Final Project Report

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Abstract

Project SWIM Exploitation mainly focused on integrating and harmonising internal and external SWIM Communication on behalf of other work packages dedicated to Information Management and SWIM Technical Architecture thereby involving all SWIM Stakeholders to ensure that the definition, design and development of their projects comply with the various SWIM interfaces.

The Project had also organised and supported various SWIM events aiming to increase awareness and support early SWIM implementations.

This report summaries the Project and its achievements.

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This deliverable consists of SJU foreground.

Acronyms

Acronym	Definition
AIRM	ATM Information Reference Model
ANSP	Air Navigation Service Provider
ATM	Air Traffic Management
AU	Airspace User
ISRM	Information Service Reference Model
R&D	Research and Development
SJU	SESAR Joint Undertaking
SWIM	System Wide Information Management
TI	Technical Infrastructure
WP	Work Package

1 Project Overview

Project SWIM Exploitation mainly focused on communication about System Wide Information Management (SWIM) with the aim to raise awareness of SWIM and help all stakeholders better understand the SWIM project.

This Project cooperated closely with other projects in the work packages (WP) of Information Management and SWIM Technical Architecture, to inform all stakeholders about SWIM artefacts developed by these work packages and to ensure the definition, design and development of SWIM projects at the stakeholder's end comply with the SWIM interfaces.

In addition, the Project was also responsible for promoting SWIM artefacts by supporting and organising various SWIM events to build trust and achieve stakeholder buy-in to SWIM, ultimately to accelerate the evolution of SWIM from concept to operation.

1.1 Project progress and contribution to the Master Plan

Within the SESAR Programme, SWIM was recognised as an important driver of change on how information should be managed along its full lifecycle and across the whole European ATM systems. The objective of this Project was to help ATM community better understand this driver of change in terms of the concept, need and approach.

This Project considered that effective and dynamic communication is one of the key success factors for SWIM, therefore the Project had clearly defined a coordinated and coherent communication strategy, involving all partners in order to ensure successful communication of SWIM within the scope of SESAR Programme.

Together with the SESAR partners, a framework of SWIM communication had been created targeting stakeholders on different levels across the globe, comprising Airspace Users (AU), Air Navigation Service Providers (ANSP), airport operators, ATM data and systems providers, IT and aeronautic industry, Civil Aviation Authorities, R&D community, aviation associations and military.

The framework specified:

- SWIM communication objectives;
- SWIM communication targets;
- SWIM communication processes.

The SWIM communication processes covered:

- Planning, execution and performance monitoring processes around SWIM communication;
- Roles and responsibilities of the key stakeholders;
- Communication means that will be supporting different communication actions.

The effectiveness of SWIM communication was monitored and documented in the SWIM Communication Action Plan on a quarterly basis which reflected the results of communication and proposes amendment to the defined communication strategy. Regular consultations were performed with the SJU and other SWIM related projects on an agreed basis.

The SWIM communication strategy had also been applied to support all SWIM related events that have taken place over the whole project lifecycle.

1.2 Project achievements

Over the whole project lifecycle, the Project had successfully organised and supported various SWIM events such as SWIM Master Class, SWIM Demonstrations, ATC Global, World ATM Congress and etc. with the objective to create a SWIM community of interest and demonstrate the benefits of implementing SWIM.

- SWIM Master Class

SWIM Master Class was a SESAR initiative to increase SWIM awareness and kick-start the SWIM evolution by further developing and demonstrating the added value of state-of-the-art information technology and broadening the understanding of SWIM and development of SWIM enabled services.

The four SWIM Master Classes organised by the Project team had seen numerous new SWIM ideas rising from concept to SWIM-enabled solutions and the growing community of SWIM. Over the years, the SWIM Master Classes had become a global platform through which to build a critical mass of knowledge and excellence about SWIM.

- SWIM Demonstrations

SWIM Demonstrations was initiated with the aim to use simple client applications (SWIM enabled application) to demonstrate SWIM Technical Infrastructure (TI) potential/capabilities for supporting operational/business needs. Demonstrations were conducted based on predefined scenarios that might take place in a real ATM environment such as airport closure, severe weather phenomena, and etc.

There had been an increase in number of participants as well as growing maturity of SWIM prototype solutions in each SWIM Demonstration. To further promote global interoperability, the SWIM Global Demonstration 2016 had involved participants from various continents across the globe showcasing that SWIM the key enabler for future information exchange.

- Ad-hoc events

This Project had also supported other SWIM related events such as the World ATM Congress, ATC Global and many ad-hoc events to increase awareness on SWIM and accelerate uptake of SWIM results.

- SWIM Factsheets

In coordination with the SJU and the work package Information Management and SWIM Technical Architecture, this Project had supported the development of several SWIM factsheets describing various SWIM artefacts. These factsheets were proven to be valuable to help newcomers understand SWIM principles and building blocks.

- Communication about Jumpstart

Jumpstart was developed as a demonstrator to support the demonstration of SWIM principles and technologies. The application retrieved both static and dynamic information from various sources to create an enhanced situation awareness that enabled more effective decision-making.

Since 2015, webinars were organised to provide hands-on experience for all who were interested in SWIM. The webinars were attended by more than 400 participants in 2015.

- Support to other work package

This Project had also provided support to the following deliverables consolidated by work package Information Management:

Governance structure
Compliance framework
Compliance criteria
SWIM evolution management
Registry concept

The work carried out by the Project was appreciated by the ATM community which was reflected by the prestigious IHS Jane's ATC Award for outreach work in the 'Enabling Technology' category in 2014. The award recognised the hard work and dedication shown by SESAR members and EUROCONTROL in making SWIM's direct business benefits a reality for ATM stakeholders.

SWIM was also recognised by the Single European Sky Awards and received 'special mentions' in 2016.

1.3 Project Deliverables

The following table presents the relevant deliverables that have been produced by the project.

Reference	Title	Description
D76	SWIM Communication management plan	This document described the framework for SWIM communication. This framework included the communication objectives, targets, messages, communication processes for planning, execution and monitoring, stakeholders and communication actions.
D77	SWIM Communication action plan	This document described the SWIM communication actions that have been discussed and agreed with SJU in terms of objectives, task checklist and (if applicable) the process steps.
D80	SJU Websites - SWIM Web Mastering	This document described various SJU websites used for SWIM communication and related structure and contents in order to achieve the objective of SWIM communication which is 1) to raise awareness and buy-in about SWIM and (2) to accelerate the uptake of SWIM deliverables in the operational and system projects
D88	SWIM communication execution monitoring and web mastering	This document described the SWIM communication execution, communication monitoring and the related web mastering activities. This included the impact of the SWIM communication actions and was used as an input for future improvement of SWIM communication.

1.4 Contribution to Standardisation

This Project had an indirectly contribution to standardisation as the project had close links with work package Information Management and other projects dedicated to SWIM Technical Architecture, with respect to communication on SWIM artefacts. Several elements such as SWIM Foundation, AIRM, ISRM and TI-Infrastructure Yellow Profile had been identified as inputs to SWIM Standardisation activities.

1.5 Project Conclusion and Recommendations

This Project has mainly focused on SWIM communication with the objective to raise awareness of SWIM and help stakeholders to understand the SWIM project. To that end, the Project has successfully achieved its objective.

Over the project lifecycle, there was a clear indication that awareness amongst ATM stakeholders had increased significantly. This was reflected by the growing number of participants to SWIM related events; an increasing maturity of SWIM enabled solutions; a larger buy-in for SWIM activities; many success stories from early SWIM implementers and most importantly the recognition of SWIM at the global level.

All activities performed by the Project have delivered valuable contribution to the global acceptance of SWIM artefacts which were the foundation for SWIM deployment.

2 References

[1] SESAR Programme Management Plan, Edition 03.00.01

[2] European ATM Master Plan

[3] Multilateral Framework Agreement ("MFA") signed between the SJU, EUROCONTROL and its 15 selected members on August 11, 2009, amended on 14 June 2010, 19 October 2010 and 2 July 2012

[4] D76: SWIM Communication management plan

[5] D77: SWIM Communication action plan

[6] D80: SJU Websites - SWIM Web Mastering

[7] D88: SWIM communication execution monitoring and web mastering

[8] D46: SWIM Governance Structure and IM functions v1

[9] D47: SWIM Governance Structure and IM functions V2

[10] D48: SWIM Compliance Criteria for R5

[11] D50: SWIM Compliance Status Report

[12] D51: SWIM Foundation v1

[13] D52: SWIM Foundation v2

[14] D53: Registry Concept of Operations v2

[15] D57: Validation Report – Design-Time Registry v1

[16] D58: Validation Report – Design-Time Registry v2

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