



ICAO

# INTERNATIONAL CIVIL AVIATION ORGANIZATION

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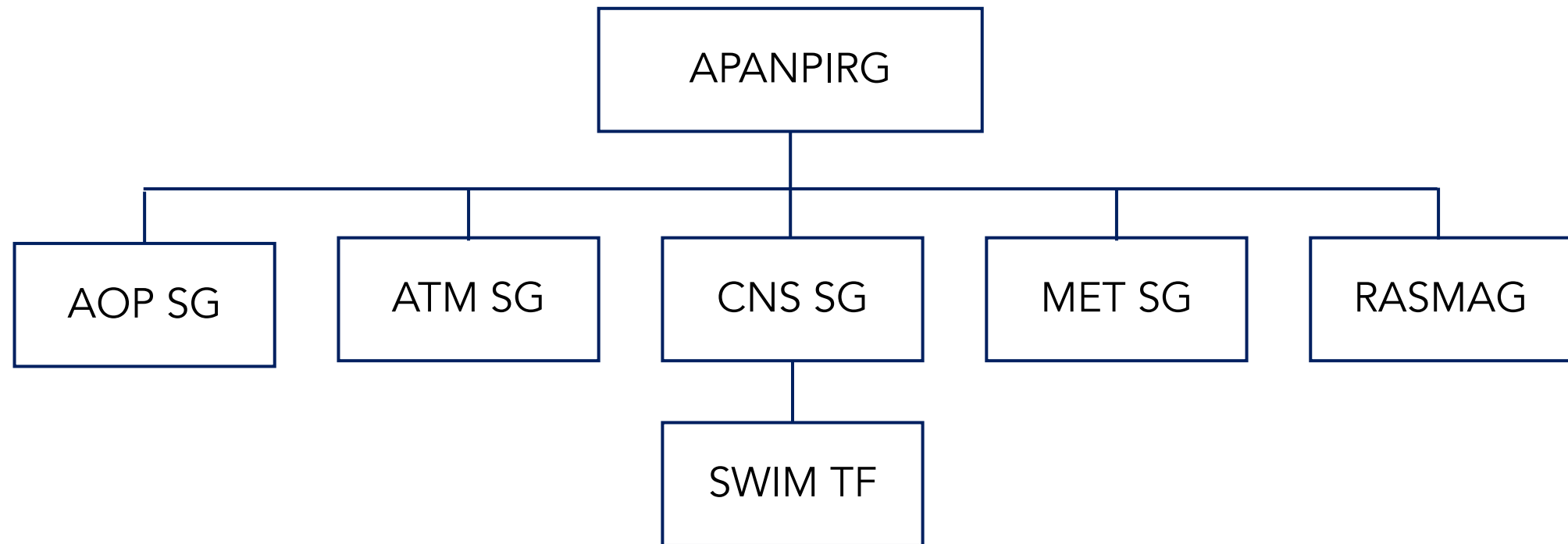


# SWIM Discovery Service Development in APAC

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# APANPIRG Structure



# APAC SWIM Registry Model

Adopted in September 2019

<b>Conclusion CNS SG/23/5 (SWIMTF/3/3) - Interoperable Registry Model for SWIM Registry in APAC Region</b>		
What:	The Interoperable Registry Model, which consists of independent registries that exchange registration data with each other, is adopted for APAC SWIM Registry.	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why:	The registration is required for SWIM implementation. The interoperable Registry Model is considered as a preferred model for use in APAC Region	Follow-up: <input checked="" type="checkbox"/> Required from States
When:	6-Sep-19	Status: Adopted by Subgroup
Who:	<input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other	

# SWIM TF Progress

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## Task 5 Regional SWIM Governance Framework

- Main members: USA, ROK, Japan, and China
- 2020 – Present: Focus on SWIM Discovery Service (SDS)
  - Defining mechanism for exchanging service description information between independently managed SWIM
  - Specifying a web service interface, key interaction patterns, schemas, and message exchange formats
  - Latest information: <https://discovery.swim.aero/>
  - GitHub: <https://github.com/faa-swim/swim-discovery-service>



# APAC SWIM Implementation Timeframe

<b>Conclusion APANPIRG/33/9 (CNS SG/26/06 (SWIM TF/06/02, SWIM TF/06/04)):</b> <b>The Asia-Pacific SWIM Implementation Timeframe and inclusion of the Asia/Pacific SWIM Implementation in the Asia/Pacific Seamless ANS Plan</b>			
<b>What:</b> 1. To set the timeframe for the implementation of SWIM in the Asia-Pacific region to be between 2024 and 2030, with 2030 being the target timeline for implementation completion.  2. To include SWIM implementation in the next edition of the Asia/Pacific Seamless ANS Plan.		<b>Expected impact:</b> <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input checked="" type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical	
<b>Why:</b> This is to set the concrete target implementation of the Asia-Pacific regional SWIM to assist States in harmonizing their implementation plans in order to achieve the seamless information exchange across the region in time for future operations, e.g. FF-ICE. Additionally, to ensure that SWIM, a key building block to achieve the vision outlined in ICAO Doc 9854 Global ATM Operational Concept (GATMOC), is captured in the Asia/Pacific Seamless ANS Plan, providing an overall framework for Asia/Pacific States to plan their implementations to meet the future performance requirements.		<b>Follow-up:</b> <input checked="" type="checkbox"/> Required from States	
<b>When:</b>	24-Nov-22	<b>Status:</b>	Adopted by PIRG
<b>Who:</b>	<input checked="" type="checkbox"/> Sub groups <input checked="" type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input checked="" type="checkbox"/> Other: SWIM TF		

# SWIM TF Progress

SWIM TF/8, 8-10 November 2023

<b>Draft Decision SWIM TF/08/01</b> Adoption of SWIM Discovery Service as a Global Standard for Globally Interoperable Service Discovery			
What: To propose to the Information Management Panel (IMP) to consider adopting the SWIM Discovery Service (SDS) as a global standard for globally interoperable service discovery.		Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical	
Why: Considering that Asia/Pacific regional SWIM will also be part of global SWIM and that SDS was studied and tested by the SWIM TF, the consideration of IMP on the possible adoption of SDS as a global standard is required to ensure cross-regional interoperability of SWIM service discovery,		Follow-up: <input type="checkbox"/> Required from States	
When:	10-Nov-23	Status:	Draft to be adopted by PIRG
Who:	<input checked="" type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input checked="" type="checkbox"/> ICAO APAC RO <input checked="" type="checkbox"/> ICAO HQ <input checked="" type="checkbox"/> Other: SWIM TF		

# SWIM TF Progress

SWIM TF/8, 8-10 November 2023

<b>Draft Decision SWIM TF/08/02</b> Candidate Baseline SWIM Discovery Service Standard for Asia/Pacific	
What: To position the SWIM Discovery Service (SDS) specification as a candidate baseline standard for Asia/Pacific SWIM implementation.	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input checked="" type="checkbox"/> Ops/Technical
Why: A candidate baseline standard for SDS is needed to support Asia/Pacific SWIM implementation within the regionally-agreed target implementation timeframe of 2024-2030.	Follow-up: <input type="checkbox"/> Required from States
When: 10-Nov-23	Status: Draft to be adopted by Subgroup
Who: <input checked="" type="checkbox"/> Sub groups <input type="checkbox"/> APAC States <input type="checkbox"/> ICAO APAC RO <input type="checkbox"/> ICAO HQ <input type="checkbox"/> Other: SWIM TF	



# SWIM TF Progress

SWIM TF/8, 8-10 November 2023

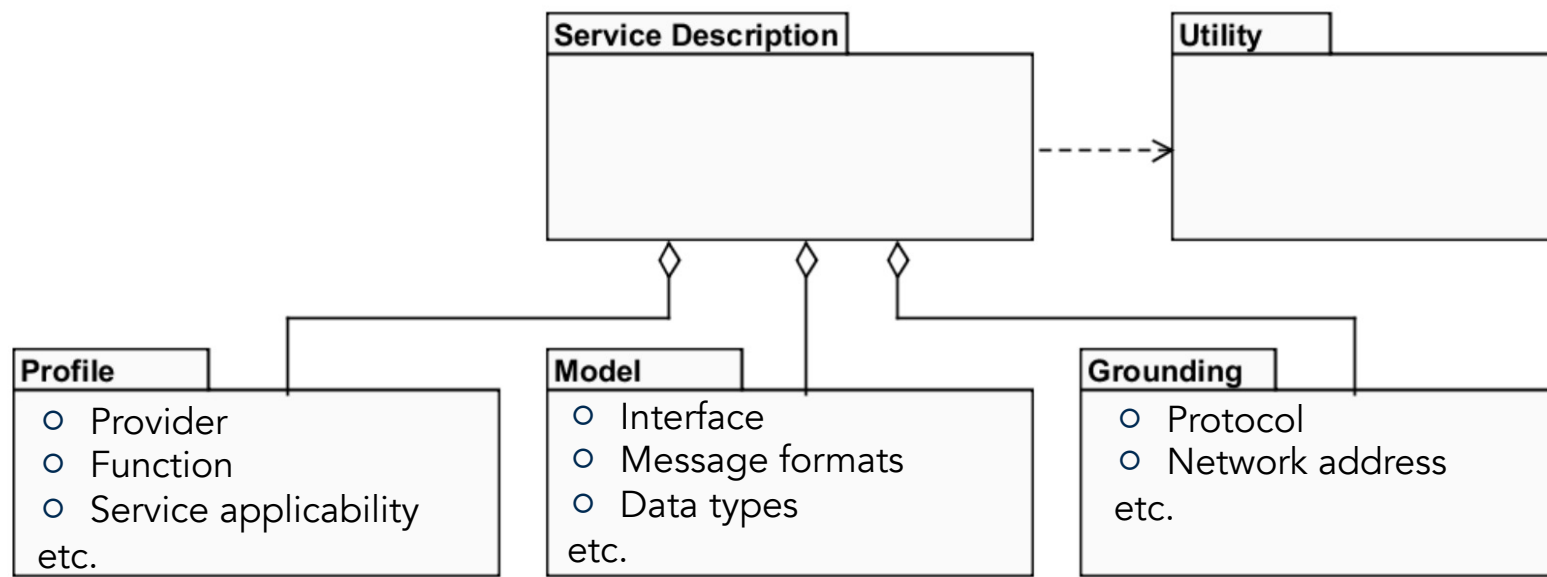
## Action Item 8-8

- IMP SWIM Registry Interoperability job card: 2026 – expected deliverable timeline
- Request IMP members within APAC to consider presenting SDS to WG/I-S and WG/G for further deliberation

# SWIM TF Progress

## Service Description Conceptual Model (SDCM)

– Current version: Version 3.0.0



# SWIM TF Progress

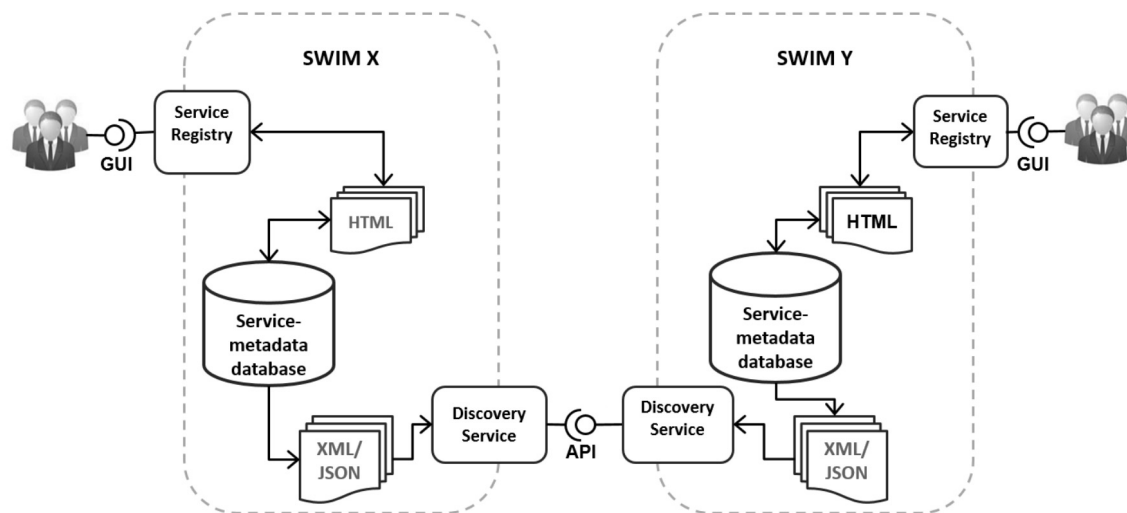
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## SWIM Discovery Service (SDS) Implementation Specification

- Current version: Version 1.0.0
- Specify interface, key interaction patterns, schemas, and message exchange formats required to develop SDS

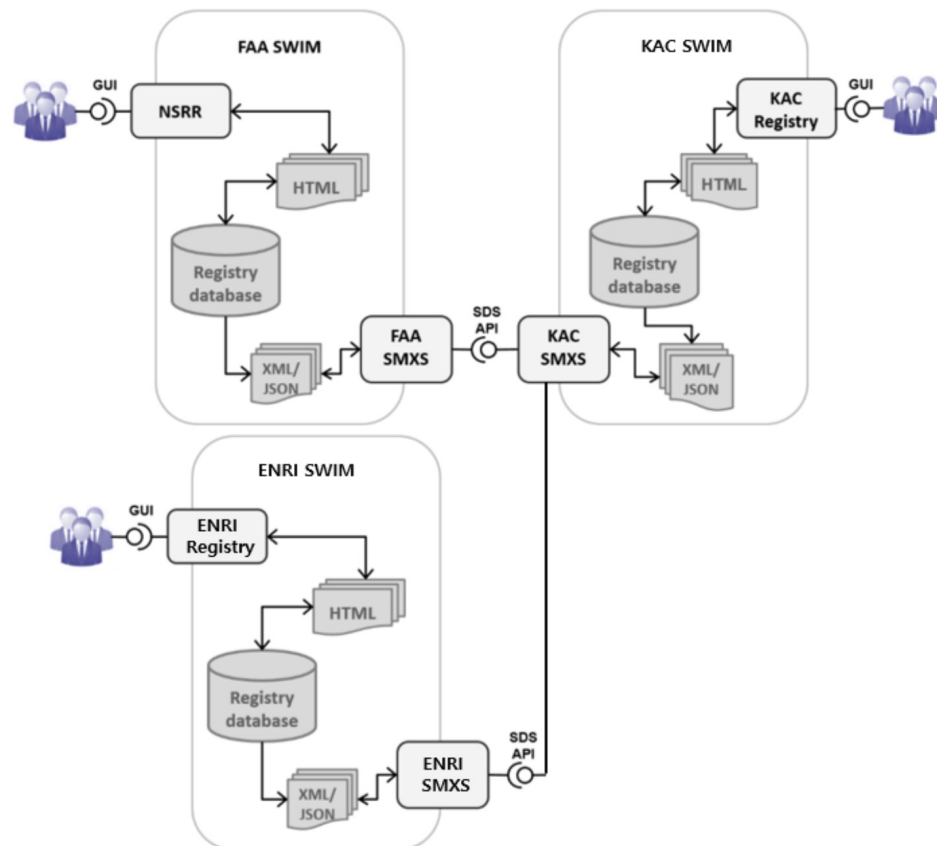
# SWIM TF Progress

## SWIM Metadata Exchange Service (SMXS)



# SWIM TF Progress

## SWIM Metadata Exchange Service (SMXS)



### Capabilities

- discovery service  
To retrieve a description of a particular discovery service
- peers  
To retrieve a collection of references to peer discovery services
- services  
To retrieve a collection of references to SWIM services that meet the search criteria
- service  
To retrieve information about a specific SWIM service



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Thank You!