WG - 104

SWIM Services - Standardisation

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WG-104 Overview

- WG-104 Task & Deliverables
- WG-104 Organisation
- Standardising the Extended AMAN Service
- Deliverable: Services for future Standardisation
- Outlook

WG-104 Deliverables

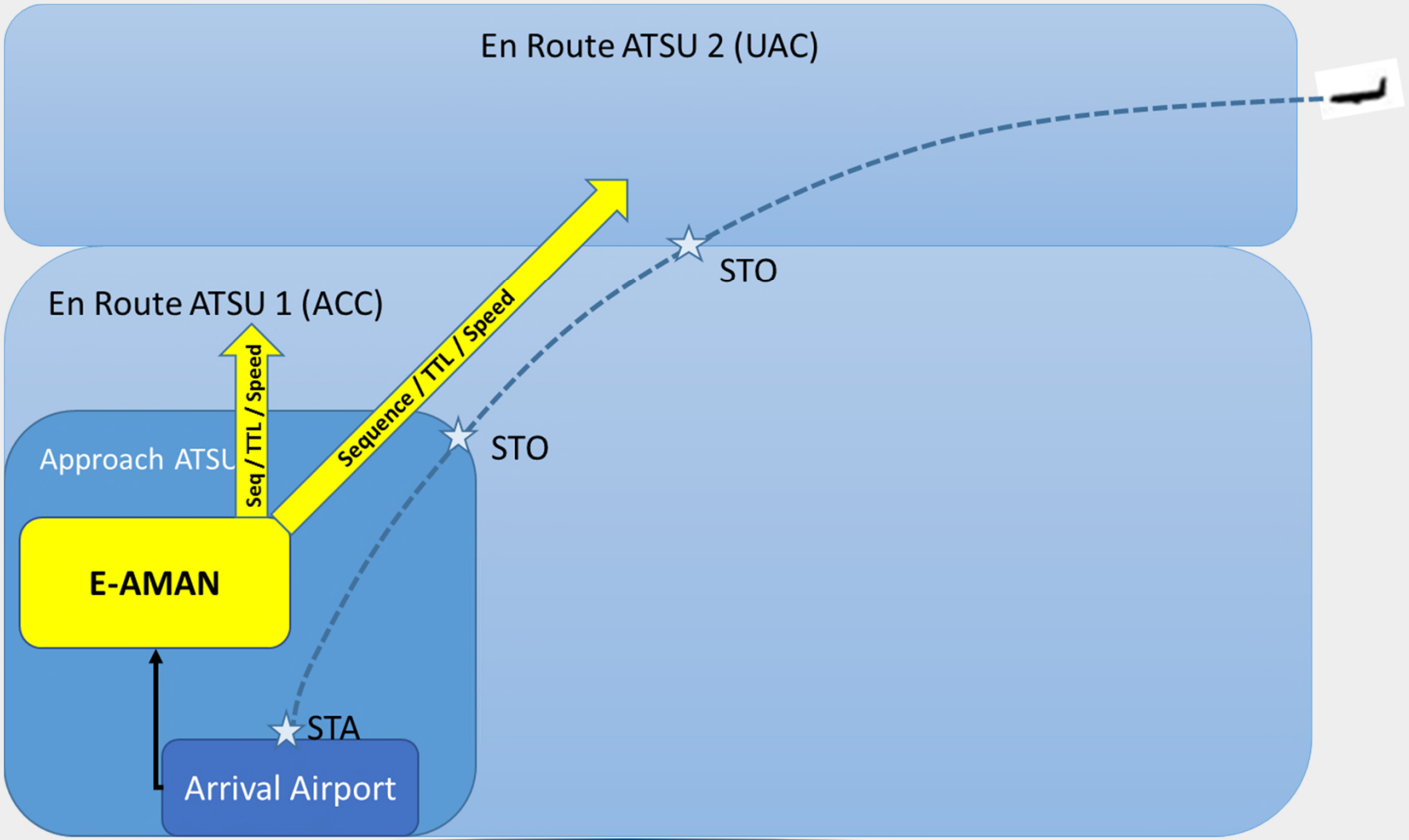
Work Programme	• Prioritised list of Services for future standardisation
Concept for service standardising	• „SWIM service covering Extended horizon AMAN coordination“ dealing with AMAN SWIM upstream service
Guidelines	• Guidance Material how to standardise future services
Lessons Learnt	• Description of the pitfalls and the problems which came up during the standardisation of the AMAN service

WG-104 Organisation

- Initiated beginning of 2016
- Tasked to deliver a concept for standardisation of SWIM Services – with the following members

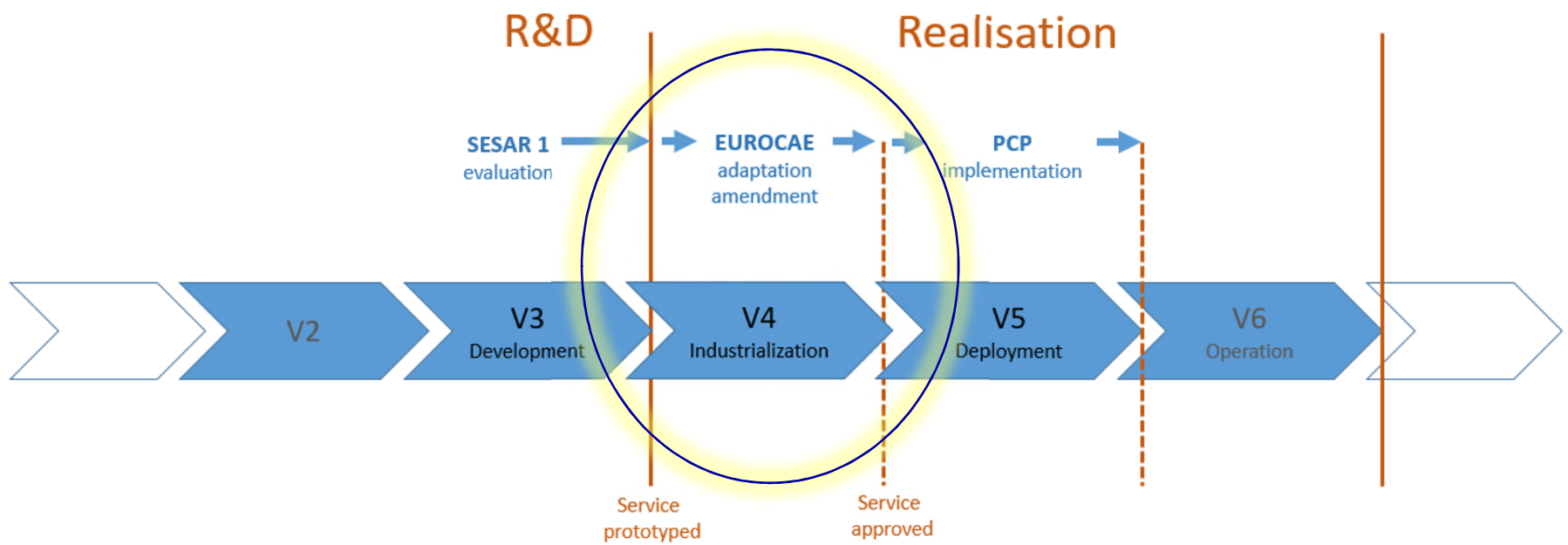
ANSPs	Industry	Others
• DFS • DSNA • ENAV • Hungarocontrol • *LFV* • *NATS*	• Frequentis • Harris • Indra • *Leonardo* • *Thales*	• Eurocontrol • EASA • Fraport • SJU

The E-AMAN concept



Standardisation – Area of WG-104 work

The SWIM Service in the E-OCVM Concept Lifecycle Model



* E-OCVM – European Operational Concept Validation Methodology (comparable to TRL)

Standardization Process I

INPUT

- Operational Concept
- Service Description
    - SDD (Service Description Document)
        - Service Identification
        - Operational Context
        - Service Functions and Service Interfaces
    - UML – Model
- Eurocontrol Specifications for SWIM
    - Strong co-ordination already at a very early stage

Standardization Process II

Main Activities

- Validation of material from SESAR 1 (SDD, UML Model)
- Transfer of UML model into unambiguous Requirements
- Service Design – specific to the Extended AMAN service
    - Service Structure - How does the service look like (Interfaces, Operations, Messages)
    - Service Behaviour – How does the service work (nominal and non-nominal behaviour)
    - Data Cataloque – What are the data elements the service exchanges (semantics, cardinalities, value ranges, constrains, error classes, error codes, mapping to AIRM)

Standardization Process III

Main Activities

- Non Functional Requirements
  - Which Service Quality can the consumer expect (Availability, Response Time, …)
- Technical Service Design
  - What are the chosen technical Solutions (Service Interface Bindings, Profile Parts, ...)
  - Error handling
  - Filtering and queue handling

Standardization Process IV

Results

- Full Set of Requirements which enables the implementation of standardized Extended AMAN service

- Guidance Material how to standardize future services

List of proposed services

- **MET Services**
  - METHazardEnRouteObservation, METHazardEnRouteForecast, METAR, METREPORT, TAF
- **A-CDM Services**
  - AiportFlightInformationPublication, CalculatedPreDepartureSequenceDelivery, PreDepartureSequenceSetting, TargetOffBlockTimeSetting
- **AIM Services**
  - AerodromeMapInformation, AeronauticalInformationFeature, AeronauticalInformationMap
- **AMAN Services**
  - Arrival Planning Information

WG-104 - Outlook

- Finalisation of deliverables by end of 2017
- External Consultation
- Request from SESAR 2020 PJ15-02 for the use of the standardised E-AMAN service
- Preparation of EUROCAE call for standardisation of future services

Thank you for your Attention

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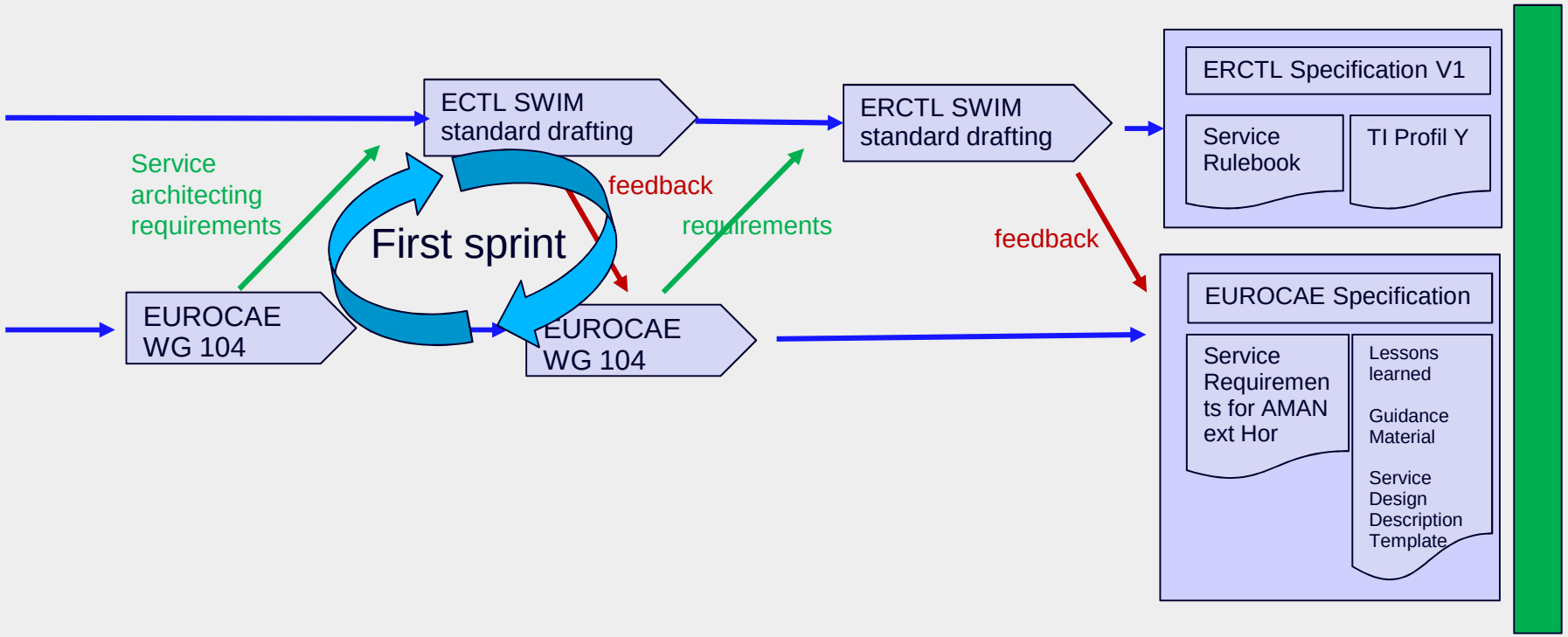
WG-104 SWIM Services

BACKUP

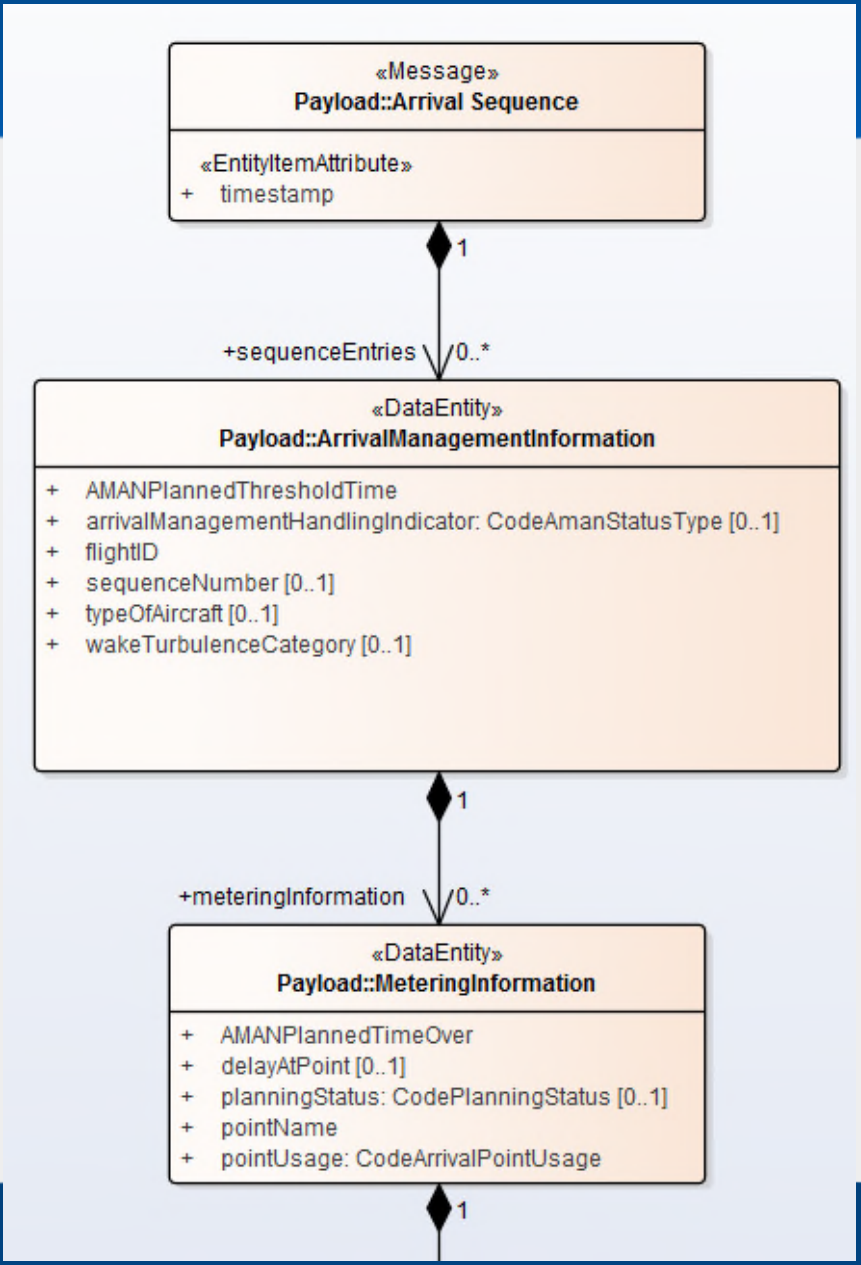
Synchronising EUROCAE WG 104 and ECTL SWIM Standardisation

How to synchronise the first versions ?

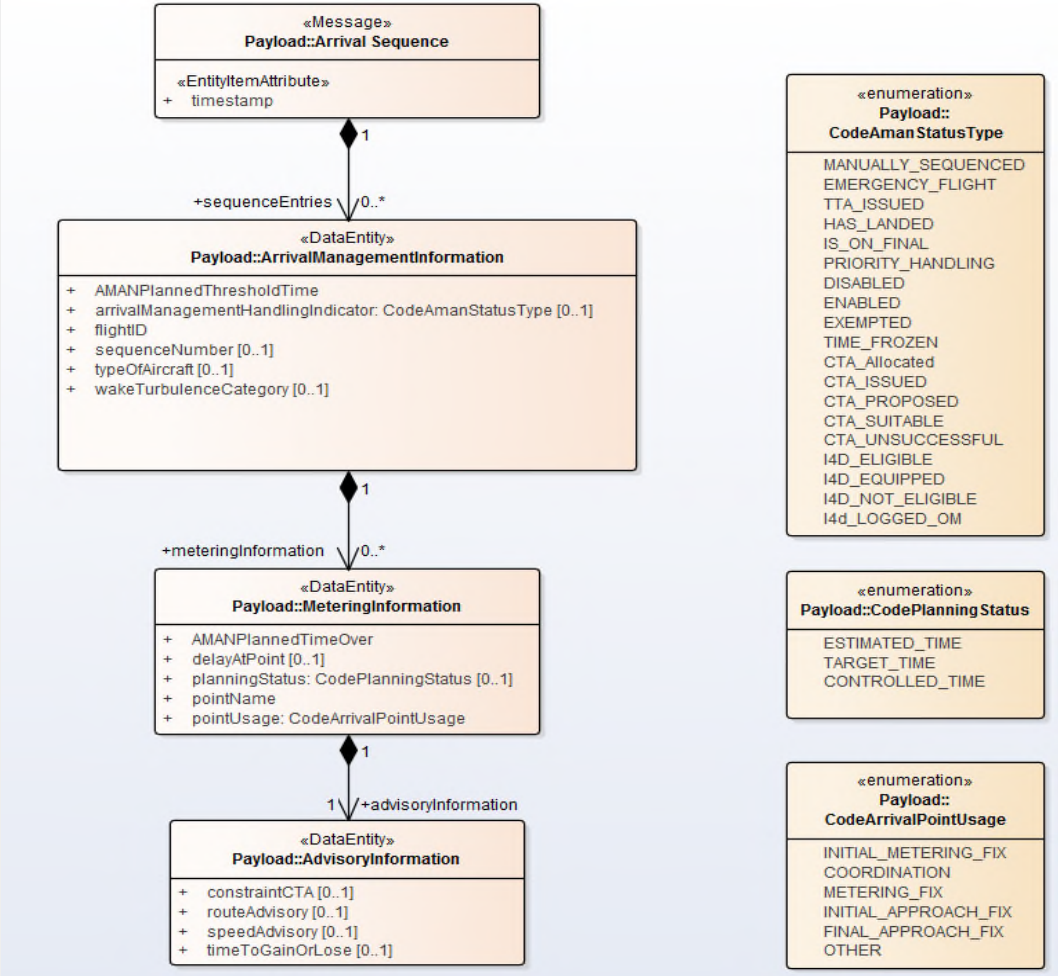
Compliant versions by end of 2017



… one extract from the payload



… one extract from the payload + enumeration



… one example from the data catalogue

Definition	Aircraft Type as codified by ICAO Doc 8643		
Mandatory	no		
Cardinality	[0..1]		
Nillable	no		
Acronym	ARCTYP		
ISO 19103 type	CharacterString		
	Additional Constraints	**Error Class**	**Error Code**
	Pattern: [A-Z][A-Z0-9]{1,3}	WARNING	PATTERN_VIOLATION
AIRM Mapping			
SemanticTrace	urn:x-ses:sesarju:airm:v410:ConsolidatedLogicalDataModel: SubjectFields:Aircraft: AircraftType@icaoIdentifier		