



# SWIM Compliance Report for R5 V&V Exercise EXE-06.03.01-VP-669

## Document information

Project Title	Deliverable
Project Number	08.01.01
Project Manager	EUROCONTROL
Deliverable Name	SWIM Compliance Report for R5 V&V Exercise EXE-06.03.01-VP-669
Deliverable ID	D48
Edition	00.01.03
Template Version	03.00.00

## Task contributors

*FINMECCANICA*

## **Abstract**

This report is evidence that the **Validation Exercise EXE-06.03.01-VP-669** has services that have been assessed for SWIM Compliance. It provides the SWIM Compliance Level for each of the services assessed in the Validation Exercise.

## Authoring & Approval

Prepared By - Authors of the document.		
Name & Company	Position & Title	Date
██████████ FINMECCANICA	██████████	10/02/2016

Reviewed By - Reviewers internal to the project.		
Name & Company	Position & Title	Date

Reviewed By - Other SESAR projects, Airspace Users, staff association, military, Industrial Support, other organisations.		
Name & Company	Position & Title	Date
██████████ FINMECCANICA	██████████	24/02/2016
██████████ FINMECCANICA		24/02/2016
██████████ FINMECCANICA		24/02/2016
██████████ ENAV		24/02/2016
██████████ /EUROCONTROL		24/02/2016

Approved for submission to the SJU By - Representatives of the company involved in the project.		
Name & Company	Position & Title	Date
██████████ FINMECCANICA	██████████	10/03/2016
██████████ FINMECCANICA		10/03/2016
██████████ FINMECCANICA		10/03/2016
██████████ FINMECCANICA		10/03/2016
██████████ ENAV		10/03/2016

Rejected By - Representatives of the company involved in the project.		
Name & Company	Position & Title	Date

Rational for rejection
None.

## Document History

Edition	Date	Status	Author	Justification
00.00.01	15/02/2016	Draft	██████████	First edition collecting all evidence from AIRM, ISRM and TI domains.
00.01.00	22/02/2016	Final		Completed with all evidence for the SWIM Compliance

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles  
 www.sesarju.eu

				Acceptance Team, for evaluation at the SE#2 review.
00.01.01	29/02/2016	Final		Addressed reviewer's comments. Added SWIM Compliance evidence also for the Runway Management Information Service. Added further evidence supporting SWIM-TI Compliance rating. Additional editorial changes.
00.01.02	09/03/2016	Final		Evaluated 00.01.01 changes and included final assessment.
00.01.03	10/03/2016	Final		Final discussion with the SWIM Acceptance Team taken into account. Formal approval logged in the document.

## Intellectual Property Rights (foreground)

This deliverable consists of SJU foreground.

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles  
[www.sesarju.eu](http://www.sesarju.eu)

## Table of Contents

<b>EXECUTIVE SUMMARY</b> .....	<b>5</b>
<b>1 INTRODUCTION</b> .....	<b>6</b>
1.1 PURPOSE OF THE DOCUMENT .....	6
1.2 INTENDED READERSHIP .....	6
1.3 TERMINOLOGY.....	6
1.4 ACRONYMS.....	9
<b>2 SWIM COMPLIANCE REPORT SUMMARY</b> .....	<b>12</b>
<b>3 DETAILS OF THE COMPLIANCE ASSESSMENT</b> .....	<b>14</b>
3.1 DESCRIPTION OF THE SERVICES.....	14
3.2 CONTACTS .....	15
3.3 INFORMATION SERVICE COMPLIANCE .....	16
3.3.1 <i>General Evidence</i> .....	16
3.3.2 <i>Evidence for Information Service Compliance</i> .....	16
3.3.3 <i>Assessment Result - Information Service Compliance Level</i> .....	19
3.4 INFORMATION COMPLIANCE.....	21
3.4.1 <i>Evidence for Information Compliance – General Case</i> .....	21
3.4.2 <i>Evidence for Information Compliance – reuse of existing approved compliance report</i> ...	23
3.4.3 <i>AIRM Change Requests</i> .....	24
3.4.4 <i>Out of Scope Justifications</i> .....	24
3.4.5 <i>Assessment Result - Information Compliance Level</i> .....	24
3.5 COMPLIANCE WITH SWIM-TI TS .....	26
3.5.1 <i>Evidence for TI Compliance</i> .....	26
3.5.2 <i>Assessment Result – TI Compliance Level</i> .....	34
3.6 POST-CONDITIONS FOR SWIM COMPLIANCE .....	35
3.6.1 <i>Post-condition on payload compliance</i> .....	35
<b>4 FEEDBACK FROM SWIM COMPLIANCE ACCEPTANCE TEAM</b> .....	<b>36</b>
4.1 SERVICE ASSESSMENT: CONCLUSIONS AND WAY FORWARD .....	36
4.2 SWIM COMPLIANCE CRITERIA FEEDBACK .....	36
<b>5 REFERENCES</b> .....	<b>37</b>

## Executive Summary

This report is evidence that the **Validation Exercise EXE-06.03.01-VP-669** has services that have been assessed for SWIM Compliance. It provides the SWIM Compliance Level for each of the services assessed in the Validation Exercise.

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles  
[www.sesarju.eu](http://www.sesarju.eu)

# 1 Introduction

## 1.1 Purpose of the Document

This report is part of the SWIM Compliance Framework, produced in the context of SWIM Compliance for Validation Exercises that want to demonstrate the SWIM Compliance level. The SWIM Compliance Criteria for R5 explain the criteria against we assess for SWIM Compliance. This report provides the evidence to satisfy the Compliance Criteria for the following services: METAR Service, TAF Service, SNOWTAM Service, AirportMETObservation Service, AirportMETForecast Service, ICAOMetLocalReport Service, AirportMETAlert Service, RunwayManagementInformation Service.

The steps in completing the template report are the following:

1. The SWIM Compliance Applicant<sup>1</sup> person responsible for the Validation Exercise, with assistance from WP 8 and WP 14 experts, produces the SWIM Compliance Report i.e. using this template.
2. The report is then handed over to the SWIM Compliance Acceptance Team, who performs the assessment and completes this template report into the final SWIM Compliance Assessment Report, including a **SWIM Compliance Level**.

This report is meant to contain all evidences that show the SWIM compliance for the Service Technical Design Description (STDD) for each service.

## 1.2 Intended Readership

- WP8 / WP 14
- WP 3
- Persons participating in the R5 Validation Exercise (e.g. Owners of the Validation Exercise)
- System Projects
- SWIM Compliance Acceptance Team

## 1.3 Terminology

Term	Definition
<b>Capability</b>	The collective <b>ability to deliver a specified type of effect or a specified course of action</b> . Within the context of the SESAR Programme a capability is therefore the ability to support the delivery of a specific operational concept to an agreed level of performance. <b>Source: Common working meeting between B41 EA study and B43 T5. In bold, the NATO Architecture Framework V3 definition</b>
<b>Governance</b>	Ability of decision-makers to set policies regarding stakeholders, services, and their relationships
<b>Information Exchange</b>	A specification of the information that is to be exchanged. An Information Exchange must have a unique identifier. Source: NATO Architecture Framework V3 definition.
<b>Information Exchange Requirement</b>	An Information Exchange Requirement (IER) is the description, in terms of characteristics, of the requirement to transfer information between two or more end users. The characteristics described include source, recipients, content, size, timeliness, security and trigger. IERs are defined as independent of the communications medium. An IER may express both

<sup>1</sup> For definition and example of SWIM Compliance Applicant, see SWIM Compliance Criteria document.

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles  
www.sesarju.eu

Term	Definition
	current and future requirements. Note: an information element is the descriptor of the content in the IER. Source: (British) Ministry of Defence, Information Exchange Requirements.
<b>Infrastructure profile</b>	A set of features characterising the enabling infrastructure, including the QoS and security that the infrastructure provides, technical constraints, user behaviour patterns and characteristics. Profiles relate to legacy and/or new infrastructures such as the SWIM technical infrastructure. Source: B43 T5 study
<b>Means of compliance</b>	Means to demonstrate that an 'Object under Assessment' conforms to a rule (such rule being as e.g., a specification, policy, standard or law)
<b>Node</b>	<b>A logical entity that performs Operational Activities specified independently of any physical implementation</b> , e.g. a stakeholder type providing and/or consuming operational information within a network of other stakeholders. Source: Common working meeting between B41 EA study and B43 T5. In bold, the NATO Architecture Framework V3 Definition.
<b>Object under Assessment</b>	Item (i.e., specifications, mechanisms, activities, individuals) upon which an assessment method is applied during an assessment. In this document, the Object under Assessment (OuA) is the Service Technical Design Description for a service.
<b>Operational Focus Area</b>	A limited set of dependent operational and technical improvements related to an Operational Sub-Package, comprising specific interrelated OIs designed to meet specific performance expectations of the ATM Performance Partnership. Source: ATM Lexicon
<b>Policy</b>	Principle or rule with a view to guiding decisions and achieving one or more rational outcomes
<b>Registry</b>	The SWIM registry is a trusted, managed, complete and consolidated source of reference for service information and related regulations (policies, standards, certifications and taxonomies). It holds all SWIM metadata regarding: <ul style="list-style-type: none"> <li>- stakeholders,</li> <li>- service definitions (ISRM),</li> <li>- service instances,</li> </ul> and the links between them. Source: Registry ConOps
<b>Service</b>	The contractual provision of something (a non-physical object), by one party, for the use of one or more other parties. Services involve interactions between providers and consumers, which may be performed in a digital form (data exchanges) or through voice communication or written processes and procedures. Source: ATM Lexicon
<b>Service definition</b>	The specification of a service as it appears in the Service Description Document and Service Interface Definition. The Service Description Document consists of a mix of textual information and graphics (expressed

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles  
 www.sesarju.eu

Term	Definition
	in a UML notation). The Service Interface Definition consists of machine-interpretable constructs specified according to the selected technical platform, including the necessary technology bindings, e.g. complete WSDL (and XSD), IDL, AMQP, DDS, etc. Source: B4.3 Working Method on Services.
<b>Service interface</b>	The mechanism by which a service communicates.  Service providers and consumers need to implement service interfaces in order to be able to collaborate. A service interface includes service operations that enable access to the functionality of the services identified, as well as the data used in the service interaction. Source: B43 T5 study.
<b>Service instance</b>	Service which has been implemented in accordance with its specification in the service catalogue (during the SESAR Development Phase, the service definitions are available in the ISRM) by a service provider (by itself or contracted to a third party). Source: SWIM ConOps
<b>Service level</b>	A value specification for one or more service attributes indicating the level to which a technical system (or resource if including non-automated services) delivers a service in a particular environment. Example: A "Service Response time" may be defined in relation to a service. A given technical system could have a corresponding Service Level, e.g. "Less than 3 seconds". Source: B43 T5 study.
<b>Service consumer</b>	Stakeholder which consumes service(s) provided by other stakeholder(s)
<b>Service lifecycle</b>	The lifecycle defines the sequence of phases followed by a service.
<b>Service Payload definition</b>	The data/information exchange model represented in UML contained in the Service Description Document.
<b>Service provider</b>	Stakeholder which provides service(s) that can be consumed by other stakeholder(s)
<b>SWIM</b>	System-wide information management. SWIM consists of standards, infrastructure and governance enabling the management of ATM information and its exchange between qualified parties via interoperable services. Source: SWIM ConOps.
<b>SWIM Common Component</b>	A SWIM infrastructure element managed by the 'SWIM authority' and implementing a shared capability, e.g. registry, PKI, etc. Source: SWIM ConOps.
<b>SWIM Compliance Acceptance Team</b>	The group of experts who perform the SWIM Compliance Assessment and provide the final SWIM Compliance Level.
<b>SWIM Infrastructure</b>	The sum of all the SWIM infrastructure elements which are needed to support SWIM services. Source: B43 T5 study.
<b>SWIM Profile</b>	A SWIM profile is a coherent, appropriately sized grouping of middleware functions/services for a given set of technical constraints/requirements which permit a set of stakeholders to share information
<b>Service Technical Design Description</b>	A set of one or more published documents that express meta information about a service. The fundamental part of a service contract consists of the service description documents that express its technical interface. These

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles  
[www.sesarju.eu](http://www.sesarju.eu)

Term	Definition
	<p>form the Service Technical Design Description (STDD) which essentially establishes an API into the functionality offered by the service.</p> <p>The service interface definition in the STDD is mainly given as a machine-readable format usually provided in a standard definition language such as IDL, WSDL or others. The STDD also describes such aspects as the message exchange pattern between provider and consumer, plus the chosen SWIM profile and requirements (bindings) on the technical infrastructure.</p> <p>A STDD can further reference human-readable documents, such as Service Level Agreement (SLA) that describes additional quality-of-service features, behaviours and limitations.</p>

## 1.4 Acronyms

Term	Definition
<b>AIRM</b>	ATM Information Reference Model.
<b>ADQ</b>	Aeronautical Data Quality
<b>ATM</b>	Air Traffic Management
<b>CLDM</b>	Consolidated Logical Data Model
<b>ConOps</b>	Concept of operations
<b>DDS</b>	Data Distribution Service
<b>DOD</b>	Detailed Operational Description
<b>EA</b>	Enterprise Architecture
<b>EAEA</b>	European ATM Enterprise Architecture
<b>EASA</b>	European Aviation Safety Agency
<b>EC</b>	European Commission
<b>EU</b>	European Union
<b>ESB</b>	Enterprise Service Bus
<b>EUROCAE</b>	European Organization for Civil Aviation Equipment
<b>IBP</b>	Industry Based Prototype
<b>ICAO</b>	International Civil Aviation Organisation
<b>ICD</b>	Interface Control Document
<b>IER</b>	Information Exchange Requirements
<b>INTEROP</b>	Interoperability Requirements

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles  
[www.sesarju.eu](http://www.sesarju.eu)

Term	Definition
IRS	Interface Requirements Specification
ISO	International Organisation for Standardisation
ISRM	Information Services Reference Model
IT	Information Technology
ITIL	IT Infrastructure Library (ITIL® provides a Best Practice guidance framework for IT Service Management)
IWXXM	ICAO Weather Information Exchange Model
MET	Meteorology
NAF	NATO Architecture Framework
OFA	Operational Focus Area
OI	Operational Improvement
OPS	Operational
OSED	Operational Service and Environment Definition
OuA	Object under Assessment
PKI	Public Key Infrastructure
QoS	Quality of Service
RPC	Remote Procedure Call
RTCA	Radio Technical Commission for Aeronautics
SACG	SWIM Architect Co-ordination Group
SCG	Service Coordination Group
SCL	SWIM Compliance Level
SDD	Service Description Document
SES	Single European Sky
SESAR	Single European Sky ATM Research Programme
SESAR Programme	The programme which defines the research and development activities and projects for the SJU
SID	Service Identification Document
SIR	Service Identification Report

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles  
[www.sesarju.eu](http://www.sesarju.eu)

Term	Definition
<b>SJU</b>	SESAR Joint Undertaking (Agency of the European Commission)
<b>SJU Work Programme</b>	The programme which addresses all activities of the SESAR Joint Undertaking Agency.
<b>SLA</b>	Service Level Agreement
<b>SOA</b>	Service Oriented Approach
<b>SOAP</b>	Simple Object Access Protocol
<b>SoaML</b>	Service Oriented Architecture Modelling Language
<b>SVA</b>	Service Activity
<b>SWIM</b>	System Wide Information Management
<b>SWIM TI</b>	SWIM Technical Infrastructure
<b>SYS</b>	System Projects
<b>TAD</b>	Technical Architecture Description
<b>TS</b>	Technical Specification
<b>STDD</b>	Service Technical Design Description
<b>UDDI</b>	Universal Description, Discovery and Integration
<b>UML</b>	Unified Modelling Language
<b>URN</b>	Uniform Resource Name
<b>WP</b>	Work Package
<b>WSDL</b>	Web Services Description Language
<b>XSD</b>	XML Schema Definition

## 2 SWIM Compliance Report Summary

This section summarises the main information about the compliance assessment.

<b>STDD Name and Version</b>	STDD for METAR Service, ed. 1.00 [27] STDD for TAF Service, ed. 1.00 [27] STDD for SNOWTAM Service, ed. 1.00 [27] STDD for AirportMETObservation Service, ed. 1.00 [27] STDD for AirportMETForecast Service, ed. 1.00 [27] STDD for ICAOMETLocalReport Service, ed. 1.00 [27] STDD for AirportMETAlert Service, ed. 1.00 [27] STDD for RunwayManagementInformation Service, ed. 1.00 [28]
<b>Services assessed for SWIM Compliance</b>	METAR Service TAF Service SNOWTAM Service AirportMETObservation Service AirportMETForecast Service ICAOMETLocalReport Service AirportMETAlert Service RunwayManagementInformation Service
<b>Version of the AIRM</b>	AIRM 4.0.1
<b>Version of the ISRM</b>	ISRM 1.4
<b>Version of the TI</b>	SWIM Profile v 3.0
<b>Version of SWIM Compliance Framework applied</b>	SWIM Compliance Framework for Release 5 Validation Exercises
<b>Reason for the Assessment</b>	Demonstrate SWIM Compliance for services in Validation Exercise EXE-06.03.01-VP-669
<b>Responsible for service requirements</b>	
<b>SWIM Support</b>	
<b>Name of the SWIM Acceptance Team</b>	<i>AIRM: FJ Crabiffosse                  Eric Roelants                  ISRM: FJ Crabiffosse                  Eric Roelants                  TI: FJ Crabiffosse                  Eric Roelants</i>

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles  
 www.sesarju.eu

<b>SWIM Compliance Level per service and compliance domain</b>	<p><i>All services achieve the following levels of Compliance:</i></p> <ul style="list-style-type: none"><li>- <i>AIRM Compliant;</i></li><li>- <i>ISRM Compliant.</i></li></ul> <p><i>For RunwayManagementInformation Service:</i></p> <ul style="list-style-type: none"><li>- <i>SWIM Blue Profile Binding Compliant</i></li></ul> <p><i>For all other services:</i></p> <ul style="list-style-type: none"><li>- <i>SWIM Yellow Profile Binding Compliant</i></li></ul>

**Notes:**

1. Italics need to be verified and updated, text in Blue will be filled in by the SWIM Acceptance Team
2. The SWIM Acceptance Team, following the final assessment, could change the SWIM Compliance levels.

### 3 Details of the Compliance Assessment

The detailed criteria are available in the SWIM Compliance Framework for R5 V&V exercises [17].

#### 3.1 Description of the services

Service Name	Description
METAR service provided by Finmeccanica IWIS system	Service for the provisioning of standard ICAO Annex 3 METAR/SPECI bulletins, including TREND forecasts.
TAF service provided by Finmeccanica IWIS system	Service for the provisioning of standard ICAO Annex 3 TAF bulletins.
SNOWTAM service provided by Finmeccanica IWIS system	Service for the provisioning of standard ICAO Annex 15 SNOWTAM bulletins.
AirportMETObservation service provided by Finmeccanica IWIS system	Service for the provisioning of structured meteorological observation information of concern for airport stakeholders.
AirportMETForecast service provided by Finmeccanica IWIS system	Service for the provisioning of structured meteorological forecasts information of concern for airport stakeholders.
ICAOMETLocalReport service provided by Finmeccanica IWIS system	Service for the provisioning of standard ICAO Annex 3 METREPORT/SPECIAL bulletins.
AirportMETAlert service provided by Finmeccanica IWIS system	Service for the provisioning of airport alerts concerning imminent meteorological conditions which may affect airport operations.
RunwayManagementInformation Service provided by Finmeccanica RMAN system	Service for the provisioning of specific and aggregated runway capacity figures and runway configuration information.

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles  
[www.sesarju.eu](http://www.sesarju.eu)

## 3.2 Contacts

The following list contains the contacts for the SWIM Services that are assessed for SWIM Compliance. The information is needed to be able to contact the right person in the case that more evidence or clarifications are required.

Service Name	Contacts
METAR Service	<i>AIRM and ISRM contacts:</i> [REDACTED] <i>Finmeccanica</i> [REDACTED]
TAF Service	
SNOWTAM Service	
AirportMETObservation Service	
AirportMETForecast Service	<i>SWIM TI contacts:</i> [REDACTED] <i>Finmeccanica</i> [REDACTED]
ICAOMetLocalReport Service	
AirportMETAlert Service	
RunwayManagementInformation Service	<i>Validation EXE PoC:</i> [REDACTED] <i>ENAV</i> [REDACTED]

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles  
[www.sesarju.eu](http://www.sesarju.eu)

## 3.3 Information Service Compliance

### 3.3.1 General Evidence

The purpose of checking the Information Exchange Service Compliance is to ensure that the OuA (i.e. the STDD describing the realisation of the service within the used technology context) meets the description of the logical service in the SDD.

Service Name	Logical Service Name	Logical Service Origin and Version Number
METAR Service	METARService	<i>SDD ed. 2.1 [26]</i> <i>Service ed. 2.0</i>
TAF Service	TAFService	<i>SDD ed. 2.1 [26]</i> <i>Service ed. 2.0</i>
SNOWTAM Service	SNOWTAMService	<i>SDD ed. 1.1 [26]</i> <i>Service ed. 1.1</i>
AirportMETObservation Service	AirportMETObservationService	<i>SDD ed. 1.1 [26]</i> <i>Service ed. 1.1</i>
AirportMETForecast Service	AirportMETForecastService	<i>SDD ed. 1.1 [26]</i> <i>Service ed. 1.0</i>
ICAOmetLocalReport Service	ICAOmetLocalReportService	<i>SDD ed. 1.1 [26]</i> <i>Service ed. 1.0</i>
AirportMETAlert Service	AirportMETAlertService	<i>SDD ed. 1.1 [26]</i> <i>Service ed. 1.0</i>
RunwayManagementInformation Service	RunwayManagementInformationService	<i>SDD ed. 3.0 [26]</i> <i>Service ed. 3.0</i>

### 3.3.2 Evidence for Information Service Compliance

The following provides the evidence for the Information Exchange Service compliance as required by the SWIM Compliance Framework Criteria Document [17], IS-1, IS-2, IS-3, IS-4, IS-5.

The relevant mappings are provided in the sections below.

#### 3.3.2.1 Operations mapping (IS-1)

The mapping between STDD and SDD operations for all the services are extracted in from the STDD and shown here below. The existence of these mappings demonstrate the fulfilment of condition IS-1 for all services.

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles  
[www.sesarju.eu](http://www.sesarju.eu)

Table 1. Operations mapping for the METAR Service

Service interface name as per SDD	Operation Name as per SDD	Operation Name as per STDD
METARInterface	subscribeToMETAR	WSN Subscribe operation
	unsubscribeFromMETAR	WSN Unsubscribe operation
	publishMETAR	WSN Notify operation

Table 2. Operations mapping for the TAF Service

Service interface name as per SDD	Operation Name as per SDD	Operation Name as per STDD
TAFInterface	subscribeToTAF	WSN Subscribe operation
	unsubscribeFromTAF	WSN Unsubscribe operation
	publishTAF	WSN Notify operation

Table 3. Operations mapping for the SNOWTAM Service

Service interface name as per SDD	Operation Name as per SDD	Operation Name as per STDD
SNOWTAMInterface	subscribeToSNOWTAM	WSN Subscribe operation
	unsubscribeFromSNOWTAM	WSN Unsubscribe operation
	notifySNOWTAM	WSN Notify operation

Table 4. Operations mapping for the AirportMETObservation Service

Service interface name as per SDD	Operation Name as per SDD	Operation Name as per STDD
AirportMETObservationInterface	subscribeToAirportMETObservation	WSN Subscribe operation
	unsubscribeFromAirportMETObservation	WSN Unsubscribe operation
	notifyAirportMETObservation	WSN Notify operation

Table 5. Operations mapping for the AirportMETForecast Service

Service interface name as per SDD	Operation Name as per SDD	Operation Name as per STDD
-----------------------------------	---------------------------	----------------------------

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles  
 www.sesarju.eu

AirportMETForecastInterface	subscribeToAirportMETForecast	WSN Subscribe operation
	unsubscribeFromAirportMETForecast	WSN Unsubscribe operation
	notifyAirportMETForecast	WSN Notify operation

**Table 6.** Operations mapping for the ICAOMetLocalReport Service

Service interface name as per SDD	Operation Name as per SDD	Operation Name as per STDD
ICAOMetLocalReportInterface	subscribeToICAOMetLocalReport	WSN Subscribe operation
	unsubscribeFromICAOMetLocalReport	WSN Unsubscribe operation
	publishICAOMetLocalReport	WSN Notify operation

**Table 7.** Operations mapping for the AirportMETAlert Service

Service Interface Name	Operation Name as per SDD	Operation Name as per STDD
AirportMETAlertInterface	subscribeToMETAlert	WSN Subscribe operation
	unsubscribeFromMETAlert	WSN Unsubscribe operation
	publishMETAlert	WSN Notify operation

**Table 8.** Operations mapping for the RunwayManagementInformation Service

Service Interface Name	Operation Name as per SDD	Operation Name as per STDD
RunwayManagementInformation PubSubInterface	subscribeToRunwayManagementInformation	OMG DDS Subscription
	unsubscribeFromRunwayManagementInformation	OMG DDS Unsubscription
	publishRunwayManagementInformation	OMG DDS Publication

### 3.3.2.2 Payload mapping (IS-2)

The mapping tables between services payloads in the SDD and services messages in STDD are available as separate artefacts [29] [30]. Since all mandatory payload attributes in the SDDs have a counterpart in STDD, IS-2 is satisfied for all services.

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles  
www.sesarju.eu

It is to be noted that for METAR and TAF services the actual XSD payload contained in the WSN *Notify* envelope is based on IWXXM 1.1. Since the ISRM payload for those services is based on IWXXM 1.1. as well, then these two services fully satisfy IS-2.

### 3.3.2.3 MEP mapping (IS-3)

All services in ISRM are based on the “Standard Publish/Subscribe Push MEP”. All the corresponding technical interfaces in the STDDs implement the PSPUSH-MEP. Since all the MEPs correspond therefore all services satisfy IS-3.

### 3.3.2.4 Service in ISRM (IS-4)

All services SDD are in ISRM 1.4 release folder[26], therefore all services satisfy IS-4.

### 3.3.2.5 NFR mapping (IS-5)

No NFR is provided, therefore all services naively satisfy IS-5.

## 3.3.3 Assessment Result - Information Service Compliance Level

Service Name	Information Service Compliance Level-Claimed <i>To be filled in by the SWIM Applicant</i>	Information Service Compliance Level-approved <i>To be filled in by the SWIM Acceptance Team</i>	Remarks (optional) <i>To be filled in by the SWIM Acceptance Team</i>
METAR Service	<b>Information Service Compliant</b>	The evidence provided is sufficient to grant the <b>Information Service Compliant</b> level of compliance.	N/A.
TAF Service	<b>Information Service Compliant</b>	The evidence provided is sufficient to grant the <b>Information Service Compliant</b> level of compliance.	N/A.
SNOWTAM Service	<b>Information Service Compliant</b>	The evidence provided is sufficient to grant the <b>Information Service Compliant</b> level of compliance.	N/A.
AirportMETObservation Service	<b>Information Service Compliant</b>	The evidence provided is sufficient to grant the <b>Information Service Compliant</b>	N/A.

		level of compliance.	
AirportMETForecast Service	<b>Information Service Compliant</b>	The evidence provided is sufficient to grant the <b>Information Service Compliant</b> level of compliance.	N/A.
ICAOMetLocalReport Service	<b>Information Service Compliant</b>	The evidence provided is sufficient to grant the <b>Information Service Compliant</b> level of compliance.	N/A.
AirportMETAlert Service	<b>Information Service Compliant</b>	The evidence provided is sufficient to grant the <b>Information Service Compliant</b> level of compliance.	N/A.
RunwayManagementInformation Service	<b>Information Service Compliant</b>	The evidence provided is sufficient to grant the <b>Information Service Compliant</b> level of compliance.	N/A.

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles  
[www.sesarju.eu](http://www.sesarju.eu)

## 3.4 Information Compliance

### 3.4.1 Evidence for Information Compliance – General Case

Table 9. General information for METAR service

<b>Service Name</b>	METAR service
<b>AIRM version</b>	AIRM 4.0.1
<b>Reference to AIRM</b>	[16]
<b>Reference to OuA (Physical Messages)</b>	IWXXM 1.1. release page [20]

Table 10. General information for TAF service

<b>Service Name</b>	TAF service
<b>AIRM version</b>	AIRM 4.0.1
<b>Reference to AIRM</b>	[16]
<b>Reference to OuA (Physical Messages)</b>	IWXXM 1.1. release page [20]

Table 11. General information for SNOWTAM service

<b>Service Name</b>	SNOWTAM service
<b>AIRM version</b>	AIRM 4.0.1
<b>Reference to AIRM</b>	[16]
<b>Reference to OuA (Physical Messages)</b>	[22]

Table 12. General information for AirportMETObservation service

<b>Service Name</b>	AirportMETObservation service
<b>AIRM version</b>	AIRM 4.0.1
<b>Reference to AIRM</b>	[16]
<b>Reference to OuA (Physical Messages)</b>	[23]

Table 13. General information for AirportMETForecast service

<b>Service Name</b>	AirportMETForecast service
<b>AIRM version</b>	AIRM 4.0.1

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles  
 www.sesarju.eu

<b>Reference to AIRM</b>	[16]
<b>Reference to OuA (Physical Messages)</b>	[23]

**Table 14.** General information for ICAOMetLocalReport service

<b>Service Name</b>	ICAOMetLocalReport service
<b>AIRM version</b>	AIRM 4.0.1
<b>Reference to AIRM</b>	[16]
<b>Reference to OuA (Physical Messages)</b>	[24]

**Table 15.** General information for AirportMETAlert service

<b>Service Name</b>	AirportMETAlert service
<b>AIRM version</b>	AIRM 4.0.1
<b>Reference to AIRM</b>	[16]
<b>Reference to OuA (Physical Messages)</b>	[24]

**Table 16.** General information for RunwayManagementInformation Service

<b>Service Name</b>	RunwayManagementInformation Service
<b>AIRM version</b>	AIRM 4.0.1
<b>Reference to AIRM</b>	[16]
<b>Reference to OuA (Physical Messages)</b>	[25]

The following tables provide the evidence for semantic correspondence of all services' physical messages to AIRM reaching the "Information Compliant" level according to the SWIM Compliance Framework Criteria Document [17], IN-3.

**Table 17.** Evidence for semantic correspondence with AIRM: METAR service

<b>Evidence for AIRM Compliance</b>	The excel sheet for the mapping between the IWXXM/METAR package and AIRM 4.0.1 is given in [21].  This provides the evidence for meeting the condition IN-3 according to [17].
-------------------------------------	--

**Table 18.** Evidence for semantic correspondence with AIRM: TAF service

<b>Evidence for AIRM Compliance</b>	The excel sheet for the mapping between the IWXXM/TAF package and AIRM 4.0.1 is given in [21].  This provides the evidence for meeting the condition IN-3 according to [17].
-------------------------------------	--

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles  
 www.sesarju.eu

**Table 19.** Evidence for semantic correspondence with AIRM: SNOWTAM service

<b>Evidence for AIRM Compliance</b>	<p>The excel sheet for SNOWTAM in [29] provides the mapping between all elements in the STDD payload and the corresponding AIRM elements.</p> <p>This provides the evidence for meeting the condition IN-3 according to [17].</p>
-------------------------------------	---

**Table 20.** Evidence for semantic correspondence with AIRM: AirportMETObservation service

<b>Evidence for AIRM Compliance</b>	<p>The excel sheet for AirportMETObservation service in [29] provides the mapping between all elements in the STDD payload and the corresponding AIRM elements.</p> <p>This provides the evidence for meeting the condition IN-3 according to [17].</p>
-------------------------------------	---

**Table 21.** Evidence for semantic correspondence with AIRM: AirportMETForecast service

<b>Evidence for AIRM Compliance</b>	<p>The excel sheet for AirportMETForecast service in [29] provides the mapping between all elements in the STDD payload and the corresponding AIRM elements.</p> <p>This provides the evidence for meeting the condition IN-3 according to [17].</p>
-------------------------------------	--

**Table 22.** Evidence for semantic correspondence with AIRM: ICAOMetLocalReport service

<b>Evidence for AIRM Compliance</b>	<p>The excel sheet for ICAOMetLocalReport service in [29] provides the mapping between all elements in the STDD payload and the corresponding AIRM elements.</p> <p>This provides the evidence for meeting the condition IN-3 according to [17].</p>
-------------------------------------	--

**Table 23.** Evidence for semantic correspondence with AIRM: AirportMETAlert service

<b>Evidence for AIRM Compliance</b>	<p>The excel sheet for AirportMETAlert service in [29] provides the mapping between all elements in the STDD payload and the corresponding AIRM elements.</p> <p>This provides the evidence for meeting the condition IN-3 according to [17].</p>
-------------------------------------	---

**Table 24.** Evidence for semantic correspondence with AIRM: RunwayManagementInformation service

<b>Evidence for AIRM Compliance</b>	<p>The excel sheet for RunwayManagementInformation service in [30] provides the mapping between all elements in the STDD payload and the corresponding AIRM elements.</p> <p>This provides the evidence for meeting the condition IN-3 according to [17].</p>
-------------------------------------	---

### 3.4.2 Evidence for Information Compliance – reuse of existing approved compliance report

N/A.

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles  
[www.sesarju.eu](http://www.sesarju.eu)

### 3.4.3 AIRM Change Requests

Element in the Object Under Assessment	AIRM Change Request Number
All elements mapped to an AIRM CR in all tables from Table 17 to Table 24.	CR#601

### 3.4.4 Out of Scope Justifications

If the service message contains elements which are “out of scope” of the AIRM, according to the AIRM Compliance Rulebook [9], a justification shall be provided in the table below. Otherwise mark this section as “Not Applicable”.

Element in the Object Under Assessment	Reason why it is out of scope
All elements mapped to an AIRM_out_of_scope in all tables from Table 17 to Table 24.	The explanation element by element is already given in the mapping tables themselves.

### 3.4.5 Assessment Result - Information Compliance Level

Service Name	Information Compliance Level - Claimed <i>To be filled in by the SWIM Compliance Applicant</i>	Information Compliance Level- Approved <i>To be filled in by the SWIM Acceptance Team</i>	Remarks (optional) <i>To be filled in by the SWIM Acceptance Team</i>
METAR Service	Information Compliant	The evidence provided is sufficient to grant the <b>Information Compliant</b> level of compliance.	N/A.
TAF Service	Information Compliant	The evidence provided is sufficient to grant the <b>Information Compliant</b> level of compliance.	N/A.
SNOWTAM Service	Information Compliant	The evidence provided is sufficient to grant the <b>Information Compliant</b> level of compliance.	N/A.

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles  
 www.sesarju.eu

AirportMETObservation Service	<b>Information Compliant</b>	The evidence provided is sufficient to grant the <b>Information Compliant</b> level of compliance.	N/A.
AirportMETForecast Service	<b>Information Compliant</b>	The evidence provided is sufficient to grant the <b>Information Compliant</b> level of compliance.	N/A.
ICAOMETLocalReport Service	<b>Information Compliant</b>	The evidence provided is sufficient to grant the <b>Information Compliant</b> level of compliance.	<i>A few fields identified as CLDM_out_of_scope could be potential candidates to be included in AIRM, to be evaluated by AIRM experts.</i>
AirportMETAlert Service	<b>Information Compliant</b>	The evidence provided is sufficient to grant the <b>Information Compliant</b> level of compliance.	<i>A few fields identified as CLDM_out_of_scope could be potential candidates to be included in AIRM, to be evaluated by AIRM experts.</i>
RunwayManagementInformation Service	<b>Information Compliant</b>	The evidence provided is sufficient to grant the <b>Information Compliant</b> level of compliance.	<i>A few fields identified as CLDM_out_of_scope could be potential candidates to be included in AIRM, to be evaluated by AIRM experts.</i>

## 3.5 Compliance with SWIM-TI TS

### 3.5.1 Evidence for TI Compliance

Table 25. Evidence for TI Compliance: METAR Service

Field name	Reference to TI criteria condition	Evidence
Service Name	(N/A)	METAR Service
SWIM Profile	(N/A)	SWIM Yellow Profile
SWIM Profiles Version	TI-1	The STDD relies upon the SWIM TI Profiles Version 3.0. Therefore TI-1 is satisfied.
MEP <sup>2</sup>	TI-2	The MEP provided in STDD is <b>PSPUSH-MEP</b> , which is also available in Appendix 1 of the SWIM Compliance Framework Criteria document, where it is called <b>Publish/Subscribe Push</b> . Therefore TI-2 is satisfied.
	TI-5	The PSPUSH-MEP indicated in the STDD is the same as the MEP included in the interface binding REQ-14.01.04-TS-0901.0304 chosen in the STDD. Therefore TI-5 is satisfied.
Technology	TI-3	The technology used in the service implementation is <b>WS-Notification</b> , included in the SWIM Yellow Profile interface bindings catalogue. Therefore TI-3 is satisfied.
Interface Binding	TI-4	The chosen binding is REQ-14.01.04-TS-0901.0304, which is included in the SWIM Yellow Profile interface bindings catalogue. Therefore TI-4 is satisfied.
Link to the service interface	TI-6	As described in the STDD, the physical service definition is given by WSDL files and XSDs messages specified according to the WS-N standards <a href="https://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wsn#technical.brw-2.wsdl">https://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wsn#technical.brw-2.wsdl</a> . The actual payload is defined as XML Schema from the standard IWXXM 1.1 [20]. Given this information, then TI-2 is satisfied.
Requirements coverage	TI-7	As described in the report [31], the SWIM TI requirements related to the selected interface binding are covered. Therefore TI-7 is satisfied.

<sup>2</sup> As the catalogue of MEP and the catalogue of SWIM-TI Interface Bindings are on-going, we refer to the MEP and the Interface Bindings in the specific WP14 documents (SWIM-TI TAD and TS and the SWIM Profiles document). [10][11][12][13][14][15][16]

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles  
[www.sesarju.eu](http://www.sesarju.eu)

Table 26. Evidence for TI Compliance: TAF Service

Field name	Reference to TI criteria condition	Evidence
Service Name	(N/A)	TAF Service
SWIM Profile	(N/A)	SWIM Yellow Profile
SWIM Profiles Version	TI-1	The STDD relies upon the SWIM TI Profiles Version 3.0. Therefore TI-1 is satisfied.
MEP <sup>3</sup>	TI-2	The MEP provided in STDD is <b>PSPUSH-MEP</b> , which is also available in Appendix 1 of the SWIM Compliance Framework Criteria document, where it is called <b>Publish/Subscribe Push</b> . Therefore TI-2 is satisfied.
	TI-5	The PSPUSH-MEP indicated in the STDD is the same as the MEP included in the interface binding REQ-14.01.04-TS-0901.0304 chosen in the STDD. Therefore TI-5 is satisfied.
Technology	TI-3	The technology used in the service implementation is <b>WS-Notification</b> , included in the SWIM Yellow Profile interface bindings catalogue. Therefore TI-3 is satisfied.
Interface Binding	TI-4	The chosen binding is REQ-14.01.04-TS-0901.0304, which is included in the SWIM Yellow Profile interface bindings catalogue. Therefore TI-4 is satisfied.
Link to the service interface	TI-6	As described in the STDD, the physical service definition is given by WSDL files and XSDs messages specified according to the WS-N standards <a href="https://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wsn#technical.brw-2.wsdl">https://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wsn#technical.brw-2.wsdl</a> . The actual payload is defined as XML Schema from the standard IWXXM 1.1 [20]. Given this information, then TI-6 is satisfied.
Requirements coverage	TI-7	As described in the report [31], the SWIM TI requirements related to the selected interface binding are covered. Therefore TI-7 is satisfied.

<sup>3</sup> As the catalogue of MEP and the catalogue of SWIM-TI Interface Bindings are on-going, we refer to the MEP and the Interface Bindings in the specific WP14 documents (SWIM-TI TAD and TS and the SWIM Profiles document). [10][11][12][13][14][15][16]

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles  
 www.sesarju.eu

Table 27. Evidence for TI Compliance: SNOWTAM Service

Field name	Reference to TI criteria condition	Evidence
Service Name	(N/A)	SNOWTAM Service
SWIM Profile	(N/A)	SWIM Yellow Profile
SWIM TI Profiles Version	TI-1	The STDD relies upon the SWIM TI Profiles Version 3.0. Therefore TI-1 is satisfied.
MEP <sup>4</sup>	TI-2	The MEP provided in STDD is <b>PSPUSH-MEP</b> , which is also available in Appendix 1 of the SWIM Compliance Framework Criteria document, where it is called <b>Publish/Subscribe Push</b> . Therefore TI-2 is satisfied.
	TI-5	The PSPUSH-MEP indicated in the STDD is the same as the MEP included in the interface binding REQ-14.01.04-TS-0901.0304 chosen in the STDD. Therefore TI-5 is satisfied.
Technology	TI-3	The technology used in the service implementation is <b>WS-Notification</b> , included in the SWIM Yellow Profile interface bindings catalogue. Therefore TI-3 is satisfied.
Interface Binding	TI-4	The chosen binding is REQ-14.01.04-TS-0901.0304, which is included in the SWIM Yellow Profile interface bindings catalogue. Therefore TI-4 is satisfied.
Link to the service interface	TI-6	As described in the STDD, the physical service definition is given by WSDL files and XSDs messages specified according to the WS-N standards <a href="https://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wsn#technical.brw-2.wsdl">https://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wsn#technical.brw-2.wsdl</a> . The actual payload is defined as XML Schema from the standard IWXXM 1.1 [20]. Given this information, then TI-6 is satisfied.
Requirements coverage	TI-7	As described in the report [31], the SWIM TI requirements related to the selected interface binding are covered. Therefore TI-7 is satisfied.

<sup>4</sup> As the catalogue of MEP and the catalogue of SWIM-TI Interface Bindings are on-going, we refer to the MEP and the Interface Bindings in the specific WP14 documents (SWIM-TI TAD and TS and the SWIM Profiles document). [10][11][12][13][14][15][16]

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles  
[www.sesarju.eu](http://www.sesarju.eu)

Table 28. Evidence for TI Compliance: ICAOMetLocalReport Service

Field name	Reference to TI criteria condition	Evidence
Service Name	(N/A)	ICAOMetLocalReport Service
SWIM Profile	(N/A)	SWIM Yellow Profile
SWIM Profiles Version	TI-1	The STDD relies upon the SWIM TI Profiles Version 3.0. Therefore TI-1 is satisfied.
MEP <sup>5</sup>	TI-2	The MEP provided in STDD is <b>PSPUSH-MEP</b> , which is also available in Appendix 1 of the SWIM Compliance Framework Criteria document, where it is called <b>Publish/Subscribe Push</b> . Therefore TI-2 is satisfied.
	TI-5	The PSPUSH-MEP indicated in the STDD is the same as the MEP included in the interface binding REQ-14.01.04-TS-0901.0304 chosen in the STDD. Therefore TI-5 is satisfied.
Technology	TI-3	The technology used in the service implementation is <b>WS-Notification</b> , included in the SWIM Yellow Profile interface bindings catalogue. Therefore TI-3 is satisfied.
Interface Binding	TI-4	The chosen binding is REQ-14.01.04-TS-0901.0304, which is included in the SWIM Yellow Profile interface bindings catalogue. Therefore TI-4 is satisfied.
Link to the service interface	TI-6	As described in the STDD, the physical service definition is given by WSDL files and XSDs messages specified according to the WS-N standards <a href="https://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wsn#technical.brw-2.wsdl">https://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wsn#technical.brw-2.wsdl</a> . The actual payload is defined as XML Schema from the standard IWXXM 1.1 [20]. Given this information, then TI-6 is satisfied.
Requirements coverage	TI-7	As described in the report [31], the SWIM TI requirements related to the selected interface binding are covered. Therefore TI-7 is satisfied.

<sup>5</sup> As the catalogue of MEP and the catalogue of SWIM-TI Interface Bindings are on-going, we refer to the MEP and the Interface Bindings in the specific WP14 documents (SWIM-TI TAD and TS and the SWIM Profiles document). [10][11][12][13][14][15][16]

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles  
[www.sesarju.eu](http://www.sesarju.eu)

Table 29. Evidence for TI Compliance: AirportMETObservation Service

Field name	Reference to TI criteria condition	Evidence
Service Name	(N/A)	AirportMETObservation Service
SWIM Profile	(N/A)	SWIM Yellow Profile
SWIM Profiles Version	TI-1	The STDD relies upon the SWIM TI Profiles Version 3.0. Therefore TI-1 is satisfied.
MEP <sup>6</sup>	TI-2	The MEP provided in STDD is <b>PSPUSH-MEP</b> , which is also available in Appendix 1 of the SWIM Compliance Framework Criteria document, where it is called <b>Publish/Subscribe Push</b> . Therefore TI-2 is satisfied.
	TI-5	The PSPUSH-MEP indicated in the STDD is the same as the MEP included in the interface binding REQ-14.01.04-TS-0901.0304 chosen in the STDD. Therefore TI-5 is satisfied.
Technology	TI-3	The technology used in the service implementation is <b>WS-Notification</b> , included in the SWIM Yellow Profile interface bindings catalogue. Therefore TI-3 is satisfied.
Interface Binding	TI-4	The chosen binding is REQ-14.01.04-TS-0901.0304, which is included in the SWIM Yellow Profile interface bindings catalogue. Therefore TI-4 is satisfied.
Link to the service interface	TI-6	As described in the STDD, the physical service definition is given by WSDL files and XSDs messages specified according to the WS-N standards <a href="https://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wsn#technical.brw-2.wsdl">https://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wsn#technical.brw-2.wsdl</a> . The actual payload is defined as XML Schema from the standard IWXXM 1.1 [20]. Given this information, then TI-6 is satisfied.
Requirements coverage	TI-7	As described in the report [31], the SWIM TI requirements related to the selected interface binding are covered. Therefore TI-7 is satisfied.

<sup>6</sup> As the catalogue of MEP and the catalogue of SWIM-TI Interface Bindings are on-going, we refer to the MEP and the Interface Bindings in the specific WP14 documents (SWIM-TI TAD and TS and the SWIM Profiles document). [10][11][12][13][14][15][16]

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles  
[www.sesarju.eu](http://www.sesarju.eu)

Table 30. Evidence for TI Compliance: AirportMETForecast Service

Field name	Reference to TI criteria condition	Evidence
Service Name	(N/A)	AirportMETForecast Service
SWIM Profile	(N/A)	SWIM Yellow Profile
SWIM Profiles Version	TI-1	The STDD relies upon the SWIM TI Profiles Version 3.0. Therefore TI-1 is satisfied.
MEP <sup>7</sup>	TI-2	The MEP provided in STDD is <b>PSPUSH-MEP</b> , which is also available in Appendix 1 of the SWIM Compliance Framework Criteria document, where it is called <b>Publish/Subscribe Push</b> . Therefore TI-2 is satisfied.
	TI-5	The PSPUSH-MEP indicated in the STDD is the same as the MEP included in the interface binding REQ-14.01.04-TS-0901.0304 chosen in the STDD. Therefore TI-5 is satisfied.
Technology	TI-3	The technology used in the service implementation is <b>WS-Notification</b> , included in the SWIM Yellow Profile interface bindings catalogue. Therefore TI-3 is satisfied.
Interface Binding	TI-4	The chosen binding is REQ-14.01.04-TS-0901.0304, which is included in the SWIM Yellow Profile interface bindings catalogue. Therefore TI-4 is satisfied.
Link to the service interface	TI-6	As described in the STDD, the physical service definition is given by WSDL files and XSDs messages specified according to the WS-N standards <a href="https://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wsn#technical.brw-2.wsdl">https://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wsn#technical.brw-2.wsdl</a> . The actual payload is defined as XML Schema from the standard IWXXM 1.1 [20]. Given this information, then TI-2 is satisfied.
Requirements coverage	TI-7	As described in the report [31], the SWIM TI requirements related to the selected interface binding are covered. Therefore TI-6 is satisfied.

<sup>7</sup> As the catalogue of MEP and the catalogue of SWIM-TI Interface Bindings are on-going, we refer to the MEP and the Interface Bindings in the specific WP14 documents (SWIM-TI TAD and TS and the SWIM Profiles document). [10][11][12][13][14][15][16]

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles  
 www.sesarju.eu

Table 31. Evidence for TI Compliance: AirportMETAlert Service

Field name	Reference to TI criteria condition	Evidence
Service Name	(N/A)	AirportMETAlert Service
SWIM Profile	(N/A)	SWIM Yellow Profile
SWIM Profiles Version	TI-1	The STDD relies upon the SWIM TI Profiles Version 3.0. Therefore TI-1 is satisfied.
MEP <sup>8</sup>	TI-2	The MEP provided in STDD is <b>PSPUSH-MEP</b> , which is also available in Appendix 1 of the SWIM Compliance Framework Criteria document, where it is called <b>Publish/Subscribe Push</b> . Therefore TI-2 is satisfied.
	TI-5	The PSPUSH-MEP indicated in the STDD is the same as the MEP included in the interface binding REQ-14.01.04-TS-0901.0304 chosen in the STDD. Therefore TI-5 is satisfied.
Technology	TI-3	The technology used in the service implementation is <b>WS-Notification</b> , included in the SWIM Yellow Profile interface bindings catalogue. Therefore TI-3 is satisfied.
Interface Binding	TI-4	The chosen binding is REQ-14.01.04-TS-0901.0304, which is included in the SWIM Yellow Profile interface bindings catalogue. Therefore TI-4 is satisfied.
Link to the service interface	TI-6	As described in the STDD, the physical service definition is given by WSDL files and XSDs messages specified according to the WS-N standards <a href="https://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wsn#technical.brw-2.wsdl">https://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wsn#technical.brw-2.wsdl</a> . The actual payload is defined as XML Schema from the standard IWXXM 1.1 [20]. Given this information, then TI-6 is satisfied.
Requirements coverage	TI-7	As described in the report [31], the SWIM TI requirements related to the selected interface binding are covered. Therefore TI-7 is satisfied.

<sup>8</sup> As the catalogue of MEP and the catalogue of SWIM-TI Interface Bindings are on-going, we refer to the MEP and the Interface Bindings in the specific WP14 documents (SWIM-TI TAD and TS and the SWIM Profiles document). [10][11][12][13][14][15][16]

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles  
 www.sesarju.eu

Table 32. Evidence for TI Compliance: RunwayManagementInformation Service

Field name	Reference to TI criteria condition	Evidence
Service Name	(N/A)	RunwayManagementInformation Service
SWIM Profile	(N/A)	SWIM Blue Profile
SWIM TI Profiles Version	TI-1	The STDD relies upon the SWIM TI Profiles Version 3.0. Therefore TI-1 is satisfied.
MEP <sup>9</sup>	TI-2	The MEP provided in STDD is <b>PSPUSH-MEP</b> , which is also available in Appendix 1 of the SWIM Compliance Framework Criteria document, where it is called <b>Publish/Subscribe Push</b> . Therefore TI-2 is satisfied.
	TI-5	The PSPUSH-MEP indicated in the STDD is the same as the MEP included in the interface binding REQ-14.01.04-TS-0901.0705 chosen in the STDD. Therefore TI-5 is satisfied.
Technology	TI-3	The technology used in the service implementation is OMG DDS, included in the SWIM Blue Profile interface bindings catalogue. Therefore TI-3 is satisfied.
Interface Binding	TI-4	The chosen binding is REQ-14.01.04-TS-0901.0705, which is included in the SWIM Blue Profile interface bindings catalogue. Therefore TI-4 is satisfied.
Link to the service interface	TI-6	As described in the STDD, the physical service definition is defined according to the OMG DDS specification: <a href="http://www.omg.org/spec/ DDSI/2.1/">http://www.omg.org/spec/ DDSI/2.1/</a> . The actual payload is defined according to an IDL file [25]. Given this information, then TI-6 is satisfied.
Requirements coverage	TI-7	As described in the report [32], the SWIM TI requirements related to the selected interface binding are covered. Therefore TI-7 is satisfied.

<sup>9</sup> As the catalogue of MEP and the catalogue of SWIM-TI Interface Bindings are on-going, we refer to the MEP and the Interface Bindings in the specific WP14 documents (SWIM-TI TAD and TS and the SWIM Profiles document). [10][11][12][13][14][15][16]

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles  
[www.sesarju.eu](http://www.sesarju.eu)

### 3.5.2 Assessment Result – TI Compliance Level

Service Name	TI Compliance Level - Claimed <i>To be filled in by the SWIM Compliance Applicant</i>	TI Compliance Level- approved <i>To be filled in by the SWIM Acceptance Team</i>	Remarks (optional) <i>To be filled in by the SWIM Acceptance Team</i>
METAR Service	<b>SWIM Yellow Profile Binding Compliant</b>	The evidence provided is sufficient to grant the <b>SWIM Yellow Profile Binding Compliant</b> level of compliance.	<i>Reference to the software V&amp;V document used as supporting evidence for requirement coverage is missing.</i>
TAF Service	<b>SWIM Yellow Profile Binding Compliant</b>	The evidence provided is sufficient to grant the <b>SWIM Yellow Profile Binding Compliant</b> level of compliance.	<i>Reference to the software V&amp;V document used as supporting evidence for requirement coverage is missing.</i>
SNOWTAM Service	<b>SWIM Yellow Profile Binding Compliant</b>	The evidence provided is sufficient to grant the <b>SWIM Yellow Profile Binding Compliant</b> level of compliance.	<i>Reference to the software V&amp;V document used as supporting evidence for requirement coverage is missing.</i>
AirportMETObservation Service	<b>SWIM Yellow Profile Binding Compliant</b>	The evidence provided is sufficient to grant the <b>SWIM Yellow Profile Binding Compliant</b> level of compliance.	<i>Reference to the software V&amp;V document used as supporting evidence for requirement coverage is missing.</i>
AirportMETForecast Service	<b>SWIM Yellow Profile Binding Compliant</b>	The evidence provided is sufficient to grant the <b>SWIM Yellow Profile Binding Compliant</b> level of compliance.	<i>Reference to the software V&amp;V document used as supporting evidence for requirement coverage is missing.</i>
ICAOMetLocalReport Service	<b>SWIM Yellow Profile Binding Compliant</b>	The evidence provided is sufficient to grant the <b>SWIM Yellow Profile Binding Compliant</b> level of compliance.	<i>Reference to the software V&amp;V document used as supporting evidence for requirement coverage is missing.</i>
AirportMETAlert Service	<b>SWIM Yellow Profile Binding Compliant</b>	The evidence provided is sufficient to grant the <b>SWIM Yellow Profile Binding Compliant</b> level of compliance.	<i>Reference to the software V&amp;V document used as supporting evidence for requirement coverage is missing.</i>

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles  
[www.sesarju.eu](http://www.sesarju.eu)

RunwayManagementInformation Service	<b>SWIM Blue Profile Binding Compliant</b>	The evidence provided is sufficient to grant the <b>SWIM Blue Profile Binding Compliant</b> level of compliance.	<i>Reference to the software V&amp;V document used as supporting evidence for requirement coverage is missing.</i>
-------------------------------------	--	--	--

## 3.6 Post-conditions for SWIM Compliance

### 3.6.1 Post-condition on payload compliance

Post-condition on payload compliance is already met, because the process for information service and information compliance (thread 1) has been followed as indicated in the Appendix on the process of the criteria document.

## 4 Feedback from SWIM Compliance Acceptance Team

### 4.1 Service assessment: conclusions and way forward

A very significant effort to properly document all necessary evidence has been performed; the quality of which is, in general terms, very good. There are nevertheless a few instances where there is room for improvement or increased clarity, these have not impacted negatively the overall assessment granted as they are considered of minimal impact and reasonably easy to fix (i.e. do not pose a serious risk to the satisfaction of the Compliance Conditions). The following areas of improvement have been noticed:

- Information Compliance:
  - Some attributes are being mapped as “Out of Scope” where a reasonable case could be made for the creation of a CR to include them in AIRM. This is suggested to be raised to AIRM for its evaluation.
- Information Service Compliance:
  - N/A.
- SWIM-TI Binding Compliance:
  - A reference to the Validation & Verification Report used as evidence for requirement coverage condition is missing. The quality of the evidence for this condition across most of R5 Validation Exercises is, in general, weaker than required. As such more leeway is being provided in its evaluation under the premise that the Service and Network Bindings underlying TI-7 condition have to be satisfied for the service provision and consumption to work in any reasonable way. In addition, the traceability to requirements provided allows us to infer that this analysis has been performed, even if the complete result is not accessible by the Assessment Team.

### 4.2 SWIM Compliance Criteria feedback

*This section is filled in by any actor in the Compliance Process. This section includes the possible needs for improvements of the SWIM Compliance Framework Criteria.*

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles  
[www.sesarju.eu](http://www.sesarju.eu)

## 5 References

- [1] 08.01.01 D42 – SWIM ConOps  
[https://extranet.sesarju.eu/WP\\_08/Project\\_08.01.01/Project%20Plan/DEL08.01.01-D42-SWIM%20conops.doc](https://extranet.sesarju.eu/WP_08/Project_08.01.01/Project%20Plan/DEL08.01.01-D42-SWIM%20conops.doc)
- [2] European ATM Service Description Template  
[https://extranet.sesarju.eu/WP\\_08/Project\\_08.03.10/Other%20Documentation/95%20active%20foundation%20documents/European%20ATM%20Service%20Description%20Template%20020.docm](https://extranet.sesarju.eu/WP_08/Project_08.03.10/Other%20Documentation/95%20active%20foundation%20documents/European%20ATM%20Service%20Description%20Template%20020.docm)
- [3] 08.03.10 SESAR European ATM Service Identification Document template  
<https://extranet.sesarju.eu/Programme%20Library/SESAR%20European%20ATM%20Service%20Identification%20Document.dot>
- [4] SESAR Safety and Performance Requirements template  
<https://extranet.sesarju.eu/Programme%20Library/SESAR%20Safety%20and%20Performance%20Requirements.dot>
- [5] SESAR Operational Service and Environment Definition template  
<https://extranet.sesarju.eu/Programme%20Library/SESAR%20Operational%20Service%20and%20Environment%20Definition.dot>
- [6] B.04.03-D81 SESAR Working Method on Services Edition 2013  
<https://extranet.sesarju.eu/intraprogman/Assessment%20Library/D81%20-%20SESAR%20Working%20Method%20on%20Services%20Edition%202013%20-%20released.doc>
- [7] 08.03.10 ISRM rulebook for rules to be followed by any Service (00:01:05<sup>th</sup> edition)  
[https://extranet.sesarju.eu/intraprogman/Assessment%20Library/ISRM\\_Foundation\\_Rulebook.docx](https://extranet.sesarju.eu/intraprogman/Assessment%20Library/ISRM_Foundation_Rulebook.docx)
- [8] 08.01.03 AIRM Compliance Framework, (1.01<sup>th</sup> edition),  
[https://extranet.sesarju.eu/WP\\_08/Project\\_08.01.03/Project%20Plan/AIRM\\_Compliance\\_Framework.doc](https://extranet.sesarju.eu/WP_08/Project_08.01.03/Project%20Plan/AIRM_Compliance_Framework.doc)
- [9] 08.01.03 AIRM Compliance Rulebook for R5,  
[https://extranet.sesarju.eu/WP\\_08/Project\\_08.01.03/Project%20Plan/8.1.3.D07\\_AIRM\\_Foundation\\_Rulebook.doc](https://extranet.sesarju.eu/WP_08/Project_08.01.03/Project%20Plan/8.1.3.D07_AIRM_Foundation_Rulebook.doc)
- [10] 14.01.03-D36 SWIM Profiles for Iteration 3.0, Ed 00.01.00, December 2014  
[https://extranet.sesarju.eu/WP\\_14/Project\\_14.01.03/Project%20Plan/P14.1.3-D36%20SWIM%20Profiles%20for%20Iteration%203.0.doc](https://extranet.sesarju.eu/WP_14/Project_14.01.03/Project%20Plan/P14.1.3-D36%20SWIM%20Profiles%20for%20Iteration%203.0.doc)
- [11] 14.01.04-D42-005 SWIM-TI Blue Profile Technical Specification 3.0, Ed 00.01.00  
[https://extranet.sesarju.eu/WP\\_14/Project\\_14.01.04/Project%20Plan/14.01.04.D42-005-SWIM-TI%20Blue%20Profile%20Technical%20Specification%203.0.doc](https://extranet.sesarju.eu/WP_14/Project_14.01.04/Project%20Plan/14.01.04.D42-005-SWIM-TI%20Blue%20Profile%20Technical%20Specification%203.0.doc)
- [12] 14.01.04.D42-004 SWIM-TI Yellow Profile Technical Specification 3.0, Ed 00.01.00  
[https://extranet.sesarju.eu/WP\\_14/Project\\_14.01.04/Project%20Plan/14.01.04.D42-004-SWIM-TI%20Yellow%20Profile%20Technical%20Specification%203.0.doc](https://extranet.sesarju.eu/WP_14/Project_14.01.04/Project%20Plan/14.01.04.D42-004-SWIM-TI%20Yellow%20Profile%20Technical%20Specification%203.0.doc)
- [13] 14.01.04.D42-006 SWIM-TI Purple Profile Technical Specification 3.0, Ed 00.01.00  
[https://extranet.sesarju.eu/WP\\_14/Project\\_14.01.04/Project%20Plan/14.01.04.D42-006-SWIM-TI%20Purple%20Profile%20Technical%20Specification%203.0.doc](https://extranet.sesarju.eu/WP_14/Project_14.01.04/Project%20Plan/14.01.04.D42-006-SWIM-TI%20Purple%20Profile%20Technical%20Specification%203.0.doc)
- [14] 08.01.03 AIRM Primer, Edition 00.06.00  
[https://extranet.sesarju.eu/WP\\_08/Project\\_08.01.03/Project%20Plan/8.1.3.D13\\_AIRM\\_Primer.doc](https://extranet.sesarju.eu/WP_08/Project_08.01.03/Project%20Plan/8.1.3.D13_AIRM_Primer.doc)
- [15] 08.01.03 AIRM Governance Handbook, v. 00.01.02,  
[https://extranet.sesarju.eu/WP\\_08/Project\\_08.01.03/Project%20Plan/AIRM\\_Governance\\_Handbook.doc](https://extranet.sesarju.eu/WP_08/Project_08.01.03/Project%20Plan/AIRM_Governance_Handbook.doc)

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles  
[www.sesarju.eu](http://www.sesarju.eu)

- [16]08.01.03 AIRM 4.0.1  
[https://extranet.sesarju.eu/WP\\_08/Project\\_08.01.03/Project%20Plan/8.1.3.D45\\_AIRM%20v4.0.0.doc](https://extranet.sesarju.eu/WP_08/Project_08.01.03/Project%20Plan/8.1.3.D45_AIRM%20v4.0.0.doc)
- [17]SWIM Compliance Framework Criteria for R5 V&V exercises  
[https://extranet.sesarju.eu/WP\\_08/Project\\_08.01.01/Project%20Plan/D48%20SWIM%20Compliance/08%2001%2001-D48-SWIM%20Compliance%20Framework%20Criteria.docx](https://extranet.sesarju.eu/WP_08/Project_08.01.01/Project%20Plan/D48%20SWIM%20Compliance/08%2001%2001-D48-SWIM%20Compliance%20Framework%20Criteria.docx)
- [18]14.01.04 Project Execution Library  
[https://extranet.sesarju.eu/WP\\_14/Project\\_14.01.04/Project%20Plan/Forms/AllItems.aspx](https://extranet.sesarju.eu/WP_14/Project_14.01.04/Project%20Plan/Forms/AllItems.aspx)
- [19]AIRM R5 Compliance Folder  
[https://extranet.sesarju.eu/WP\\_08/Project\\_08.01.03/Other%20Documentation/Forms/AllItems.aspx?RootFolder=%2fWP%5f08%2fProject%5f08%2e01%2e03%2fOther%20Documentation%2fWorking%5fArea%2fService%5fand%5fSystem%5fSupport%5fTeam%2fR5%20Compliance&FolderCTID=0x012000BB83ED945FF2094D840C0B2691025A14&View=%7b3278B414%2d5D4C%2d49E1%2dAAEA%2d55FB32B7894B%7d](https://extranet.sesarju.eu/WP_08/Project_08.01.03/Other%20Documentation/Forms/AllItems.aspx?RootFolder=%2fWP%5f08%2fProject%5f08%2e01%2e03%2fOther%20Documentation%2fWorking%5fArea%2fService%5fand%5fSystem%5fSupport%5fTeam%2fR5%20Compliance&FolderCTID=0x012000BB83ED945FF2094D840C0B2691025A14&View=%7b3278B414%2d5D4C%2d49E1%2dAAEA%2d55FB32B7894B%7d)
- [20]IWXXM 1.1 release page  
<http://www.wmo.int/pages/prog/www/WIS/wiswiki/tiki-index.php?page=AvXML-1.1-Release>
- [21]AIRM Compliance tables for IWXXM 1.1  
[https://extranet.sesarju.eu/WP\\_08/Project\\_08.01.03/Other%20Documentation/Working\\_Area/Service\\_and\\_System\\_Support\\_Team/IWXXM-AIRM%20Compliance/IWXXM](https://extranet.sesarju.eu/WP_08/Project_08.01.03/Other%20Documentation/Working_Area/Service_and_System_Support_Team/IWXXM-AIRM%20Compliance/IWXXM)
- [22]AIXM 5.1– <http://www.aixm.aero/schema/5.1>
- [23]Schemas for AirportMETObservation and AirportMETForecast services  
[https://extranet.sesarju.eu/WP\\_08/Project\\_08.01.03/Other%20Documentation/Working\\_Area/Service\\_and\\_System\\_Support\\_Team/SYS%20Support/P12.07.05%20-%20IWIS/Schemas/METObservationAndForecastSchemas.zip](https://extranet.sesarju.eu/WP_08/Project_08.01.03/Other%20Documentation/Working_Area/Service_and_System_Support_Team/SYS%20Support/P12.07.05%20-%20IWIS/Schemas/METObservationAndForecastSchemas.zip)
- [24]IWXXM 1.1 extensions for ICAOMetLocalReport and AirportMETAlert services (schemas)  
[https://extranet.sesarju.eu/WP\\_08/Project\\_08.01.03/Other%20Documentation/Working\\_Area/Service\\_and\\_System\\_Support\\_Team/SYS%20Support/P12.07.05%20-%20IWIS/Schemas/IWXXMExtensionSchemas.zip](https://extranet.sesarju.eu/WP_08/Project_08.01.03/Other%20Documentation/Working_Area/Service_and_System_Support_Team/SYS%20Support/P12.07.05%20-%20IWIS/Schemas/IWXXMExtensionSchemas.zip)
- [25]Message definition (IDL) for the RunwayManagementInformation service  
[https://extranet.sesarju.eu/WP\\_08/Project\\_08.01.03/Other%20Documentation/Working\\_Area/Service\\_and\\_System\\_Support\\_Team/SYS%20Support/P12.02.01%20-%20RMAN/IDL](https://extranet.sesarju.eu/WP_08/Project_08.01.03/Other%20Documentation/Working_Area/Service_and_System_Support_Team/SYS%20Support/P12.02.01%20-%20RMAN/IDL)
- [26]ISRM 1.4 release folder for all SDDs  
[https://extranet.sesarju.eu/WP\\_08/Project\\_08.03.10/Project%20Plan/ISRM%201.4](https://extranet.sesarju.eu/WP_08/Project_08.03.10/Project%20Plan/ISRM%201.4)
- [27]Release folder for all STDDs of services provided by IWIS  
[https://extranet.sesarju.eu/WP\\_08/Project\\_08.01.03/Other%20Documentation/Working\\_Area/Service\\_and\\_System\\_Support\\_Team/SYS%20Support/P12.07.05%20-%20IWIS/STDD](https://extranet.sesarju.eu/WP_08/Project_08.01.03/Other%20Documentation/Working_Area/Service_and_System_Support_Team/SYS%20Support/P12.07.05%20-%20IWIS/STDD)
- [28]Release folder for the STDD of the Runway Management Information service  
[https://extranet.sesarju.eu/WP\\_08/Project\\_08.01.03/Other%20Documentation/Working\\_Area/Service\\_and\\_System\\_Support\\_Team/SYS%20Support/P12.02.01%20-%20RMAN/STDD](https://extranet.sesarju.eu/WP_08/Project_08.01.03/Other%20Documentation/Working_Area/Service_and_System_Support_Team/SYS%20Support/P12.02.01%20-%20RMAN/STDD)
- [29]Payload and AIRM mapping tables for services provided by IWIS  
[https://extranet.sesarju.eu/WP\\_08/Project\\_08.01.03/Other%20Documentation/Working\\_Area/Service\\_and\\_System\\_Support\\_Team/SYS%20Support/P12.07.05%20-%20IWIS/Payload%20mapping](https://extranet.sesarju.eu/WP_08/Project_08.01.03/Other%20Documentation/Working_Area/Service_and_System_Support_Team/SYS%20Support/P12.07.05%20-%20IWIS/Payload%20mapping)
- [30]Payload and AIRM mapping table for the Runway Management Information service

[https://extranet.sesarju.eu/WP\\_08/Project\\_08.01.03/Other%20Documentation/Working\\_Area/Service\\_and\\_System\\_Support\\_Team/SYS%20Support/P12.02.01%20-%20RMAN/Payload%20mapping](https://extranet.sesarju.eu/WP_08/Project_08.01.03/Other%20Documentation/Working_Area/Service_and_System_Support_Team/SYS%20Support/P12.02.01%20-%20RMAN/Payload%20mapping)

[31]SWIM TI requirement coverage for binding: IWIS services

[https://extranet.sesarju.eu/WP\\_08/Project\\_08.01.03/Other%20Documentation/Working\\_Area/Service\\_and\\_System\\_Support\\_Team/SYS%20Support/P12.07.05%20-%20IWIS/SWIM-TI%20Binding%20Coverage](https://extranet.sesarju.eu/WP_08/Project_08.01.03/Other%20Documentation/Working_Area/Service_and_System_Support_Team/SYS%20Support/P12.07.05%20-%20IWIS/SWIM-TI%20Binding%20Coverage)

[32]SWIM TI requirement coverage for binding: RMAN service

[https://extranet.sesarju.eu/WP\\_08/Project\\_08.01.03/Other%20Documentation/Working\\_Area/Service\\_and\\_System\\_Support\\_Team/SYS%20Support/P12.02.01%20-%20RMAN/SWIM-TI%20Binding%20Coverage](https://extranet.sesarju.eu/WP_08/Project_08.01.03/Other%20Documentation/Working_Area/Service_and_System_Support_Team/SYS%20Support/P12.02.01%20-%20RMAN/SWIM-TI%20Binding%20Coverage)

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles  
[www.sesarju.eu](http://www.sesarju.eu)

**-END OF DOCUMENT-**

founding members



Avenue de Cortenbergh 100 | B -1000 Bruxelles  
[www.sesarju.eu](http://www.sesarju.eu)