkowski@AirservicesAustralia.com
Thailand / TMD	Mr. Wanchalearm Petsuwan	Contributor	wpetsuwan@hotmail.com
Thailand / TMD	Ms. Rassmee Damrongkietwattana	Contributor	rassmee@hotmail.com
Thailand / TMD	Mr. Worapong Noothong	Contributor	pui-74@hotmail.com
Thailand / AEROTHAI	TBC	Contributor	TBC

Working arrangements

☐ Face to face meetings

☒ Webconferences

☐ Needs an ICAO secured portal, name: Click here to enter text.

☒ Other: emails

Statement of Work

Task 7 SWIM Demonstrations

Task Manager: David Leow (Singapore) and Amornrat Jirattigalachote (Thailand)

Project: SWIM Task Force	
Revision number: 1	**Approved:** Click here to enter a date.

Objective and scope of the project
- Track and observe SWIM demonstrations and trials within the Asia/Pacific region and ensure that reports of those demonstrations and trails are presented to the SWIM Task Force
- Provide, if requested, support for regional SWIM demonstrations
- Support trials and proof of concepts work as determined by the SIPG

Deliverables
- Reports from other SWIM demonstrations within the Asia/Pacific region
- Reports on SIPG trials and PoC activities

Milestones
- As needed: Reports from other SWIM demonstrations
- As needed: Reports from SIPG trials and PoCs

Dependencies
- Dependencies between tasks in the project (will be controlled by the Task Force):
    - All

Task participants

State/Org-anization	Name	Role/Respon-sibility	Email	Phone
Singapore	David Leow	Lead	david_leow@caas.gov.sg	+65 6595 6771
Thailand	Amornrat Jirattigalachote	Lead	amornrat.ji@aerothai.co.th	+66 2 287 8262
Hong Kong, China	Henry Chan	Leader	hhlchan@cad.gov.hk	+852-2910-6574

Working arrangements

☐ Face to face meetings

☒ Web conferences

☐ Needs an ICAO secured portal, name: Click here to enter text.

☒ Other: Click here to enter text.

Statement of Work

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Task 8 SWIM Service and Application Validation

Task Leader: Yukinobu Ryu, Xiaodong Lu, Honglei Gao, Yong Jin Ha

Project: APAC SWIM Task Force	
Revision number: 03	**Approved:** Click here to enter a date.

Objective and scope of the project

- Construct a platform for SWIM service and application validation
- Support the implementation of SWIM service and applications
- Support the demonstration of SWIM based operations

Deliverables

- Develop validation requirements for APAC SWIM Infrastructure services
  - o Interface Management
  - o Messaging
  - o Security
- Define and validate the required SWIM services and applications for supporting different operation levels under mixed-mode environment
  - o SWIM based information sharing (ATFM, A-CDM and etc.)
  - o FF-ICE/R1 operation
  - o FF-ICE/R2 operation
  - o Trajectory Based Operations
- Develop a common platform for SWIM service and application validation
  - o Test system for FIXM, AIXM, and IWXXM message exchange
  - o Technical support for regional validation and demonstration

Milestones

Indicate here the main milestones of the task or give a reference to a planning (Gantt chart etc)

- Milestone 1: ~2019.12 Construct a platform for SWIM service and application validation
- Milestone 2: ~2020.11 Conduct a demonstration for FF-ICE/R1 service validation
- Milestone 3: ~2023.12 Develop validation requirements for Regional SWIM Infrastructure
- Milestone 4: Validate the Regional SWIM Infrastructure with Security Services via the joint demonstration
- Milestone 5: Validate the required SWIM services and applications for different operation levels via the APAC TBO Pathfinder Project

Dependencies

Dependencies with projects supervised by different SG (will be controlled by APANPIRG):

- Manual on SWIM, SARPS, PANS and Guidance material from IMP, TFP, CYSECP, CP and ATMRPP

Dependencies with projects supervised by the SG (will be controlled by SG):

- The status of SWIM TI implementation in APAC Region

Dependencies between tasks in the project (will be controlled by the Task Force):

- Task 2 – Regional SWIM Infrastructure, Task 3 – Security Services
  - o Provide a platform for SWIM-based operations
- Task 5 – Governance
  - o Integrate SWIM Governance requirements and policy
- Task 6 – Information Services
  - o Support the validation of SWIM Information Services

Task participants

State/Organization	Name	Role/Responsibility	Email	Phone
Japan	Yukinobu Ryu	Co-Leader	ryuu-y2ea@mlit.go.jp	+81-3-5253-8111
Japan	Xiaodong Lu	Co-Leader	luxd@mpat.go.jp	+81-422-41-3528
China	Honglei Gao	Co-Leader	gaohonglei@atmb.net.cn	+86-010-87786917
China	Hongming Ren	Member	renhongming@atmb.net.cn	+86-010-84247276
ROK	Sehwan Han	Co-Leader	hsh91@airport.co.kr	+82-2-2660-4383
ROK	Younghoon Kim	Member	yh89@airport.co.kr	+82-2-2660-2878
PCCW Global	Bono Ng	Member	bcng@pccwglobal.com	+85-2-3419-2103

Working arrangements

☒ Face to face meetings

☒ Web conferences

☐ Needs an ICAO secured portal, name: Click here to enter text.

☒ Other: Email

Statement of Work

Task 9 Monitoring of Panel work

Task Manager: Yukinobu Ryu

Project: SWIM Task Force	
Revision number:　　　02	**Approved:** Click here to enter a date.

Objective and scope of the project

- Monitor developments by IMP and escalate issues/inputs as required

Deliverables

- Monitor developments by the IMP and escalate issues as required
- Periodic updates to IMP from SWIM Task Force work plan

Milestones

Indicate here the main milestones of the task or give a reference to a planning (Gantt chart etc)

- Milestone 1: SWIM TF/10, 19 to 23 May 2025, in Bangkok
- Milestone 2: IMP/WG/13, 15 to 19 September 2025 in Montreal
- Milestone 3: IMP/4, 20 to 24 April 2026, TBD

Dependencies

- ATM SG
- ATFM SG
- CNS SG
- MET SG

Task participants

State/Org-anization	Name	Role/Respon-sibility	Email	Phone
Japan	Yukinobu Ryu	Task manager	Ryuu-y2ea@mlit.go.jp	+81-3-5253-8751

Working arrangements

☐ Face to face meetings

☐ Needs an ICAO secured portal, name: Click here to enter text.

☐ Other: Click here to enter text.

Statement of Work

ICAO BANGKOK

Task 10 : REGIONAL COORDINATION AND SWIM-RELATED INFORMATION SHARING
Task Manager: John Moore

Project: SWIM Task Force	
Revision number: 2.0	**Approved:** Click here to enter a date.

Objective and scope of the project

- Monitor identified SWIM-related activities being undertaken in Asia & Pacific Region outside of the ongoing direct SWIM discussions and initiatives
- Liaise with relevant regional TF/WGs to refine operational and communications requirements, provide guidance to those WG/TFs developing and using SWIM, and influence outcomes from other WGs and TFs that will support successful expansion of SWIM

Deliverables

- Identify and monitor SWIM related activities (and their interdependencies) in planning or development within other Working Groups (WGs) and Task Forces (TFs).
- Update other groups on the activities of the SWIM TF
- Update SWIM TF on the activities of other groups outside of the direct activities of the SWIM TF or related groups

Milestones

- Updates where relevant at other WG/TF meetings and a Working Paper update at each SWIM TF meeting
- Updates (WP/IP) to APANPIRG WG/TF as needed

Dependencies

- All relevant WGs, TFs or initiatives unrelated to ICAO group activities (eg: CANSO, OEM or individual State activities)

Task participants

State/Org-anization	Name	Role/Respon-sibility	Email	Phone
IATA	John Moore	Task Lead	moorej@iata.org	

Working arrangements

☐ Face to face meetings

☐ Needs an ICAO secured portal, name: Click here to enter text.

☒ Other: Web meetings and Phone Calls

Statement of Work

Task 11 - SWIM Implementation Education and Promotion

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Task Manager: Thomas Green

Project: APAC SWIM Task Force	
Revision number: V1	Approved: Click here to enter a date.

Objective and scope of the project

- Creation of an educational and promotional program needed to support SWIM implementation, operations, and facilitate cooperation among stakeholders within the region.
- Collaboration with other APAC SWIM TF task to ensure cohesiveness between the guidance materials and educational material deliverable from the APAC SWIM TF.
- Management, organization, and dissemination of all APAC SWIM educational material
- Creation of an APAC SWIM education and promotional catalog

Deliverables

- APAC Region SWIM Educational and Promotional Roadmap
- APAC Regional SWIM Brochure
- APAC Regional SWIM Symposium
- APAC SWIM Regional Outreach Plan
- APAC SWIM Education and Promotional Catalog

Milestones

Task Number	Activity	Estimated Date of Completion
1	Creation of Draft APAC SWIM Brochure	TBD
2	Draft 3 year SWIM Education and Promotional roadmap	September 10, 2021
3	Confirm date for APAC SWIM Regional Symposium	TBD
4	Complete Draft APAC SWIM Regional Outreach Plan	TBD
5	Complete Draft of APAC SWIM Education and Promotional Catalog	TBD

Dependencies

- ICAO Doc 10039 - Manual on SWIM Concept
- SWIM Manual and Technical Guidance Material
- Guidance Materials issued via the various APAC SWIM TF Task

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Task Participants

State/Org-anization	Name	Role/Respon-sibility	Email	Phone
LST	Thomas Green	Task Lead	Thomas.green@lstechllc.com	
AEROTHAI	Jittima Asawachaiporn	Participant	jittima214@gmail.com	

Working arrangements

☐ Face to face meetings

☐ Needs an ICAO secured portal, name: Click here to enter text.

☐ Other: Click here to enter text.

SWIM TF Work Plan

Project Group	Old Task number	Old Task Description	New Task No	New Task Description	Objective and scope	Task Lead(s)	Planned Start	Planned completion	Dependencies	Guidance for SOW
Implementation Planning	1-1	Benchmarking of best practices	1	Regional implementation philosophy & 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	David Leow (Singapore) Dr. Amornrat Jirattigalachote (Thailand)	2017	2018	SWIM Task Force created, resources available Panels deliver as expected Task 1.7 (common vocabulary)	benchmark existing governance models (FAA, Europe), existing catalogues, existing arrangements for quality of service/SLA (availability/reliability), existing registries if any Benchmark mediation of legacy users Benchmark available existing SWIM and industry models for service descriptions ICCAIA IP13 to be included

		Guidance To States:
		Interregional workshop
		    Develop SWIM implementation Guidance for phase 1
		    Develop SWIM implementation Guidance for phase 2 (dual operations)
		    Regional workshops
							2017
							2017
							2017
							2019
							As needed
								2022
								2017
								2018
								2020
									SWIM iKit (if confirmed by IMP)	From the task 1-3 APANPIRG WG/TF planning to use or using SWIM may need guidance (ad hoc basis)
										Guidance to States
										
										Mediation of legacy users
										
										Lessons learnt from ASEAN SWIM demonstration

		Guidance for publishers/consumers;					2017	2018	Task 1.1 Task 1-5 and 1-6 Task 1-4 (service descriptions)	Common vocabulary requirement on publishers and suscribers to use the common controlled vocabulary Should include developing a guide for the preparation of service descriptions (dependency = 1.4) Could include guidance for developers/publishers on a set of protocols/formats to use See WP/5 appendices b and c for FAA guidance Analyse which guidnace is necessary from IP/6 and WP/6
	1-2	SWIM Regional roadmap					2019	2022	SWIM Manual 10039 and Technical Manual	Roadmap needs to be updated to reflect the changes and developments that have occured in the last SWIM TF meetings. It needs to be more granular and help direct the work of the other task groups for APAC regional SWIM implementation. To decide and agree on the target architecture for APAC SWIM that will address all the members' concerns
							2022	2024	New implementation Roadmap	1st Set the timeframe for implementation 2nd Discuss with the TF and decide on the elements for impelementation 3rd Develop new roadmap for SWIM implementation.
SWIM infrastructure	1-8	Regional SWIM Architecture	2	Regional SWIM infrastructure	• Define the high-level APAC SWIM Architecture including policies on implementation and distribution of SWIM services • Define the requirements for the APAC SWIM Infrastructure with the goal of ensuring technical interoperability • Outline policy to ensure backwards compatibility with non-SWIM capable entities • Develop a roadmap for the implementation of APAC SWIM Infrastructure	Mr. Xiaodong Lu (Japan) Mr. Yukinobu Ryu (Japan) Mr. Henry Chan (Hong Kong, China)	2017 2021	2020 2023	• Manual on SWIM, SARPS, PANS and Guidance material from IMP, CP or ATMRPP • Availability and capability of CRV implementation • Task 5 – Governance • Task 6 – Information Services • Task 8 – SWIM Service and Application Validation	Define a CRV-based APAC SWIM Architecture to assure interoperability during the transition period Develop APAC SWIM Infrastructure requirements based on the related ICAO documents Propose an approach to implement secure APAC SWIM Infrastructure by cooperating with Task 3 Security Services
	New	NA	3	Security service	• Advises TF Chair and Task Leads in the area of cybersecurity for APAC. Specific objectives include: • 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. • 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. • Ensures interoperability of trust frameworks within APAC region and with other ICAO regions. • Developing SWIM Cyber Security Architecture Framework and SWIM security strategy for the Asia-Pacific Region. Analyses and capture SWIM security risks. • Provide security guidelines and best practices to be incorporated in SWIM APAC Governance activities.	Mr. Jim Laymon (USA)	2023	2025	ICAO 2022 approval of: 1. X.509 Certificate Policy for the International Aviation Trust Framework (IATF) Certification Authority 2. IATF CP Criteria and Methodology for Cross Certification Identity Management 3. IATF CP Life Cycle Management (CPLCM) Operating Rules, 4. International Aviation Trust Framework Bylaws 5. IATF Criteria and Methodology for Global Resilient Aviation Interoperable Network (GRAIN)	Objective: 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. Proposed Guidance: APAC establishment of a Regional SWIM PKI Policy Management Authority in alignment with ICAO IATF SARPS Objective: Ensures interoperability of trust frameworks within APAC region and with other ICAO regions. Proposed Guidance: APAC establishment of a Regional SWIM DT&E environment to conduct Interoperability testing with US FAA, EUROCONTROL and other Regional ANSPs. (MRTBO example) Objective: Developing SWIM Cyber Security Architecture Framework and SWIM security strategy for the Asia-Pacific Region. Analyses and capture SWIM security risks. Provide security guidelines and best practices to be incorporated in SWIM APAC Governance activities Proposed Guidance: FAA provide Technical interchange of SWIM IAM Phase 2 and SWIM IAM segment 3 planned investments that align with ICAO IATF requirements to include establishment of the FAA PKI Policy Management Authority to assist APAC development of SWIM Cyber Security Architecture Framework and PKI use governance.

Project Group	Old Task number	Old Task Description	New Task No	New Task Description	Objective and scope	Task Lead(s)	Planned Start	Planned completion	Dependencies	Guidance for SOW
Technical Architecture	1-6	Regional SWIM models	4	Development and maintenance of 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	Dr. Amornrat Jirattigalachote (Thailand) Mr. Wen Zhu (USA)	2016	2017 TBD (Regional Extension will need to be maintained/updated to accommodate (i) new operational use cases and (ii) the release of new version of information exchange model(s))	Global model definitions available	From the task 1-3 models may need extension /refinements - there is already a case for ATFM Interaction with "light" approach discussed by IMP, coordination with 1-7 Relation with CCB - coordination with task 1-4 Regional Extension may need refinement - There is already a case for ATFM and ATFM/A-CDM integration; Interaction with "light" approach discussed by IMP - Coordiantion with Task 9 Relation with CCB - Coordination with Task 5
Governance	1-4	SWIM governance	5	Regional SWIM Governance Framework	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. 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. 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.	Mr. Dongkie Park (ROK) Mr. Mark Kaplun (USA), Mr. Yukinobu Ryu (Japan) Mr. Xiaodong Lu (Japan), Ms. Honglei Gao (China)	2016	TBD (Note: SWIM Governance will be implemented throughout the SWIM lifecycle.)	I. Procedures for Air Navigation Services (PANS) Information Management (IM), Volume I System Wide Information Management II. Manual on System Wide Information Management (SWIM), Doc 10039, VOLUME I: SWIM Concept III. SWIM Discovery Service Implementation Specification Service Description Conceptual Model (SDCM) IV. APAC SWIM Roadmap	I. Effective governance will result in more consistent decision-making and reduce risk and uncertainty. II. Identify new areas for policy development based on collected input and present them to the APAC SWIM TF. III. Further update the SDS solution to reflect user experience, lessons learned, and emerging technological solutions. IV. Facilitate ongoing engagement with SDS implementers through regular feedback and reviews. V. Concentrate on what really needs to be delivered to SWIM consumers. VI. Ensure that consumers' and providers' needs are met by developing a comprehensive SLA-management solution that can be adapted to multiple states' SWIM deployment scenarios.
	1-5	Design Regional SWIM Registry and architecture for phase 2								
	2-1-2 2-1-4	Implement SWIM registry and architecture Guidance and Requirements for Publishers and Consumers								
Information Services	2-1-2	Promote new needs and new services and maintain database of publishers (ID/access points/services/interface/format..) pending registry implementation	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.	Mr. Marco Kok (Hong Kong, China)	2017	2023	Dependent on new use cases and operational needs identiifed in APAC.	•Develop the APAC version of the required and optional information services for ANSP to prioritize the implementation of services •Develop the APAC version of data catalogue for information services •Identify any additional optional fields required for SWIM service overviews in APAC in addition to those as defined in PANS-IM
Validation & Demonstration	1/2/2001	Promote new needs and new services and maintain database of publishers (ID/access points/services/interface/format..) pending registry implementation	7	SWIM Demonstration	• Report on the SWIM in ASEAN demonstration, particularly the lessons learnt • Track and observe SWIM demonstrations and trials within the Asia/Pacific region and ensure that reports of those demonstrations and trails are presented to the SWIM Task Force • Provide, if requested, support for regional SWIM demonstrations	Mr. David Leow (Singapore) Dr. Amornrat Jirattigalachote (Thailand)	2017	2019		An "Excel" file? Include service descirptions etc Assume registry services can be available on CRV from 2019 onwards 70 FAA applications are available for use and should be referenced in the catalogue
	2-2-1	SWIM generalization					2021	TBD (Depening on the demonstration/trial to be conducted in APAC)	Demonstration/Trial to be conducted within APAC	
	2-1-3	Support validation and publication of SWIM based applications	8	SWIM services and application validation	• Construct a platform for SWIM service and application validation • Support the implementation of SWIM service and applications • Support the demonstration of SWIM based operations	Mr. Yukinobu Ryu (Japan) Mr. Xiaodong Lu (Japan) Ms. Honglei Gao (China) Mr. Dongkie Park (ROK)	2017 2020	2019 2023	• Manual on SWIM, SARPS, PANS and Guidance material from IMP, CP or ATMRPP • The status of SWIM TI implementation in APAC Region • Task 2 – Regional SWIM Infrastructure • Task 3 – Security Services • Task 5 – Governance • Task 6 – Information Services	Support the validation of FF-ICE/R1 service Develop validation requirements for Regional SWIM Infrastructure Support the validation of Regional SWIM Infrastructure with Security Services via the joint demonstration Support the validation of required SWIM services and applications for different operation levels
	1-7	Monitoring of panels work	9	Monitoring of panels work	Monitor developments by IMP and escalate issues/inputs as required	Mr. Yukinobu Ryu (Japan)	2016	2022	SWIM Manual and Technical Manual	Escalate issues to the panels Report back from panels 2 IMP meetings per year, monthly conferences A need for a Discussion paper at IMP (deliverable of the task) Focal point for common controlled vocabulary, in coordination with 1-4 Version management should be coordinated regarding backward compatibility and the content of models (FIXm, AIXM) Focal pint to trigger change requests to the models

Project Group	Old Task number	Old Task Description	New Task No	New Task Description	Objective and scope	Task Lead(s)	Planned Start	Planned completion	Dependencies	Guidance for SOW
Coordination and Promotion	1-3	Regional coordination within APAC and guidance and training to APANPIRG bodies	10	Regional coordination and SWIM-related information sharing	• Identify SWIM related activities (and their interdependencies) in planning or development within other WGs and TFs. • Liaise with relevant regional TF/WG to refine operational and communications requirements (ATFM SG, MET IE, AAITF, ACSICG, CRV OG, etc). • Provide guidance to APANPIRG WG/TF using SWIM. • Influence outcomes from other WGs and TFs that will support successful expansion of SWIM (eg: development of SWIM compatible CRV). • This involves confirming inclusion on agendas and appropriate discussions ensuing	Vacant	2016	2022	SWIM Manual and Technical Manual Guidance on IWXXM	Use APANPIRG organizational chart Revise on an annual basis Establish simple "MOU" between concerned APANPIRG bodies
		Guidance and training to APANPIRG WG/TF : - Provide guidance to APANPIRG WG/TF using SWIM					2017 2017 2017 2019 As needed	2022 2017 2018 2020	SWIM iKit (if confirmed by IMP)	From the task 1-3 APANPIRG WG/TF planning to use or using SWIM may need guidance (ad hoc basis) Guidance to States Mediation of legacy users Lessons learnt from ASEAN SWIM demonstration
	New	NA	11	SWIM implementation education and promotion (New task)	● Creation of an educational and promotional program needed to support SWIM implementation, operations, and facilitate cooperation among stakeholders within the region. ● Collaboration with other APAC SWIM TF task to ensure cohesiveness between the guidance materials and educational material deliverable from the APAC SWIM TF. ● Management, organization, and dissemination of all APAC SWIM educational material ● Creation of an APAC SWIM education and promotional catalog	Mr. Thomas Green (USA)	2022	TBD (See dependancies)	Completion of this task is reliant on the work completed in Task 1-10. As the task are completed and guidance is created, the catelog can be populated.	

Action ID	Task No	Reference	Who	What	Due date	Status	Comment	Additional Notes
1-1		2.2.1 & 2.2.2	~~Jeri Groce (Chair)~~, Task 1, Secretariat	Introduce the mediation principle in the design of the SWIM transition	TBD	Open	This will be assigned to the eventual lead of 2.2.1. Should be in SWIM Planning. Assigned to Task 1. (SWIM TF/6)	See attached TF-1 Paper and Mediation Paper **Work can be assist by Imp Pioneer Ad-hoc Group. Seed can support for transition from AHMS…**
1-2		1.1	All	Confirm their interest in ASEAN SWIM demonstration	30-Apr-2018	Completed	ASEAN demo has be out since October, but have had limited responses. • Awaiting feedback from China, Korea, and Japan. • A new due date of 31st of March has been requested. There are several confirmed partners, and an airline is helping with the coding and messaging in the scenarios.	
1-3		1.7 & 2.1.1	Yukinobu Ryu-san, (David Almeida)	Confirm terms used to designate the APAC SWIM "catalogue" are in compliance per controlled vocabulary	8-May-2018	Completed		
1-4		Thomas Green	Le Thi Phuong, (David Almeida)	Contribute to Task 1-1 regarding the benchmarking of quality and verification process, Service Level Agreements (SLA)	TBD	Closed	Dependent on Task 1.1 Work Plan. David Almeida will reach out to Member of Viet Nam to establish schedule.	Suggest we close this action, based on aging of the topic. Viet Nam and all members are invited to provide working papers and information papers for future discussion.
1-5		New conversation	Jiseok Kang	Define the minimum set of imformation and basic function of APAC SWIM registry	30-Nov-2018	Completed	This activity must be aligned to the SARPS, PANS and guidance defined by the IMP. This acivity needs a coordination with Task 2-1-1 to define service description elemenets for APAC SWIM servicies 1.While we are looking forward to getting more guidance from IMP PANS, SARPS, the IMP is also wish to get more input on SWIM implementation from regional office while they are developing these two documents. So I suggest APAC SWIM TF should work in parallel, working on researching the policy of registry, in	
1-6	3;5	1.4	Mark Kaplun ~~and David Wills~~ Task 3 Lead (SWIM TF/6)	Embark requirements laid out in ICAO provisions and FAA best practices and other practices as available to define the SWIM security governance	30-Apr-2019	Open	There is interest in establishing a security task to discuss the crosscutting SWIM issues, perhaps this should be a separate task as ICAO moving toward global trust security networks The due date will be pushed to April 2019 for the next plenary meeting The secretariat will add an agenda item to the next plenary for "splitting out security from governance into its own task"	Security is part of new task structure. Propose to transfer to Task 3. (SWIM TF/6)

Action ID	Task No	Reference	Who	What	Due date	Status	Comment	Additional Notes
1-7	1	1.1	David Almeida and Edward Curtis	Introduce lessons learnt from ICCAIA in the benchmark	27-May-2018	Completed	Dependent on Task 1.1 Work Plan. To be addressed after TF/3	Task 1.1 has been completed. Various documents were provided. Request ICCAIA member take action to introduce additional lessons learned as Information Papers in future plenary's.
1-8	8	2.1.3	Xiaodong Lu	Plan a large scale tabletop exercise and message exchange demonstration in the mid-term (2019 or 2020)	30-Nov-2018	Closed	There are currently two tasks – the ASEAN SWIM demo and FF-ICE/2 validation task. This task is reliant upon coordination with those 2 tasks. The due date will be pushed to November 2018 to allow time for FAA and ASEAN to make decisions Working on tabletop between Japan, Korea, and China. Will discuss this issue at TF/3	
1-9		Work Plan	Jeri Groce	Consolidate the SOW and update the work plan accordingly	22-May-2017	Completed	A residual action includes to setup webconference for the Task Leads.	
1-10		Work Plan	Frederic Lecat	Create a SWIM TF space under ICAO secure portal		Closed		
1-11		1.2	Amo, Stuart Wilson, David Almeida	Define the purpose of scope of "Outreach to Aviation Partners" deliverable	5-Oct-2017	Completed		
1-12	1	1.2 & 2.1.1	Amo, David Leow, Marco Kok	Align interdepedencies between Task 1.2 and 2.1.1.	30-Apr-2018	Completed	Artifacts of 2.1.1 can support 1.2. Will discuss at the October Brussels meeting	Recommend this item be closed due to the re-planning activity performed in 2020.
1-13		1.5	Jiseok Kang	Develop Working Paper for APAC SWIM registry approach	31-Dec-2018	Completed	This action is dependent on action item **ID# 1-5** to finish before work can begin	
1-14		1.1	Ryu-San, David Leow, and David Almeida	Need to create a WP for presentation to the IMP, letting them know which artifacts the APAC TF is dependent on, and by what date we need the artifacts by.	1-Nov-2017	Closed		
1-15		Work Plan	Frederic Lecat	Send out ICAO Regional Martial out to team	1-Nov-2017	Closed		
1-16	1	1.2	Marco Kok, and John Moore	Develop plan for development of a data catalog for Aeronautical, Flight, and Weather data	30-Nov-2018	Closed	matter experts in the domain areas of Aeronautical, Flight, and Weather data has been made by action owner Marco Kok. Work still ongoing, coordinating with Amo, referring to data catalogue	
1-17		1.1 & 1.4	Stuart Wilson, and Mark Kaplun	Need to coordinate development of SWIM Governance Framework for coordination between Task 1.1 and Task 1.4	30-Jan-2018	Closed		
1-18		Work Plan	Mark Kaplun	Coordinate with Stephan Dubet who is developing the ICAO IMP SWIM Governance document		Closed	• Mark Kaplun will coordinate and prepare a paper. • Deliverable date is on-going. • Initial deliverable date will be the week of the plenary. *Next delivery date will be SWIM T/F 5 (AUG 2021)	Recommend forwarding this action to the current Governance task leads to update and resolve, as required by the TF team.
1-19		1.5	David Leow	Provide detailed Task 1.5 SOW to Stuart	10-Jan-2018	Completed		

Action ID	Task No	Reference	Who	What	Due date	Status	Comment	Additional Notes
1-20		1.4	Mark Kaplun	Provide Goverernence and Registry lessons learned out to Task 1.5	30-Jan-2018	Completed		
1-21		1.6	Frederic Lecat	Send ED-133 documentation to Amo and Amo to take this into consideration for requirements development for Task 1.6		Closed		
1-22		1.8	Jeri Groce	Determine who will be the leader of Architecture Task (Task 1.8)		Closed		
1-23		Work Plan	Stuart Wilson	Coordinate possible dates for next meeting and send out a poll.		Closed		
1-24		Action Item 1-16	APAC Task Force Leadership	APAC Task Force Leadership to support Marco Kok, and John More on Action Item 1-16.	9-Apr-2018	Closed	Amo: The AeroThai group have already developed an initial data catalogue and will provide to Mr. Kok. Shane: May be able to provide input into this activity as well.	
1-25		1.8	Yunkinobu Ryu	Provide proposal on structure of Task 1.8 by the end of January.	30-Jan-2018	Closed	WP 1-8 closed this task.	
2-1		2.1.3	Yunkinobu Ryu, Xiaodong Lu, Gao Honglei, Jiseok Kang	Plan Regional message exchange demonstration	30-Nov-2018	Closed	This action is related to action 1-8 and the due date will be scheduled for November 2018. This action was included in action 1-8 and has been closed as a result	
2-3	1	1.1	David Almeida, Thomas Green	Establish contact with any SWIM-related working groups in other ICAO Regions	30-Apr-2019	Closed	The main effort in Europe working on identity access management and security. Some policies that are evolving and service lifecycle management activities.	The FAA has several international coordination projects. As has been done in previous Leadership & Plenary sessions, as relevant topics come up, FAA SWIM Program will engage those other international partners to support information needs, etc.
2-4	1	1.1	David Almeida, Thomas Green	Make recommendations on the APAC Region applicability of items in SWIM TF/2 WP/4	30-Apr-2019	Closed	XM recommendations will continue to be addressed as needed	This action should be covered under Action 3-3.
2-5	10	1.3	John Moore	Coordinate SWIM TF and MET IE/WG outcomes and activities This action is really about broader coordination of SWIM activities in APAC (not solely MET) and raising awareness of the work of the SWIM Task Force.	31-Dec-2019	Closed	WP09 SWIM in ASEAN Demonstration presented at ICAO APA-CDM TF/3	Closed because it is an ongoing activity (6/29)
2-6	10	1.3	John Moore More appropriate lead would be Amo or David Leow as the leads of the demonstration.	Coordinate minutes of SWIM in ASEAN Demonstration with SWIM TF	30-Nov-2018	Closed	David shared the minutes of ASEAN TIM #1, #2 on 18/11/2018	

Action ID	Task No	Reference	Who	What	Due date	Status	Comment	Additional Notes
2-7	5	1.4	David Willis, Mark Kaplun; Xiaodong Lu	Examine CRV OG to determine what structure may be used to form an APAC Regional SWIM Governance Review Board	Closed in SWIM TF/5	Closed	Task will be left as is until more clarification from Wen Zhu Closed in SWIM TF/5	Propose this is included in governance task (6/29); We need help from SWIM expert to come up with proposal Regional SWIM Governance to Discuss with CRV OG; Xiaodong and Wen to follow up **It has been discussed earlier. Mark will submit clarifications to close in SWIM TF/5** **3 September 2021:** The action item has been reexamined. Considering the ongoing actions taken by several task groups, it has been determined that it is still immature to clearly derive the appropriate structure of APAC regional SWIM governance body.
2-8	5	1.4	David Willis, Mark Kaplun	SWIM in ASEAN Demonstration participant Administrations to share any lessons learned or other insights relating to SWIM governance	30-Nov-2019	Closed	This task's due date will be scheduled for a few months after the ASEAN SWIM demo to obtain their lessons learned, demo date 27/6/19.	
2-9		1.4	David Willis, Mark Kaplun	Develop a draft APAC Governance Framework		Closed	Group decided this was a duplicate of task 1.4 and closed the action as it will be addressed by that task	
2-10		1.6	Amornrat Jirattigalochote	Coordinate SWIM in ASEAN Demonstration findings on A-CDM data attributes with APA-CDM/TF		Closed	WP09 SWIM in ASEAN Demonstration presented at ICAO APA-CDM TF/3	
2-11	2	1.8	Yunkinobu Ryu, Xiaodong Lu	Investigate the role of CRV in APAC SWIM and make recommendations on how APAC SWIM will interconnect with the CRV	30-Apr-2019	Closed	There are two options to establish SWIM platform on CRV. Confirms details of CRV and IMP to consider how to implement this method of the regional CRV. Xiaodong Lu will give a report about this in next SWIM TF meeting in 2019	Japan presented a paper on topic in SWIM T/F 4. Will be included in the Task 2 Deliverables (6/29)
2-12		2.1.1	Marco Mang Hin Kok	Re-Draft SWIM survey, together with educational material to also inform survey participants on SWIM	30-Apr-2019	Closed	Survey results presented at SWIM TF/3	

Action ID	Task No	Reference	Who	What	Due date	Status	Comment	Additional Notes
2-14	1	1.1	~~David Almeida,~~ Thomas Green,	Develop an APAC SWIM education implementation plan and high level education materials	SWIM TF/6 SWIM TF/7 SWIM TF/9 SWIM TF/10	Open	₋The SWIM education video for those with technical background has been finished which will be published on APAC website in March. (DONE) ₋The SWIM brochure has been in the final stage for design and will be completed in April. (will review comments) ₋The SWIM education implementation plan draft was presented at TF/3 wil continue to be developed	Need to start from scratch due to unavailablity of SWIM Brochure.(SWIM TF/5) **Require participation from region and difficult to complete task. Inputs from APAC is missing (TF/7)** **Requested experts to share material for SWIM education with Task leads** The first draft of SWIM brochure was presented by Thomas in SWIM Task Leads meeting 26 March 2024
2-15			All	Commence drafting an APAC Regional SWIM Implementation guidance document		Closed	oThis action is the pure output of the APAC TF to serve as a repository of output of the TF. oShane Sumner took an action to discuss the due date for the APAC Regional SWIM Implementation guidance document and report back to the group oThe Secretariat and David Almeida took an action to create a skeleton structure of this document Discuss the due date for the APAC Regional SWIM Implementation	
2-16		Action Item 2-8	John Moore	Confirm the dates of the ASEAN SWIM Demo with David Leow and Amo		Closed	Demo June 27, 2019	
2-17		Action Item 2-15	Shane Sumner	Discuss the due date for the APAC Regional SWIM Implementation Guidance document and report back to the group		Closed	Action merged with 2-15	
2-18		Action Item 2-15	Secretariat and David Almeida	Create a skeleton structure of APAC Regional SWIM Implementation guidance document		Closed	Action merged with 2-15	
2-19		Action Item 2-14	All	All states are encouraged to provide more SWIM education materials		Closed		
2-20	5	1.4	Wen Zhu, Mark Kaplun, David Leow, and David Almeida	Discuss and draft a proposal to the chair and try to get clarification on deliverables 1.4		Closed		Close. Overcome by events with modification of the task plan into new tasking.
2-21	2	1.8	David Leow and Amornrat Jirattigalochote	Provide all ASEAN SWIM Demo lessons learned and each subtask can absorb the lessons applicable to that group.	30-Nov-2019	Closed	To be addressed after demonstration	
2-22	5	2.1.4	Xiaodong Lu	Send an email to **Jiseok Kang** and Shane Sumner to resolve the discussion if task 2.1.4 should be included in the SWIM Registry/Architecture task		Closed		Included in task 5 (Governance)
2-23			Jay Zimmer	follow up with Shane Sumner to coordinate how APAC TF can interface with the CRV during Plenary 3. Need CRV points of contact to get on the agenda and brief out as well as attend this meeting		Closed	necessary changes to the provisional agendas internally within the Secretariat, in consultation with the Chairs. Our current plan has SWIM TF/3 scheduled for 06 to 10 May 2019, and CRV OG/6 for 08 to 10 May. FYI	

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3-1			Task leads	The Task Leads will address the APAC SWIM Implementation Materials Table of Contents of the at the next quarterly Task Force Lead Teleconference and provide input of supplementary materials by SWIM TF/4	30-Apr-2020	Closed		
3-2	2;3	1.3	Wen Zhu	Set up dedicated working group to covers other areas of cybersecurity	30-Apr-2020	Closed		This is completed with establishment of Security efforts within Technical Infrastructure Services.
3-3	4	1.6	Amornrat Jirattigalochote	The APAC SWIM FIXM Extension be forwarded to the FIXM Change Control Board (CCB) for validation and publication on the FIXM official website	30-Apr-2020	Closed		
3-4	9	1.7	Task Force members	SWIMTF members to submit comments to Japanese IMP member,Yukinobu Ryu	20-May-2019	Closed		
			Tasf Force members	SWIMTF to review Table of Contents for APAC SWIM Eductation programme (Appendix F to the SWIMTF/3 meeting report)	30-Jun-2019	Closed		
4-1	1,10	Task 1&10	Secretariat	Enhance communication with ICAO EUR/NAT Office on SWIM PT activities	On-Going	Closed		Routine task for the secretariat (6/29)
4-2	7		Task Leads	Further exploit and deliberate the outcomes of SWIM in ASEAN Demonstration to benefit States/Administration	SWIM TF/6 SWIM TF/7	Closed	Longer time action. Closed in SWIM TF/7	task leads to provide WP or IP on how ASEAN Demo can be leveraged in task areas **Report is tranferred to all Task leads and reviewed**
4-4			Task Leads of Task 2, Task 5 and Task 6	To join the sudy group proposed by SURICG to explore the initiative on surveillance data sharing over SWIM	SWIM TF/5	Closed		A number of members have joined this SG (6/29)
4-5			TF chair and Task Leads	Review the ToR and consolidate the action items in this list	SWIM TF/5	Completed	To align with GANP edition 6, APAC Seamless ANS Plan 3.0 and aim to enhance the interaction with other relevant contributory bodies of APANPIRG	More feedback from TL on TOR for TF/5 needed (6/29) **Closed after CNS SG/25**
4-6			Amornrat Jirattigalochote, Secretariat	Plan another SWIM workshop	1st TL meeting in 2021	Closed		
4-7			TF chair and Task Leads	Follow up the Task 3 and Task 11	1st TL meeting in 2021	Closed		
4-8	9	Task 9	Yukinobu Ryu, Secretariat	List of SWIM relevant ICAO Panels and representatives from APAC	Need to provide list before removing from Action Items List provided	Closed	To better monitor the Panels Work relevant to SWIM on the available resources and representation in APAC As ongoing, need to remove from Action List and will manage by Secretariat	Open till list then closed. Added AI into next task lead meeting- SWIM TF/5 **SWIM TF TL meeting on 28 Oct 2021 reviewed list and changed status to on-going** **To be removed from the list after SWIM TF/6** **Removed**

Action ID	Task No	Reference	Who	What	Due date	Status	Comment	Additional Notes
4-9	10	Task 10	John Moore, Secretariat	List of SWIM relevant meetings in APAC	SWIM TF/6	Closed	To better support the regional coordination and SWIM related information sharing	Same as 4-8, Need list before closing. Secretariat will provide in next TL. **SWIM TF TL meeting on 28 Oct 2021 reviewed list and changed status to on-going**
4-10	11	Task 11	Task Leads, Secretariat	Seek information on SWIM education and promotion for consolidation by Task 10.		Closed		To be completed as a part of Task 11 activities
4-11	11	Task 11	Task Leads, Secretariat	Share SWIM related material for future compilation of the APAC SWIM Implementation Materials	SWIM TF/6 SWIM TF/7	Closed	ICAO Secretariat will revise IGD ToC Consolidate the first draft of IGD **Done and closed in SWIM TF/7**	SWIM TF/5- Premature to develop SWIM Implementation material as global doc is not ready.
4-13	2	Task 2	Task 2 Group	Develop APAC SWIM TI Profile	SWIM TF/6 SWIM TF/7 SWIM TF/8 SWIM TF/10	Open	Proposed by Australia, needs further consideration Australia presented WP/19 in SWIM TF/5 Next action from Task group-2 Infrastrure binding can be considered as a part of TI profile.	Renato to provide a roadmap to develop the TI Profile **SWIM TF/5- Progress may be slow because APAC SWIM Implementation is initial stage** A draft living document v1.0 was endorsed by meeting for CNS SG/28 adoption
5-1	Task 2, Task 5, 4,6 and Task 7	NA	Task Leads of Task 2, Task 5, Task 4 and Task 6, SURSG, S3TIG	Start study of surveillance data being carried via SWIM on CRV; Study to include exploration of updated exchange model	SWIM TF/6 SWIM TF/7 **SWIM TF/9** **SWIM TF/10**	On-going	Action resulted from TL meeting Approved by the plenary	Ongoing work in SWIM TF/6 If S3TIG estab, trial will go on longer time. Joint event is from 28-29 May 2024. Lesson
5-2	Task 7	NA	Task 7 TLs, Secretariat	Conduct SWIM over CRV demo; Present lesson learned and findings to the group	SWIM TF/6 SWIM TF/7 SWIM TF/9 SWIM TF/10	Open	Action resulted from TL meeting Approved by the plenary S3TIG demo may embed the demo. (SURSG chair) Demo required more types of data e.g. ATFM…	Demo delayed due to COVID-19. Report may not be possible in SWIM TF/6