IMP Governance

UPDATE

WORK IN PROGRESS

Presented to: ATIEC 2016
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Aviation Information World – Forecasting the Future
CONTENTS

• Governance WG basics
• Work in progress update
  – Foundation
  – Information
  – Services and Registry
  – Quality
  – Compliance
• Summary
Governance

• **Governance**: « Consistent management, cohesive policies, guidance, processes and decision rights for a given area of responsibility »

• **Application to SWIM**: standards, policies, compliance, oversight, financial aspects linked to exchange of information
SWIM Governance WG in brief

- **Scope**: information, services, technical infrastructure, compliance

- **Deliverables**
  - Candidate SARPs (hi-level IM governance principles)
  - Contributions to SWIM Manual

- **Main themes**
  - **Foundation**: roles and responsibilities, institutional issues
  - **Information**: controlled vocabulary, governance of “XMs” + AIRM
  - **Services**: description, link with Registry
  - **Data / Information / Service Quality**
  - **Compliance**
Definition – Institutional issues

- **SWIM Governance definition**: set of standards, policies and processes that ensure information required for global interoperability is provided by reliable, trusted services

- **Institutional issues**

<table>
<thead>
<tr>
<th>Institutional Issues</th>
<th>Addressed by SWIM Governance</th>
<th>Alternative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reliability and Trust</td>
<td>Yes, through quality</td>
<td></td>
</tr>
<tr>
<td>Non-Compliance</td>
<td>No</td>
<td>Existing ICAO processes</td>
</tr>
<tr>
<td>Information Ownership</td>
<td>No</td>
<td>National Issue</td>
</tr>
<tr>
<td>Liability</td>
<td>No</td>
<td>National Issue</td>
</tr>
<tr>
<td>Responsibility</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Withholding of Information</td>
<td>No</td>
<td>Existing ICAO processes</td>
</tr>
<tr>
<td>Funding</td>
<td>No</td>
<td>ICAO ANC charges</td>
</tr>
<tr>
<td>Registry Proliferation</td>
<td>Yes, standards for service</td>
<td></td>
</tr>
<tr>
<td>Resistance to SWIM Principles</td>
<td>No</td>
<td>Awareness WG</td>
</tr>
</tbody>
</table>
Roles and Responsibilities

Stakeholders (from Doc 9854)
- Aerodrome community
- Airspace providers
- Airspace users
- ATM service providers
- ATM support industry
- ICAO
- Regulatory authorities
- States
- Military organizations

Roles
- Originator
- Provider
- Regulator
- Consumer

Responsibilities
- Service availability
- Data/information quality
- Service performance
- Compliance with Standards
- Security

Only for Guidance Material (no SARPs)
Controlled Vocabulary

- Contents worked out by the Architecture WG
- Design in accordance with global standards by the Governance WG

<table>
<thead>
<tr>
<th>Name</th>
<th>Definition</th>
<th>Obligation</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identifier</td>
<td>A language-independent identifier that uniquely identifies the term in the context of the vocabulary.</td>
<td>Required</td>
<td>Industry best practices recommend the use of a URI (Uniform Resource Identifier) as the identification mechanism, which provides a significant advantage over using plain labels or numbers.</td>
</tr>
<tr>
<td>Preferred Label</td>
<td>An English expression of the term.</td>
<td>Required</td>
<td></td>
</tr>
</tbody>
</table>

**ID:** [http://icao.int/imp/vocabulary#data](http://icao.int/imp/vocabulary#data)

**Preferred Label:** Data

**Definition:** A representation of fact, concept, or instruction represented in a formalized form suitable for communication, interpretation or processing either by human and/or by automated systems. Data are the fundamental components of information and knowledge.

**Related:** Information

**Editorial Note:** Source of definition: Annex 15: Aeronautical Data

**Historical Note:** Original Source: Appendix ATMRPP WP 555

**Historical Note:** A description of changes to the meaning or form of the term for the purposes of vocabulary administration and maintenance. Optional; may be more than one.
Governance of eXchange Models

- **Principles**
  - Hi-level ICAO level governance of XMs
  - Change Control Advisory Board as ICAO steering / advising body for CCBs
  - One CCAB per model (ATMRPP, IMP, METP)

- **Current work**
  - Identify / document problems with existing arrangements for XMs
  - Draft generic Terms of Reference for the 3 CCABs

- **Next steps**
  - Report at next IMP + joint session with ATMRPP
Services and Registry

- **Information necessary to discover and access SWIM services shall include:**
  - Name of the Service
  - Service provider
  - Description of the Service
  - Service fees
  - Service version
  - Originator(s) of the information
  - The constraints about the service
  - Technical specifications of the service interface
  - Quality of service, including availability, continuity, response time

- **Information useful to discover and access SWIM services should include:**
  - Quality of information provided by the service
  - Security mechanism, including access control
Services and Registry (2)

• A SWIM registry should be used as the means to discover and access SWIM services
• A SWIM registry shall provide description of services
• A SWIM registry shall provide registration and search functionalities.
• A SWIM registry shall include an access control mechanism for service registration.
• A SWIM registry should be made publicly available

• A service description model may be used to capture the service description in a formalized way. The use of a common service description model is considered as a good way to improve interoperability.
Information / Data / Service Quality

• Objectives
  – Identify approaches and best practices from the ATM data domains and develop overall Quality principles and guidance
  – Need to determine data requirements across various SWIM domains

• Current work
  – Identify the quality characteristics in each domain, make proposals to align these where possible
  – Definition / scope of Data vs Information vs Service Quality
  – List existing references that can be used for guidance

• Draft SARPs
  – Providers of information services shall implement and maintain Quality Management System (QMS) for information management.
  – The QMS shall include plans and procedures for processing data in order to meet the applicable data quality requirements.
SWIM Compliance

- **Objective**
  - Define what compliance with SWIM means and how it may be assessed
  - How to establish “trust”

- **Consensus**
  - Need to have clear standards as the baseline

- **Open questions**
  - Who has to comply ?
  - Compliance with what ?
  - How is it different for SWIM compared to other ICAO domains ?
  - How to address the wide range of potential SWIM providers ?
  - Is a qualification process required ?
  - Is there a need for formal validation of SWIM services ?

- **What’s next ?**
  - Direction for future work to be decided at the next IMP Plenary
In summary

• Mature work
  – Foundation (R&R, institutional issues)

• Good progress
  – Controlled vocabulary
  – Information to access / discover services
  – Provisions about registry

• To be further discussed
  – Governance of eXchange models
  – Quality

• Still trying hard…
  – SWIM Compliance
Questions