



**canso**  
civil air navigation services organisation

## **SWIM** **Benefits and Expectations**

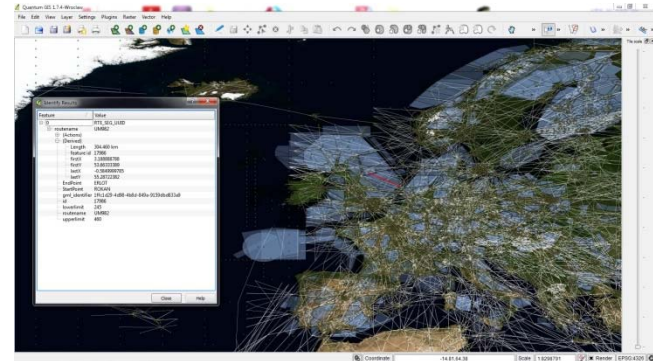
***Stéphane DUBET, DSNA***  
*Member of CANSO AIM WG*

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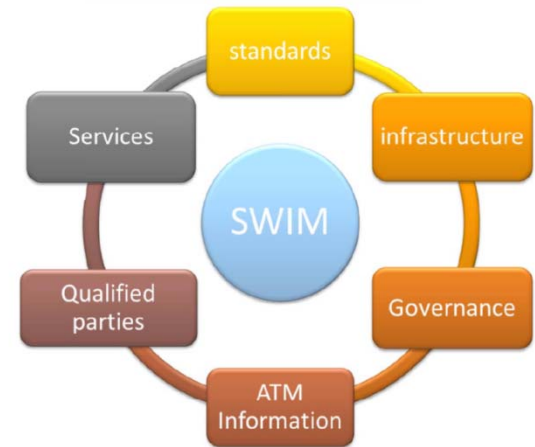
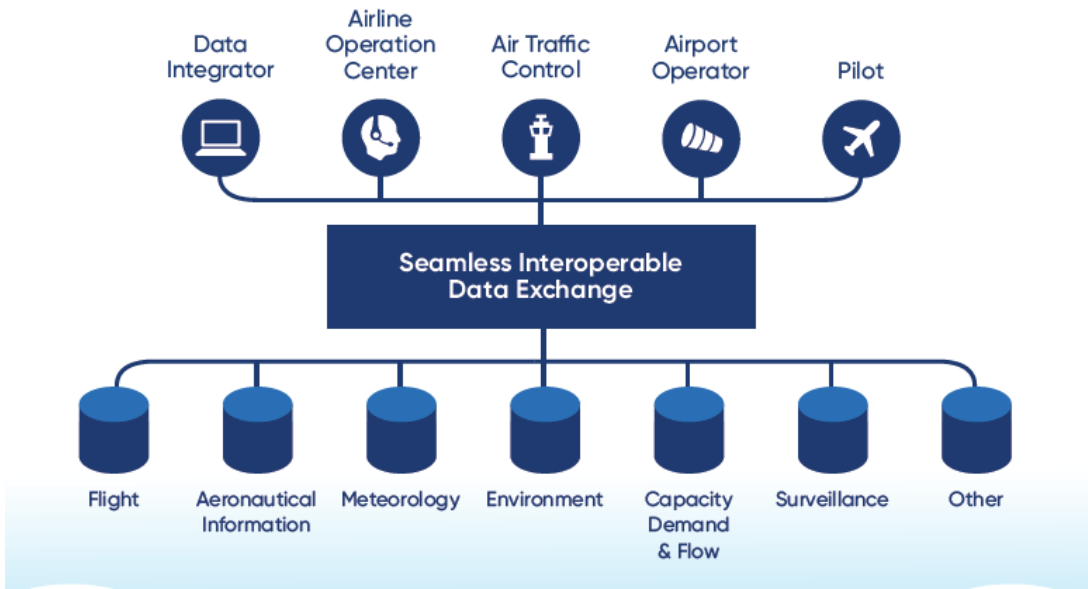
ICAO Interregional APAC/EUR/MID Workshop on  
"Service improvement through integration of AIM, MET and ATM Information Services"

# Contents

- **SWIM principles**
- **Short History**
  - Early days
  - R&D phase
  - Implementation phase
- **ANSPs and SWIM**
  - The ANSP perspectives
  - Role
  - Challenges and Opportunities
  - Expectations and Benefits
- **Conclusions**



# SWIM PRINCIPLES



*SWIM consists of standards, infrastructure and governance enabling the management of information and its exchange between qualified parties via interoperable services*



## SERVICE ORIENTED APPROACH



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# ANSP INVOLVEMENT IN SWIM

## **Early Days** (ca 1998-2008) → **Learning**

- Increasing importance / reliance on information
- Need to rationalize information exchanges

## **R&D Phase** (ca 2008-2016) → **Testing**

- First ANSP developments and experimentations
- Pioneer services (eg the Eyjafjallajökull case)
- Promising prototypes (eg Digital NOTAMs, new MET services)

## **Implementation** (2016 onwards) → **Running**

- Gradual operational implementations
- Full commitment



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# EARLY DAYS - LEARNING

## Increasing information exchanges...

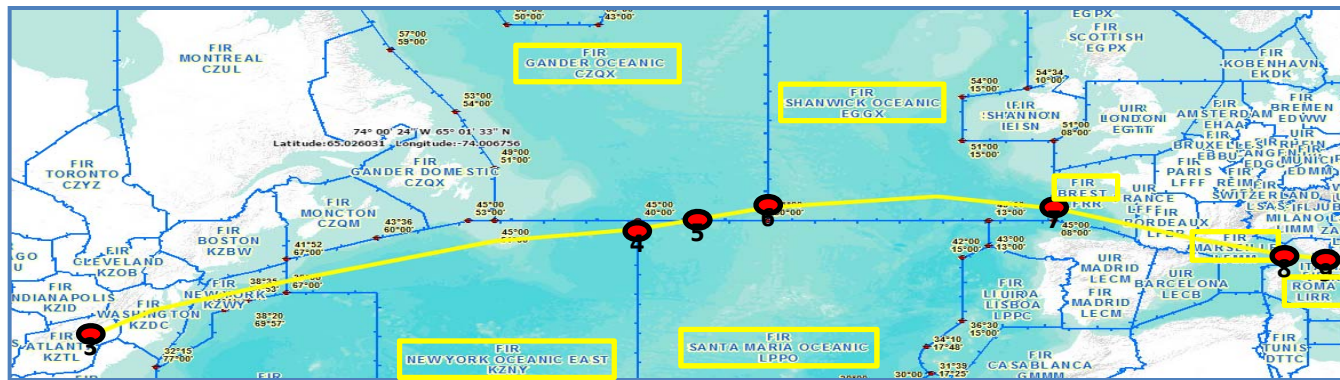


## ... with multiples standards and interfaces



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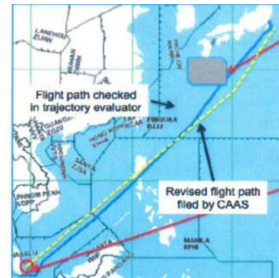
# THE R&D PHASE - TESTING



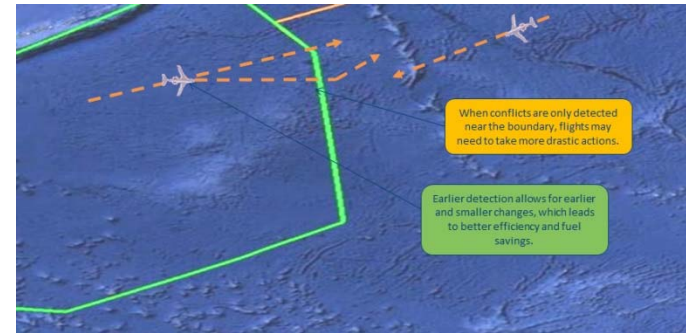
## Scenario 4a Singapore - Tokyo (SIA638A)

CAAS  
JCAB

NOTAM issued by JCAB resulting in flight plan amendment from CAAS



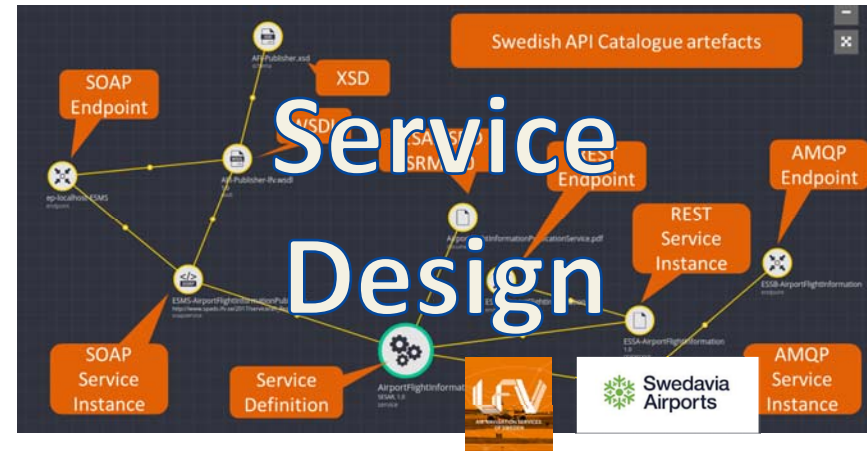
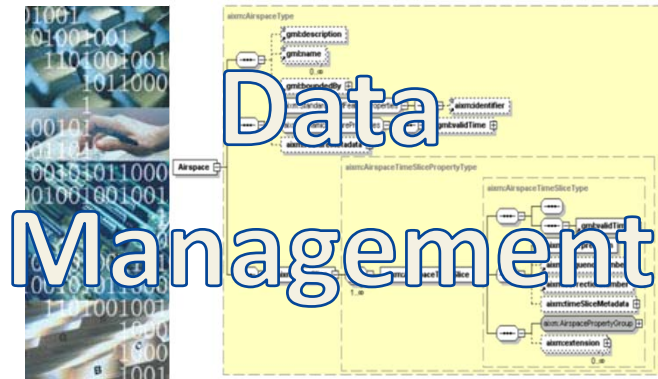
1. NOTAM issued for airspace restriction by JCAB
2. Received by NCR and TC Display
3. Flight Plan submitted by CAAS
4. Flight Plan received by JCAB, TC Display, and MGV
5. Trajectory Evaluator used by CAAS to assess flight path
6. Revised Flight Plan submitted by CAAS
7. Revised Flight Plan received by JCAB, TC Display, and MGV
8. Departure message submitted by CAAS
9. Departure message received by JCAB, TC Display, and MGV



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# IMPLEMENTATION PHASE - RUNNING

## ➤ New activities



➤ Cultural change : think "service", not "system"

➤ A gradual implementation

# IN PRACTICAL TERMS

## ATM DATA BECOME GLOBALLY AVAILABLE



**Services** [eur-registry.swim.aero](http://eur-registry.swim.aero)

**SESAR SWIM Registry** [My Organisation](#) [My Registry](#) [My Account](#) [Logout](#) [Admin Profile](#)

**1000 Users**

**150 Organizations**

**70 Service Implementations**

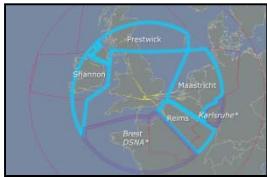
The screenshot shows a web interface for the SESAR SWIM Registry. It includes a navigation menu with 'ABOUT', 'COMMUNITY', 'IMPLEMENTATIONS', 'REFERENCE', 'ACTIVITIES', and 'SESAR'. Below the menu is a map of Europe with red location pins indicating service locations. A pie chart displays service categories: Surveillance, Other, Meteorology, Flight, Capacity Demand and Flow, Environmental, and Aeronautical Information. A list of service implementations follows, with numbered callouts (1, 2) pointing to specific entries.



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# IMPLEMENTATION EXAMPLES



NATS



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# ANSP PERSPECTIVES ON SWIM



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# ROLE OF ANSPs

- **Implement and provide feedback (lessons learned)**
- **Contribute to further developments of System Wide Information Management**
- **Support global harmonization and standardization (link with ICAO)**



# CHALLENGES FOR ANSPs

- **Legacy systems die hard**
- **Adapt to the new service oriented approach**
- **Cultural changes do not happen by magic**
- **Legal aspects related to data exchanges**
- **Cyber security aspects**



# OPPORTUNITIES FOR ANSPs

- **Better situation awareness**
- **Improve performance in service provision**
- **Deploy new / innovative services**
- **Enable better trajectory management**



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# MAIN ANSP EXPECTATIONS



## CDM

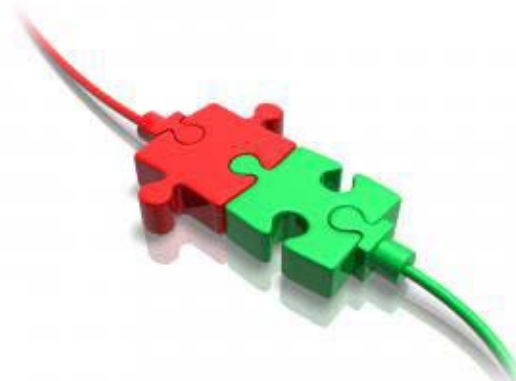
Collaborative  
Decision Making



## Operational benefits



## Innovation



## Connecting ops systems



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# OPERATIONAL BENEFITS

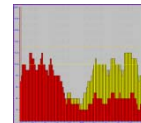
*Along the whole operational cycle*



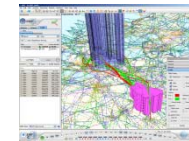
Collaborative Plan



Day of operations



Post-Ops



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# SWIM BENEFITS – ANSP VIEW

Interoperability

Better decision  
making

Faster  
Implementation

Cost reduction



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# CONCLUSIONS

- **CANSO supports data exchanges within the ATM community**
- **CANSO endorses a service orientation approach for ATM**
- **CANSO members are SWIM customers for operational purposes**
- **CANSO members are SWIM providers with focus on optimized service for users**



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# Thank you!



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