



ICAO

*International Civil Aviation Organization*

**The Sixth Meeting of System Wide Information Management Task Force (SWIM TF/6)**

Video Teleconference (VTC), 17 – 20 May 2022

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**Agenda Item 6:** Review SWIM Task Force ToR, Programme, and Outstanding Action Items

## **REVIEW WORK PLAN AND ACTION ITEMS**

(Presented by Secretariat)

### **SUMMARY**

This paper presents the revised SWIM TF's work plan, and proposal to amend the Action List to reflect the latest work status achieved.

## **1. INTRODUCTION**

1.1 The 20<sup>th</sup> Meeting of the Communications, Navigation and Surveillance Sub-Group of APANPIRG (CNS SG/20) was held in Bangkok, Thailand, from 11 to 15 July 2016. In the same meeting through **Decision CNS SG/20 – D3: Establishment of SWIM Task Force**, SWIM Task Force was established.

1.2 The First Meeting of the APAC SWIM Task Force (SWIM TF/1) was held at the ICAO Asia-Pacific Regional Office, Bangkok, Thailand, from 10 to 12 May 2017. The Second Meeting of the APAC SWIM Task Force (SWIM TF/2) was held at the ICAO Asia-Pacific Regional Office, Bangkok, Thailand, from 09 to 12 April 2018. The Third Meeting of the APAC SWIM Task Force (SWIM TF/3) was held at the ICAO Asia-Pacific Regional Office, Bangkok, Thailand, from 07 to 10 May 2019. The Fourth Meeting of the APAC SWIM Task Force (SWIM TF/4) was held via Video Tele-Conferencing from 03 to 06 November 2020.

1.3 The Fifth Meeting of the APAC SWIM Task Force (SWIM TF/5) was held via Video Tele-Conferencing from 09 to 11 August 2021. The meeting resources can be accessed by the link: <https://www.icao.int/APAC/Meetings/Pages/2021-SWIM-TF-5.aspx>

## **2. DISCUSSION**

2.1 The SWIM TF/1 meeting agreed on the Work Plan for the task force, which outlined the phased approach for SWIM implementation in the APAC region, and assigned various tasks to task leads and contributors. The Meeting also summarized Action Items arisen during the discussion into an Action List.

2.2 The SWIM TF/2, SWIM TF/3, and SWIM TF/4 meetings further reviewed and modified the Task structure of SWIM task force programme. It was informed at the SWIM TF/4 that the objective of proposing the revised Task Groups and Action Items was to better align the achievements from various tasks with the global guidance and regional implementation materials.

2.3 The SWIM TF/5 meeting updated the Action Items List to reflect the progress in the past year and the plan for the near future. The agreed SWIM TF Work Plan from SWIM TF/1 is provided in **Appendix A**, and the Action Items List from SWIM TF/5 is provided in **Appendix B** to this paper.

2.4 As an established effective practice in progressing various tasks of the SWIM TF, online Task Leads (TLs) coordination meetings have been organized from time to time between Task Force meetings. The latest TLs coordination meeting (video teleconference) was held on 8 February 2022 and resulted in the proposed modifications of Task naming originally agreed by SWIM TF/5.

2.5 The proposed Task description modifications shown with yellow highlight are displayed in the **Table 1**.

**Table 1.** Task Scope and Task Leads Update.

<b>Groups</b>	<b>Task No.</b>	<b>Subject/Task</b>	<b>Task Leads</b>
Implementation Planning	1	Regional implementation philosophy & roadmap	David Leow (Singapore) Amornrat Jirattigalachote (Thailand)
SWIM infrastructure	2	Regional SWIM infrastructure	Xiaodong Lu (Japan), Yukinobu Ryu (Japan), Henry Chan (Hong Kong, China)
	3	Security service	Mr. Jim Laymon (USA)
Technical Architecture	4	Development and maintenance of regional information exchange models	Amornrat Jirattigalachote (Thailand) Wen Zhu (USA)
Governance	5	Registry and Other Related Governance Policies <b>Regional SWIM Governance Framework</b> (New proposed name)	Mr. Dongkie Park (ROK) Mark Kaplun (USA), Yukinobu Ryu (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	Yukinobu Ryu (Japan), Xiaodong Lu (Japan), Honglei Gao (China), Mr. Dongkie Park (ROK)
Coordination and Promotion	9	Monitoring of Panels' work	Yukinobu Ryu (Japan)

Groups	Task No.	Subject/Task	Task Leads
	10	Regional coordination and SWIM-related information sharing	Vacant
	11	SWIM implementation education and promotion (New task)	Thomas Green (USA)

2.6 To gather as much as possible the different viewpoints from Asia/Pacific Member States and international organizations facing diverse challenges, the Meeting is requested to nominate experts from Member States and organizations to support various activities of Task 1 to 11.

2.7 After the deliberation in various TLs coordination meetings, the SWIM TF Work Plan is updated and provided in **Appendix C**. The meeting is may review the work plan and update it if required.

### 3. ACTION BY THE MEETING

3.1 The Meeting is invited to:

- a) note the information contained in this Paper;
- b) review and adopt the proposed revised task description;
- c) review and adopt the Work Plan of SWIM TF;
- d) review and update the Action Items List;
- e) nominate experts to participate in various tasks; and
- f) discuss any relevant matter as appropriate.

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Project	Task number	Task	Planned Start	Planned completion	Dependencies	Guidance for SOW	SOW (reference)	Task Lead(s)	
SWIM - Definition phase	1-1	Benchmarking of best practices	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	1-1 Benchmarking - SOW	David J. Almeida (USA)	
		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	2022 2017 2018 2020	As needed	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 subscribers 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 guidance is necessary from IP/6 and WP/6			
		SWIM Regional roadmap	2017 2018	2018 2022	SWIM Manual 10039 and Technical Manual	Initial Roadmap should be developed in alignment with Seamless ATM plan objectives - realistic timelines Can be a simple excel files recording all States intentions, revised intentions, and actual achievements SOW should address how and when to maintain roadmap Good mix of participants is required ICCAIA IP13 to be included Include in the roadmap the target dates for IWXXM (2018 recommendation METAR, TAF, Volc Ash, SIGMET, AIRMET --- and possibly a standard for 2020)			1-2 Regional Roadmaps - SOW_TF1_Av1
	1-3	Regional coordination within APAC and guidance and training to APANPIRG bodies	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	1-3 Regional Coordination - SOW_v0.1	John Moore (IATA)	
		Guidance and training to APANPIRG WG/TF : - Provide guidance to APANPIRG WG/TF using SWIM	2017 2017 2019	2022 2017 2018 2020	As needed	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
	1-4	SWIM governance	2018	2022	SWIM Manual and Technical Manual draft SARPS (stable and mature) lessons learnt from existing governance models (FAA, Europe)	Should include all stakeholders in APAC Should identify SARPS and guidance issued by IMP/ATMRPP/METP Strong coordination required with 1.5 WPO4 recommends two service Description models - task 1.4 to study options Version management should address backward compatibility and the content of models (FIXM, AXIM) possibility to operate PKI through the CRV service provider to be further explored	1-4 SWIM Governance - SOW_updated_fri	David Wills (New Zealand) for SWIM TF/1 and Mark Kaplun (USA) from SWIM TF/2	
	1-5	Design Regional SWIM Registry and architecture for phase 2	2017	2019	SWIM ConOps and Technical Manual Overall requirements: Refer 2.5.4 of DOC 10039	Should take into account how to efficiently implement 2.5.4 of DOC 10039. Search, access, discovery features Should include access control and search functionalities. Chapter 3.5 SWIM Registry For architecture should take into account CRV and that there is no central operational entity in APAC to run common services Input< paper about service description (FAA) Strong coordination required with 1-4 3 approaches proposed in WPO7, not exclusive Not forget access to registries outside APAC Confirm if the option of PKI is suitable If yes coordinate with CRV OG to seek if PKI services provided by CRV provider would be a suitable option possibility to operate PKI through the CRV service provider to be further explored Consider SWIM architecture principles from IP02	1-5 SWIM Registry - SOW	Kang Jiseok (ROK) and David Leow (Singapore)	
	1-6	Regional SWIM models	2016	2017	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	1-6 SWIM Regional Models - SOW_TF1_Av2	Amornrat Jirattigalochote (Thailand)	
	1-7	Monitoring of panels work	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, AXIM) Focal point to trigger change requests to the models	1-7 Monitoring Panels - SOW	Yukinobu Ryu (Japan)	
SWIM Implementation Phase 1 - initial expansion of services and preparation of phase 2	2-1-1	Promote new needs and new services and maintain database of publishers; (ID/access points/s)	2017	2019		An "Excel" file? Include service descriptions 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	2-1-1 SWIM IMP Phase 1 - SOW_v1	Marco Mang Hin Kok (Hong Kong China)	
	2-1-2	Implement SWIM registry and architecture	2019	2022	Task 1-5 completed CRV implemented	Assume registry services can be available on CRV from 2019 onwards Design and implement a mediation service (see SWIM TF-1, WPO5)	2-1-2 SWIM Registry - SOW	David Leow (Singapore)	
	2-1-3	Support validation and publication of SWIM based applications	2017	2019	Availability of SWIM applications (task 2-1-2) SWIM registry and architecture (DNS service, security, etc) (task 2-1-4) Procedures/SLA: Task 1-4 Models: 1-6	SARPS and guidance Envisage a regional validation as a final step - see report of SWIM TF-1 for large scale tabletop exercise	2-1-3 SWIM IMP Phase 1 - SOW_v1	Xiaodong Lu (Japan), Gao Honglei (China) and Jiseok Kang (Republic of Korea)	
SWIM Implementation Phase 2 - generalization	2-2-1	SWIM generalization	2022	2025	SWIM Manual and Technical Manual National transition roadmaps Task 2-1-2 Task 2-1-3 Task 2-1-1	Populate registry (2-1-2) using catalogue (2-1-1), and maintain it Task systematic cross-validation of new services using testbeds from 2-1-3 Optimize architecture on CRV (DNS, proxies) Assist States in their transition to full SWIM Assist States with LOA and guidance (1-1)	SOW to be drafted later on	TBD later on	
	2-2-2	Facilitate dual operations	2022	2025		Operate a mediation service (see SWIM TF-1, WPO5) until all states have transitioned to SWIM (2-2-1)	SOW to be drafted later on	TBD later on	

SWIM TF/6  
Appendix B to WP/20

Action ID	Task No	Reference	Who	What	Due date	Status	Comment	Additional Notes
1-6	3;5	1.4	Mark Kaplun and David Wills	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"	
2-14	1	1.1	David Almeida, Thomas Green,	Develop an APAC SWIM education implementation plan and high level education materials	SWIM TF/6	Open	<p>_The SWIM education video for those with technical background has been finished which will be published on APAC website in March. (DONE)</p> <p>_The SWIM brochure has been in the final stage for design and will be completed in April. (will review comments)</p> <p>_The SWIM education implementation plan draft was presented at TF/3 wil continue to be</p>	Need to start from scratch due to unavailability of SWIM Brochure.
4-2	7		Task Leads	Further exploit and deliberate the outcomes of SWIM in ASEAN Demonstration to benefit States/Administration	SWIM TF/6	Open		task leads to provide WP or IP on how ASEAN Demo can be leveraged in task areas
4-8	9	Task 9	Yukinobu Ryu, Secretariat	List of SWIM relevant ICAO Panels and representatives from APAC	<b>Need to provide list before removing from Action Items</b>	Open/Ongoing	<p>To better monitor the Panels Work relevant to SWIM on the available resources and representation in APAC</p> <p>As ongoing, need to remove from Action List and will manage by Secretariat</p>	<p>Open till list then closed.</p> <p><b>Add AI into next task lead meeting</b></p> <p><b>Added in AI for 28 October 2021 SWIM TF TL meeting</b></p> <p><b>List is agreed by all</b></p>
4-9	10	Task 10	John Moore, Secretariat	List of SWIM relevant meetings in APAC	SWIM TF/6	Open	<p>To better support the regional coordination and SWIM related information sharing</p>	<p><b>Same as 4-8, Need list before closing. Secretariat will provide in next TL.</b></p> <p><b>Added in AI for 28 October 2021 SWIM TF TL meeting</b></p> <p><b>List is agreed by all.</b></p>
4-11	11	Task 11	Task Leads, Secretariat	Share SWIM related material for future compilation of the APAC SWIM Implementation Materials	SWIM TF/6	Open		SWIM TF/5- Premature to develop SWIM Implementation material as global doc is not ready.

SWIM TF/6  
Appendix B to WP/20

Action ID	Task No	Reference	Who	What	Due date	Status	Comment	Additional Notes
4-13	2	Task 2	Task 2 Group	Develop APAC SWIM TI Profile	SWIM TF/6	Open	Proposed by Australia, needs further consideration Australia presented WP/19 in SWIM TF/5 Next action from Task group-2	Renato to provide a roadmap to develop the TI Profile  <b>SWIM TF/5- Progress may be slow because APAC SWIM Implementation is initial stage</b>
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	Start study of surveillance data being carried via SWIM on CRV; Study to include exploration of updated exchange model	SWIM TF/6	Open	<b>Action resulted from TL meeting Approved by the plenary</b>	
5-2	Task 7	NA	Task 7 TLs, Secretariat	Conduct SWIM over CRV demo; Present lesson learned and findings to	SWIM TF/6	Open	<b>Action resulted from TL meeting Approved by the plenary</b>	<b>Demo delayed due to COVID-19. Report may not be possible in SWIM TF/6</b>

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	2022	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
		Guidance for publishers/consumers;					2017	2017		Mediation of legacy users
	1-2	SWIM Regional roadmap					As needed	2020	Lessons learnt from ASEAN SWIM demonstration	
							2017	2018	Task 1.1 Task 1-5 and 1-6 Task 1-4 (service descriptions)	Common vocabulary requirement on publishers and subscribers 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
		2019	2022	SWIM Manual 10039 and Technical Manual	Roadmap needs to be updated to reflect the changes and developments that have occurred 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					
			2022	2024	New implementation Roadmap	1st Set the timeframe for implementation 2nd Discuss with the TF and decide on the elements for implementation 3rd Develop new roadmap for SWIM implementation.				
SWIM infrastructure	1-8	Regional SWIM Architecture	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>	Mr. Xiaodong Lu (Japan)  Mr. Yukinobu Ryu (Japan)  Mr. Henry Chan (Hong Kong, China)	2017	2020	<ul style="list-style-type: none"> <li>Manual on SWIM, SARPS, PANS and Guidance material from IMP, CP or ATMRPP</li> <li>Availability and capability of CRV implementation</li> <li>Task 5 – Governance</li> <li>Task 6 – Information Services</li> <li>Task 8 – SWIM Service and Application Validation</li> </ul>	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	<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>	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.
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 - Coordination with Task 9 Relation with CCB - Coordination with Task 5
	1-4	SWIM governance			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 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.	Mr. Dongkie Park (ROK)			I. Procedures for Air Navigation Services (PANS) Information Management (IM), Volume I System Wide Information Management II. Manual on System Wide Information Management (SWIM)	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 learnt and incorporate technical developments.

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
Governance	1-5	Design Regional SWIM Registry and architecture for phase 2	5	Regional SWIM Governance Framework	<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>	<p>Mr. Mark Kaprun (USA), Mr. Yukinobu Ryu (Japan) Mr. Xiaodong Lu (Japan), Ms. Honglei Gao (China)</p>	2016	TBD (Note: SWIM Governance will be implemented throughout the SWIM lifecycle.)	<p>Information Management (SWIM), Doc 10039, VOLUME I: SWIM Concept III. SWIM Discovery Service Implementation Specification Service Description Conceptual Model (SDCM) IV. APAC SWIM Roadmap</p>	<p>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.</p>
	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 identified in APAC.	<ul style="list-style-type: none"> <li>Develop the APAC version of the required and optional information services for ANSP to prioritize the implementation of services</li> <li>Develop the APAC version of data catalogue for information services</li> <li>Identify any additional optional fields required for SWIM service overviews in APAC in addition to those as defined in PANS-IM</li> </ul>
Validation & Demonstration	1/2/2001	<del>Promote new needs and new services and maintain database of publishers (ID/access points/services/interface/format...) pending registry implementation</del>	7	SWIM Demonstration	<ul style="list-style-type: none"> <li>Report on the SWIM in ASEAN demonstration, particularly the lessons learnt</li> <li>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</li> <li>Provide, if requested, support for regional SWIM demonstrations</li> </ul>	<p>Mr. David Leow (Singapore) Dr. Amornrat Jirattigalachote (Thailand)</p>	2017	2019		An "Excel" file? Include service descriptions 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 (Depending 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	<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>	<p>Mr. Yukinobu Ryu (Japan) Mr. Xiaodong Lu (Japan) Ms. Honglei Gao (China) Mr. Dongkie Park (ROK)</p>	2017 2020	2019 2023	<ul style="list-style-type: none"> <li>Manual on SWIM, SARPS, PANS and Guidance material from IMP, CP or ATMRRP</li> <li>The status of SWIM T1 implementation in APAC Region</li> <li>Task 2 – Regional SWIM Infrastructure</li> <li>Task 3 – Security Services</li> <li>Task 5 – Governance</li> <li>Task 6 – Information Services</li> </ul>	<p>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</p>
Coordination and Promotion	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	<p>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 point to trigger change requests to the models</p>
	1-3	Regional coordination within APAC and guidance and training to APANPIRG bodies	10	Regional coordination and SWIM-related information sharing	<ul style="list-style-type: none"> <li>Identify SWIM related activities (and their interdependencies) in planning or development within other WGs and TFs.</li> <li>Liaise with relevant regional TF/WG to refine operational and communications requirements (ATFM SG, MET IE, AAIF, ACSICG, CRV OG, etc).</li> <li>Provide guidance to APANPIRG WG/TF using SWIM.</li> <li>Influence outcomes from other WGs and TFs that will support successful expansion of SWIM (eg: development of SWIM compatible CRV).</li> <li>This involves confirming inclusion on agendas and appropriate discussions ensuing</li> </ul>	Vacant	2016	2022	SWIM Manual and Technical Manual Guidance on IWXXM	<p>Use APANPIRG organizational chart Revise on an annual basis Establish simple "MOU" between concerned APANPIRG bodies</p>
		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)	<p>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</p>
New	NA	11	SWIM implementation education and promotion (New task)	<ul style="list-style-type: none"> <li>Creation of an educational and promotional program needed to support SWIM implementation, operations, and facilitate cooperation among stakeholders within the region.</li> <li>Collaboration with other APAC SWIM TF task to ensure cohesiveness between the guidance materials and educational material deliverable from the APAC SWIM TF.</li> <li>Management, organization, and dissemination of all APAC SWIM educational material</li> <li>Creation of an APAC SWIM education and promotional catalog</li> </ul>	Mr. Thomas Green (USA)	2022	TBD (See dependencies)		<p>Completion of this task is reliant on the work completed in Task 1-10. As the task are completed and guidance is created, the catalog can be populated.</p>	