



ICAO UNITING AVIATION

SP/08 to SIPG WS/3

NO COUNTRY LEFT BEHIND



SIPG Task 3 Progress Update



June 2026



Progress

- Deliverables
 - R/R MEP Guidance Material (Working Draft)
 - REST API Naming and Structuring Guidance Material (Working Draft)
 - API GW Requirement Specification (In Development)
- Meetings (for reviewing guidance material)
 - 1st Task 3 Teleconference, 15 Oct 25
 - Monthly SIPG meetings
- Report R/R MEP Guidance Material to SWIM-related Group
 - 2nd FF-ICE Ad-hoc
 - 11th SWIM TF
- Lesson Learned
 - R/R MEP is a technology we use every day, but documenting it in a structured way proved to be more challenging than expected

Documentation

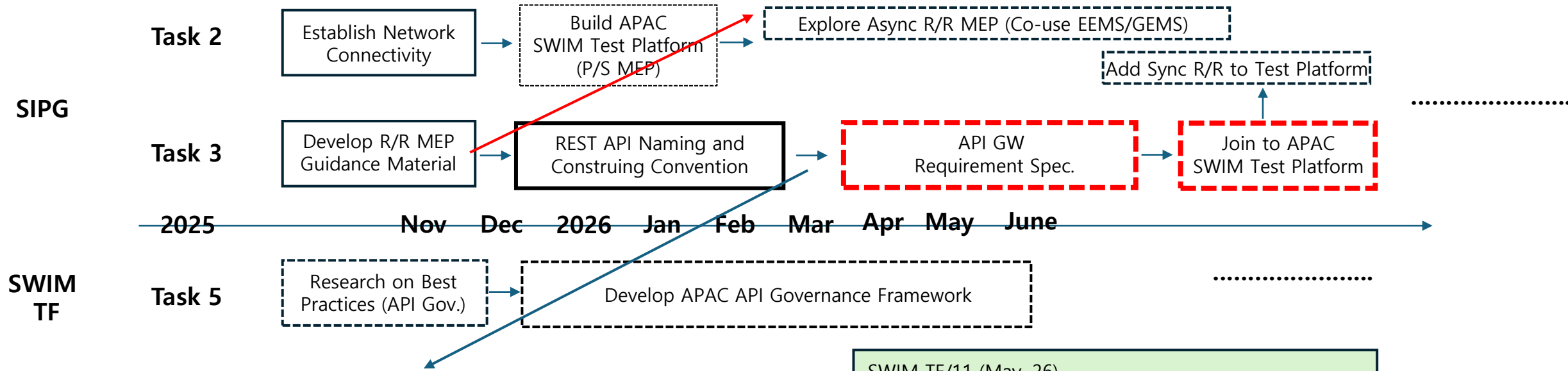
Iterative
Feedback Loop

**APAC SWIM
Prototype**





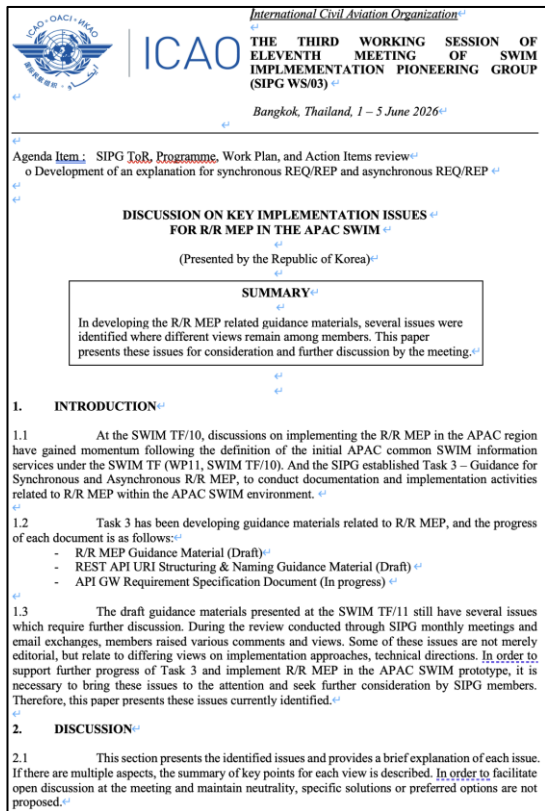
Where are we?



Several issues were identified where different views remain among members
 These issues are expected to be solved at the SIPG WS/3
 (See WP - Direction on Key Implementation Issues for R-R MEP in the APAC SWIM)



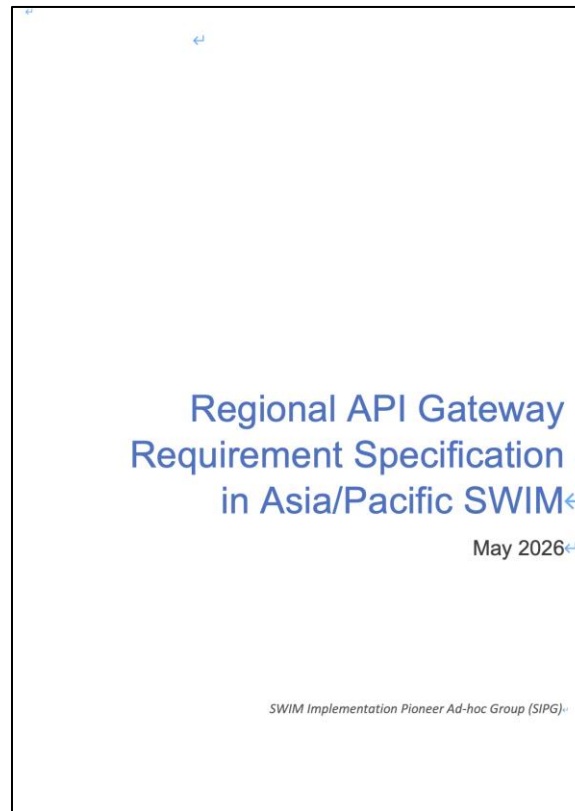
Future Plan (short term < 1~2 Q.)



Solve silos



Reach out common directions



Define Minimum Capabilities



Edge API GW and Global API GW or (proxy)

Add Synchronous R/R MEP Capability into APAC SWIM Prototype

Task 2 lead provides progress update regarding asynchronous R/R MEP



Appendix

Brief overview of the API Gateway Requirement Specification

- Defines requirements to support synchronous Request/Reply MEP in APAC SWIM prototype
- Assumes a hierarchical API GW model similar to the EEMS-GEMS architecture
- Covers both Edge API GW and Global API GW (or proxy) capabilities
- Focuses on middle-mile HTTP request/response delivery, routing, relay, security, observability, and operational support
- Does not define a new API GW product or solution-specific implementation
- Requirements may be fulfilled by existing API GW or proxy solutions such as APISIX or API7



Appendix

Brief overview of the API Gateway Requirement Specification

2.1. Functional Requirements (SFR) [↩](#)

Category ↩	SFR <input checked="" type="checkbox"/> PER <input type="checkbox"/> SYR <input type="checkbox"/> INR <input type="checkbox"/> DAR <input type="checkbox"/> TER <input type="checkbox"/> SER <input type="checkbox"/> QUR <input type="checkbox"/> COR <input type="checkbox"/> ↩	
ID ↩	SFR-001 ↩	
Title ↩	HTTP/1.1 Protocol Support for Synchronous R/R ↩	
Mandatory ↩	Mandatory <input checked="" type="checkbox"/> Optional <input type="checkbox"/> ↩	
Description ↩	Definition ↩	Support standard HTTP/1.1 protocol for synchronous Request/Reply communication. ↩
	Detailed Description ↩	The API GW shall accept, process, and forward HTTP/1.1 requests and responses for synchronous R/R MEP. The gateway shall support standard request/response semantics required for RESTful API interactions, including request methods, URI, headers, status codes, and response payload relay. ↩
Related Requirements ↩	SFR-003, SFR-007, INR-001 ↩	
Source of Requirements ↩	↩	
Verification Method ↩	Protocol conformance test using sample HTTP/1.1 requests and responses. ↩	
Applicable ↩	Edge API GW <input checked="" type="checkbox"/> Global API GW <input type="checkbox"/> ↩	

2.7. Security Requirements (SER) [↩](#)

Category ↩	SFR <input type="checkbox"/> PER <input type="checkbox"/> SYR <input type="checkbox"/> INR <input type="checkbox"/> DAR <input type="checkbox"/> TER <input type="checkbox"/> SER <input checked="" type="checkbox"/> QUR <input type="checkbox"/> COR <input type="checkbox"/> ↩	
ID ↩	SER-001 ↩	
Title ↩	IP Restriction and Allowlisting ↩	
Mandatory ↩	Mandatory <input checked="" type="checkbox"/> Optional <input type="checkbox"/> ↩	
Description ↩	Definition ↩	Restrict access to trusted network sources and explicitly block unauthorized traffic. ↩
	Detailed Description ↩	The API GW shall support IP-based allowlists and denylists for external requester, peer gateway, and administrative access where applicable. The policy shall be configurable at listener, route, or administrative interface level. ↩
Related Requirements ↩	INR-001, INR-003, TER-005 ↩	
Source of Requirements ↩	↩	
Verification Method ↩	Allowed and blocked source IP test. ↩	
Applicable ↩	Edge API GW <input checked="" type="checkbox"/> Global API GW <input type="checkbox"/> ↩	

- Requirement Specification Template proposed by ROK at SWIM TF/10 is used as the basis for this document
- API Gateway Requirement Specification in development will be modified after SIPG WS/3, and a peer review will be conducted under SIPG (target timeline < 2mo.)