



ICAO

The Fourth Meeting of System Wide Information Management Task Force (SWIM TF/4)

Web-conference, 3 – 6 November 2020

Agenda Item 6: Development of APAC SWIM Implementation Materials**SWIM IN APAC REGION****Where are we now and where are we going?**

(Presented by Japan)

SUMMARY

This paper presents an exhaustive list of considerations for future Task Force activities and a few information relating IMP works as Task 1-7.

1. INTRODUCTION

1.1 Establishment of SWIM Task Force was adopted with TOR in APANPIRG/27 to support B1-SWIM and the Seamless ATM Plan objectives. 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. Tasks were clarified and assigned to each person in charge to fulfill their assigned mission.

1.2 Thanks to the lead of the Chair person and the contributions of each task leaders, the work of this Task Force has been very active. In particular, the success of the ASEAN SWIM Demonstration has made stakeholders in the region aware of the potential benefits of SWIM.

1.3 The implementation of SWIM has become even more important in the updated Global Air Navigation Plan (Doc 9750) and also has become a key enabler for the realization of the Global ATM Operation Concept (GATMOC). On the other hand, the impact of COVID-19 on the aviation industry has been severe, with demand expected to recover around 2024.

1.4 In order to regain what has been lost due to COVID-19, it is essential that more efficiency is required and that the strategy for implementing SWIM in the region is strengthened and shared with stakeholders. This WP contains an exhaustive list of considerations for future Task Force activities.

2. DISCUSSION**2.1 Implementation Planning**

2.1.1 Due to the COVID-19, ICAO Information Management Panel 2nd meeting (IMP/2) has been suspended to 2Q in 2021. (Originally, it was planned in Oct, 2019.) This mean that delivery of SWIM related SARPs may be delay in a few years. However, it is not a significant and it allows us to have enough time to consider SWIM implementation planning in our region.

2.1.2 ASIA/PACIFIC SEAMLESS ANS PLAN (Version 3.0) was approved by APANPIRG/30 in Nov, 2019. The 2019 update of the Plan introduces new ASBU Block 1 modules (SWIM elements in GANP/ASBU are Block 2 and 3). That is why there is no description for SWIM implementation. The

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output of implementation planning activities shall be reflected to the next APAC SEAMLESS ANS PLAN.

2.2 SWIM Infrastructure

2.2.1 Being the APAC region, which is a collection of various states and special administrative regions, it is clear that there are various SWIM Infrastructure implementation policies in place. Some state will manufacture their own Infrastructure, while others will purchase equipment from vendors. Alternatively, they may choose to purchase cloud-based services and not own the infrastructure itself. “One size fits all” is not the most desirable solution in our region.

2.2.2 SWIM Infrastructure will be upgraded when necessary with information services consideration. Also, A/G SWIM implementation may be required further capabilities to handle digital data other than XML format.

2.2.3 For the consideration of SWIM Infrastructure, we can use SWIM Manual volume II as implementation guidance. But, unfortunately for us, it does not describe the detail of inter-connected SWIM Infrastructures. However, lesson learned from ASEAN SWIM Demonstration, Global Enterprise Messaging Services (GEMS) shall be selected in one of options in our region. Further options may be required for those who don’t want to use GEMS functions, if any.

2.3 Technical Architecture

2.3.1 Technical Architecture is closely related with SWIM Infrastructure and Information services. Information services, in particular, will continue to be developed for some time to meet the needs of various information service consumers.

2.4 Governance

2.4.1 As noted in SWIM TF/3, WP/11 - SWIM MANUAL VOL.II, the definition of SWIM Region was agreed at once by IMP as follows;

SWIM Region. A SWIM region is a group of stakeholders that have agreed upon common governance in support of regional SWIM implementation

2.4.2 After the careful considerations and discussion by the feedbacks from other panels, IMP updated the agreed definition as follows;

SWIM Region. A geographical area in which a group of States and/or ATM stakeholders has agreed upon common regional governance in support of system wide information management implementation.

Note: A SWIM region can be an ICAO region or any other community of interest agreeing on common governance.

2.4.3 SWIM Governance should be set up based on the agreement of the entire community on common values. Therefore, we cannot ignore the common values for us. For example, there are several ATFM operation framework exist in our region. But ATFM Steering Group is making effort to combine these under the Asia/Pacific ATFM Framework. There must be common value.

2.5 Information Services

2.5.1 In order to obtain common value for stakeholders, the best option is to use common information services that are customized for this purpose. We had survey for information services last year and got many feedback from stakeholders. SWIM TF/3 agreed that higher priority should be given

to the SWIM implementation for cross-border ATFM and A-CDM operations and the associated required information services.

2.5.2 IWXXM is the first common data exchange model to support MET service which is comply with ANNEX 3 requirement. The “data” is also designed to be use under the SWIM compliant environment.

2.5.3 FF-ICE is a key enabler to achieve GATMOC and its SARPs and Guidance Material, under developing by ATMRPP, contain several “Information Service” for SWIM compliant environment.

2.5.4 To maximize the benefit and to move forward, “APAC SWIM INFORMATION SERVICES PACKAGE” including mentioned above will be required as initial set of information services.

2.6 **Validation & Demonstration**

2.6.1 The ASEAN SWIM Demonstration, conducted last year under the strong leadership of Singapore and Thailand, was able to demonstrate the capabilities and benefits of SWIM to stakeholders.

2.6.2 As part of Task 2-1-3 action, three states - Japan, China and Republic of Korea - conducted evaluations and demonstration of FF-ICE Release 1 services in SWIM TF/4 meeting.

2.6.3 In developing the Information Services described in section 2.5, evaluation of the Information Service and developing the understanding of the stakeholders through Demonstration is one of the necessary steps towards the implementation of the Information Service. Services must change appropriately to meet user needs. Therefore, it is necessary to have a system to permanently evaluate the changing services in the APAC region.

2.7 **Coordination and Promotion**

2.7.1 An educational video on SWIM was produced last year with the help of CAA China. (<https://www.youtube.com/watch?v=wXI9ep98Z8E>)

2.7.2 In addition, a video has also been produced and released in IATA to educate members. (<https://www.iata.org/en/programs/ops-infra/air-traffic-management/operational-improvements/#tab-3>)

2.7.3 These two videos clearly express the role and function of the SWIM, but they also clearly convey the impact of the SWIM, so they can be used in a variety of situations.

2.7.4 SWIM is a key enabler to realize GATMOC and Trajectory Based Operation (TBO). All GATMOC components talk each other through SWIM and execute synchronized operations for each. However, this is not fully understood by ATM stakeholders. For this reason, we need to continue to strengthen our promotional activities and cooperation with other working groups especially for ATFM, APA-CDM, MET and AIM.

3. **ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) note the information contained in this paper; and
- b) discuss any relevant matter as appropriate
