

# SWIM Routing

Wayne Osse  
CANSO

# SWIM Global Routing and ISDs

- **Background**
  - **FPL-2012 Cessation by 2034** (ATMRPP Job Card)
    - FPL-2012 Cessation needs FF-ICE/R1
    - FF-ICE/R1 needs SWIM
    - SWIM needs IP
    - Annex 10 – Information needs a label
  - **SWIM Routing Issues are Surfacing**
    - Information Service Definitions relevance



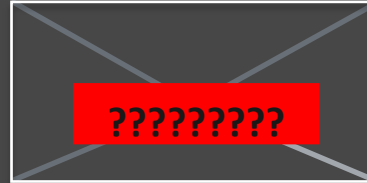
# SWIM Global Routing and ISDs

## Use Cases

1. An EU eASP cannot route FF-ICE/R1 information without a label
2. A CFSP is encountered issues with routing to a multitude of eASPs
3. ANSPs share information with other ANSPs without labels, or different types of labels
4. SWIM Routing across a region, centralized or not (see #1) needs harmonized labels
5. EU OPMET services are having the same problem as #1
6. How are participants prevented from providing/consuming information they are not allowed?
7. How are new participants allowed to consume new or existing information?

# SWIM Global Routing and ISDs

- No implementation guidance or standards for information labels



- Labels being created differently, at multiple levels, across SWIM efforts



**Interoperability**



# SWIM Global Routing and ISDs

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- **Help**
  - The Group With No Name - ATMRPP WG on Flight SWIM
    - CANSO, AEROTHAI, NAV CANADA, EUROCONTROL, ICCAIA, IATA
- **Focus**
  - Harmonization of SWIM routing between FF-ICE Stakeholders (over SWIM)



# SWIM Global Routing and ISDs

- **What is Needed**
  - A Standard SWIM Routing Label
    - Harmonize information delivery (without payload inspection)
    - Apply across and between SWIM implementations (islands)
    - Support all levels (in an extensible way)
  - Mechanism - Message Metadata (Message Topics, Message Properties)
  - Governance — Allow/Prevent providing and consuming information (prevent abuse)
  - Transition - Today-> Tomorrow



# SWIM Global Routing and ISDs

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- Next Steps
  - Focus on the FF-ICE/R1 Filing Service (initially)
  - Research SWIM Routing mechanisms
  - Get input from global, State and regional FF-ICE efforts
  - Demonstrate solutions
  - Report back to the ATMRPP



Questions?





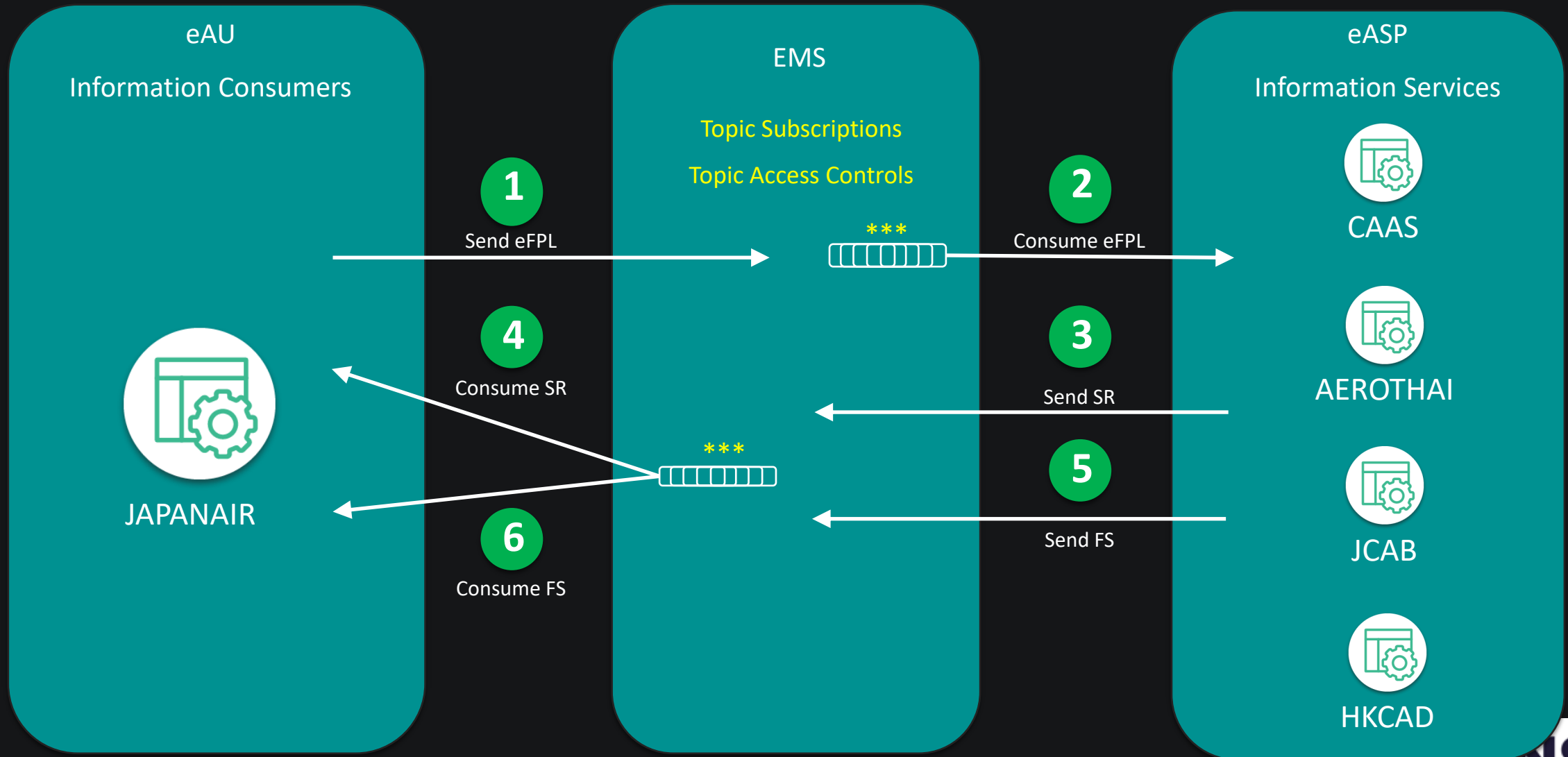
# FF-ICE/R1 Filing Service - Demo

- eAU
  - Send an FFP message to an eASP
- eASP
  - Process the FFP
  - Send a Submission Response message
  - Send a Flight Status message
- But How...

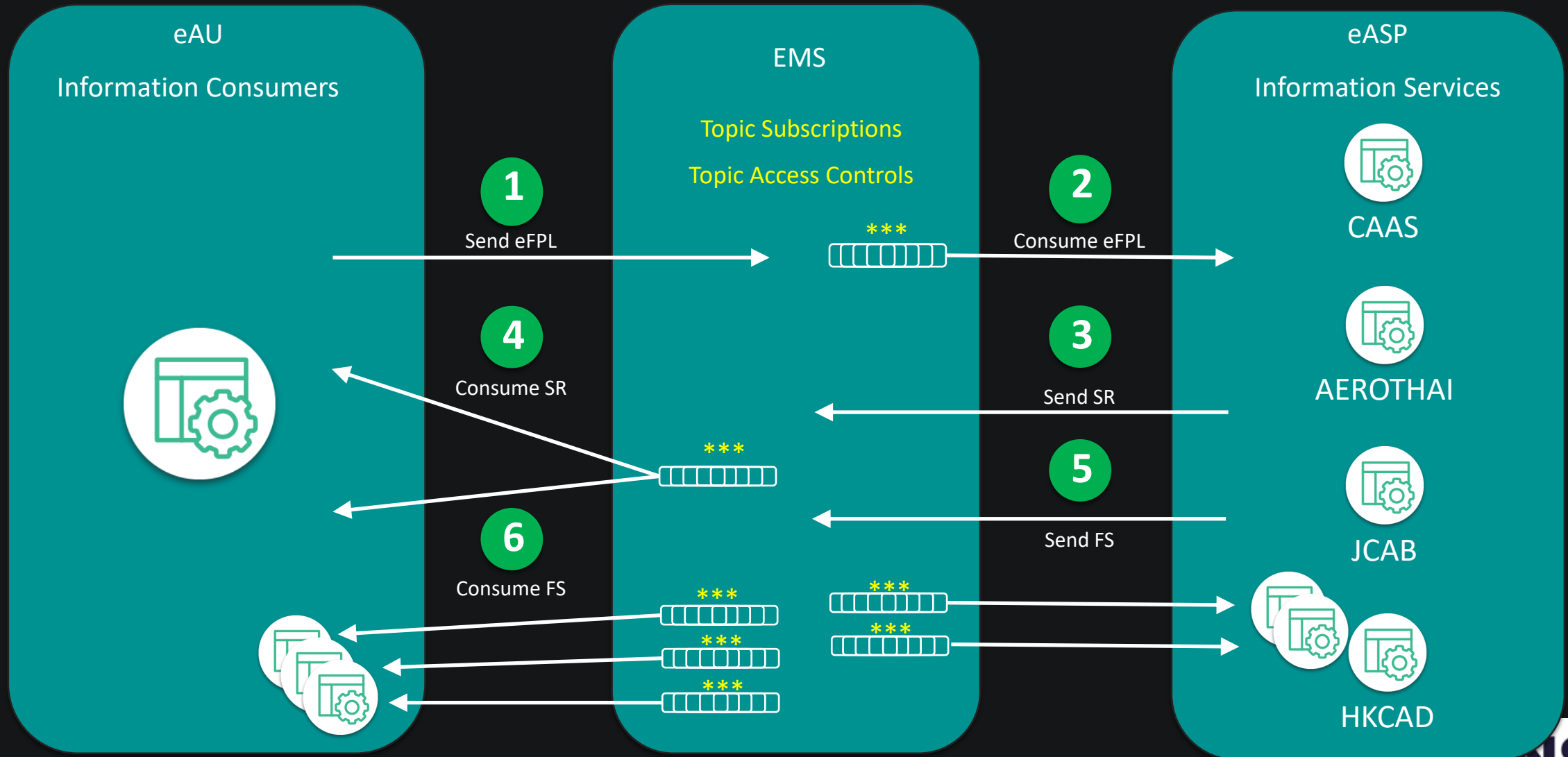
# FF-ICE/R1 Filing Service – Demo (How)

- Notes
  - *for the moment, ignore MEPs and protocols*
  - *a header (message properties) is sent in all messages*
- eAU
  - **Subscribe** to Submission Response messages *by topic*
  - **Subscribe** to Flight Status messages *by topic*
  - Send an FFP message to an eASP *on a topic*
- eASP
  - **Subscribe** to FFP messages *by topic*
  - Process a consumed FFP message ...
  - Send Submission Response message(s) *on a topic*
  - Send a Flight Status message(s) *on a topic*
- Show Me...

# Information Flow



# Information Flow – Dynamically Adding Participants





Questions?

# Message Topic

## Example

Jakarta/1/**CALLSIGN**/JAPANAIR/0/FLT/FLIGHT\_PLAN/FFICER1\_FFP/FILE/ICAO/WSSS/0/**WSJC**/xxx.xxx/1.0

	Topic Element	Example Values	Notes
<b>Versioning</b>	Topic Model Name	/ Jakarta	Topic Schema
	Topic Model Version	/ 1	Topic Schema Versioning
<b>Source</b>	<b>Source</b> Domain	/ CALLSIGN	FIXM - fb:identiferDomain
	<b>Source</b> Id	/ JAPANAIR	FIXM - fb:identifer
	<b>Source</b> User Id	/ 0	Purpose: Entitlement
<b>Context</b>	Information Domain	/ FLT	Purpose: Entitlement
	Request Type	/ FLIGHT_PLAN	Purpose: Entitlement
	Message Type	/ FFICER1_FFP/FPU/FC/SR/FS	<u>FficeFFP</u> , ...
	Event	/ F=File, U=Update, C=Cancel, S-Status	Purpose: Entitlement
<b>Recipient ?</b>	<b>Recipient</b> Domain	/ ICAO	FIXM - fb:identiferDomain
	<b>Recipient</b> Id	/ WSSS	FIXM - fb:identifer
	<b>Recipient</b> User Id	/ 0	Purpose: Entitlement
<b>Info Domain Context</b>	FIR	/	
	GUF	/	
	Operator FPL Version		