



Introduction

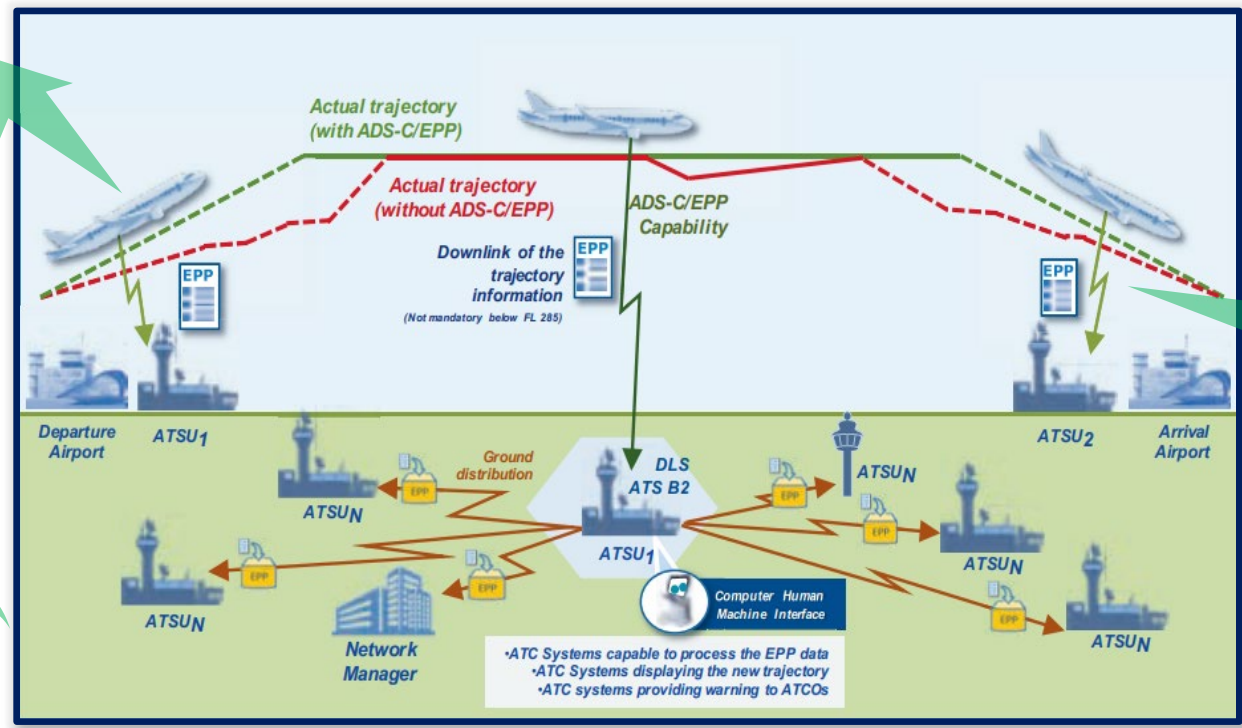
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ADS-C / EPP Overview

EPP (Extended Projected Profile) availability on ground is key towards a full air-ground trajectory synchronization required for the implementation of the targeted TBO.



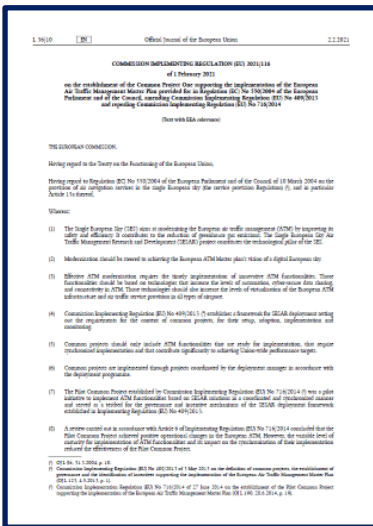
This information is automatically downlinked via ADS-C to the ground Air Traffic Service Units (ATSUs) and available to air traffic controllers.

It allows ground systems to receive the aircraft FMS trajectory, including 4D data (consisting of the three spatial dimensions plus time as a fourth dimension) at each waypoint of the flight plan.



CP1 AF6 requirements

Extract from IR (EU) No 116/2021 (CP1 regulation)



AF6 extract from IR (EU) No 116/2021 (CP1 regulation)



6.1.1 - ATM sub-functionality on initial air-ground trajectory information sharing

Aircraft must be equipped with the capability to automatically down-link trajectory information using **ADS-C EPP as part of the ATS B2 services**. The trajectory data automatically down-linked from the airborne system must update the ATM system in accordance with the terms of the contract.

- Data link communications ground systems must support ADS-C (downlink of aircraft trajectory using EPP) as part of the ATS B2 services **while keeping compatibility with controller - pilot data link communications ('CPDLC') services as required by Commission Regulation (EC) No 29/2009**, including provision of service to flights equipped only with the Aeronautical Telecommunication Network Baseline 1 ('ATN-B1').
- All ATS providers referred to in point 6.3 and the related ATC systems must be able to **receive and process trajectory information** from equipped aircraft.
- **The ATC systems must enable controllers to display the route of the downlinked trajectory.**
- **ATC systems must provide a warning to controllers in case of a discrepancy between the downlinked aircraft trajectory and the ground system trajectory elaborated using the filed flight plan route.**

*ADS-C EPP: Automatic Dependent Surveillance- Contract Extended Projected Profile



6.1.2 - ATM sub-functionality on Network Manager trajectory information enhancement

- The Network Manager systems must use elements of the downlinked trajectories to enhance their information of trajectories flown by aircrafts.



6.1.3 - ATM sub-functionality on initial trajectory information sharing ground distribution

- **Ground systems must ensure that trajectory data downlinked from the aircraft is distributed between ATS units and between ATS units and the Network Manager systems.**
- The data link capability referred to in Regulation (EC) No 29/2009 is an essential prerequisite for the AF6.
- A reliable, fast and efficient air/ground communication infrastructure must support initial trajectory information sharing



CP1 provisions related to Industrialisation/Implementation target date



● **“Implementation target date”** means a date by when the implementation of the ATM functionality or sub- functionality is to be completed



● **“Industrialisation target date”** means a date by when the standards and specifications are to be available for the ATM functionality or sub-functionality to enable its implementation

● **“Common projects may also include ATM functionalities or sub- functionalities that are not ready for implementation but that constitute an essential component of the common project concerned and provided that their industrialisation is deemed to be finalised within three years from the adoption of the concerned common project. For that purpose, an industrialisation target date for those ATM functionalities or sub-functionalities shall also be defined in the common project.”**



● **“If the industrialisation processes are not successfully finalised by the industrialisation target date, those functionalities should be withdrawn from the common project and considered for future ones”**



● The deployment manager, the SESAR Joint Undertaking, the European standardisation organisations, Eurocae and the relevant manufacturing industry shall cooperate under the coordination of the **European Union Aviation Safety Agency to ensure that the industrialisation target date is met**





SDP Deployment Programme and Short-term deployment approach (1/3)

In the SESAR Deployment Programme 2021, the AF6/CP1 requirements have been taken in duly consideration in the milestones of the following families:

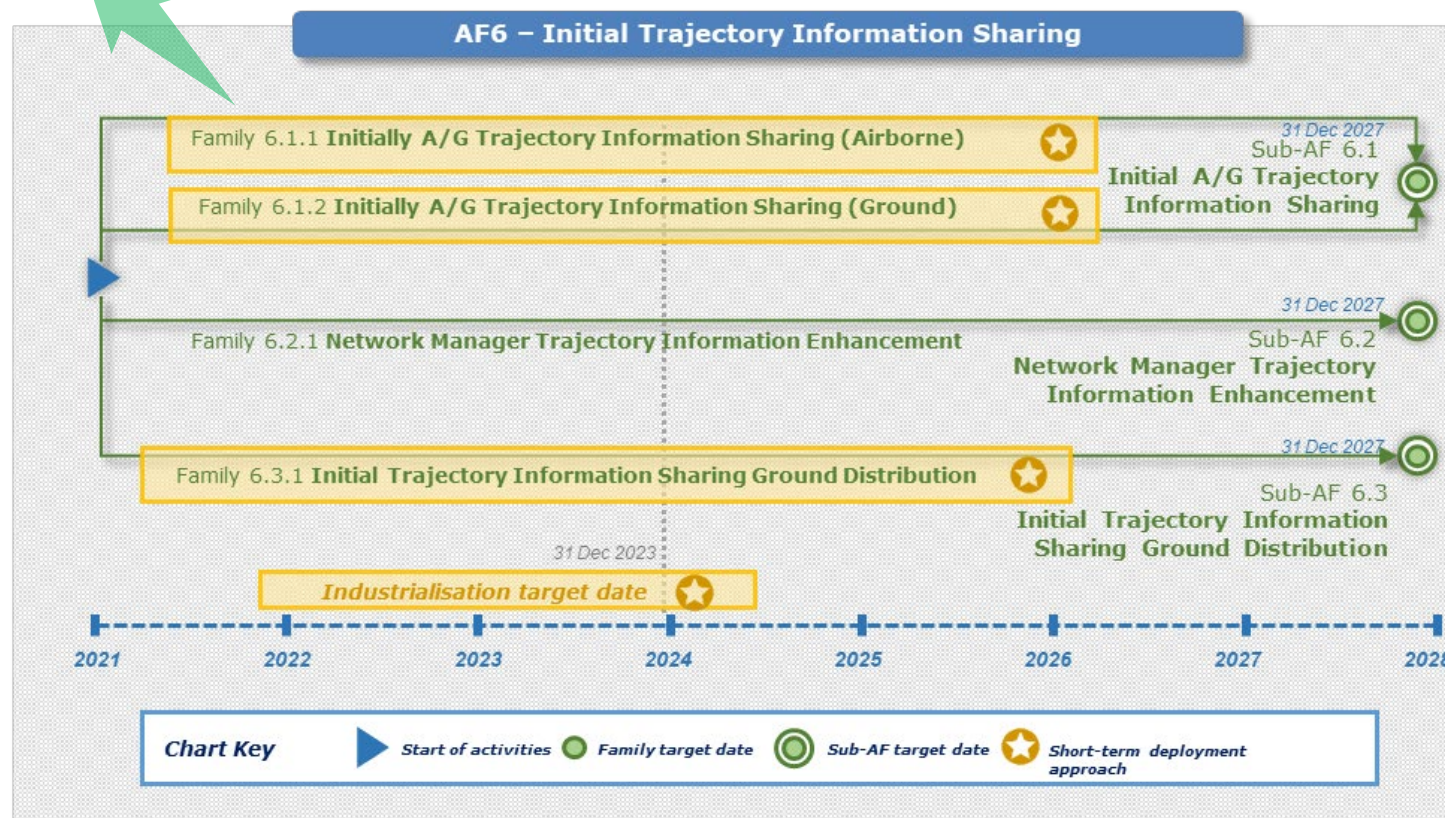
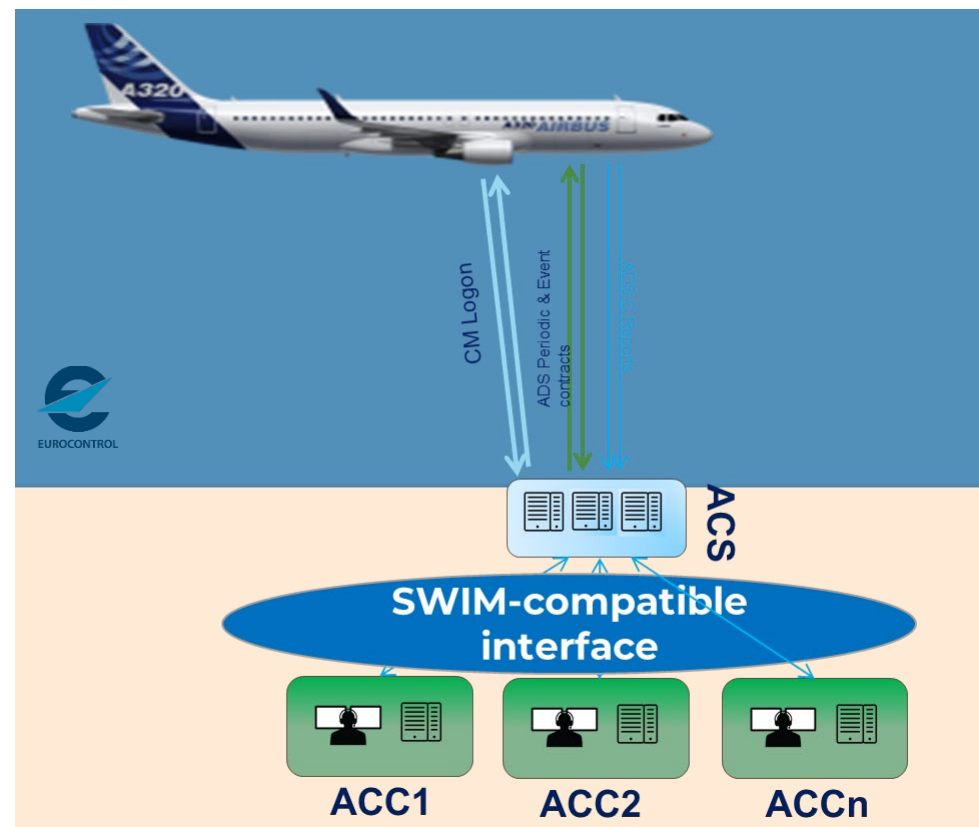


Figure 29 - AF6 Short Term Deployment Approach



SDP Deployment Programme and Short-term deployment approach (2/3)

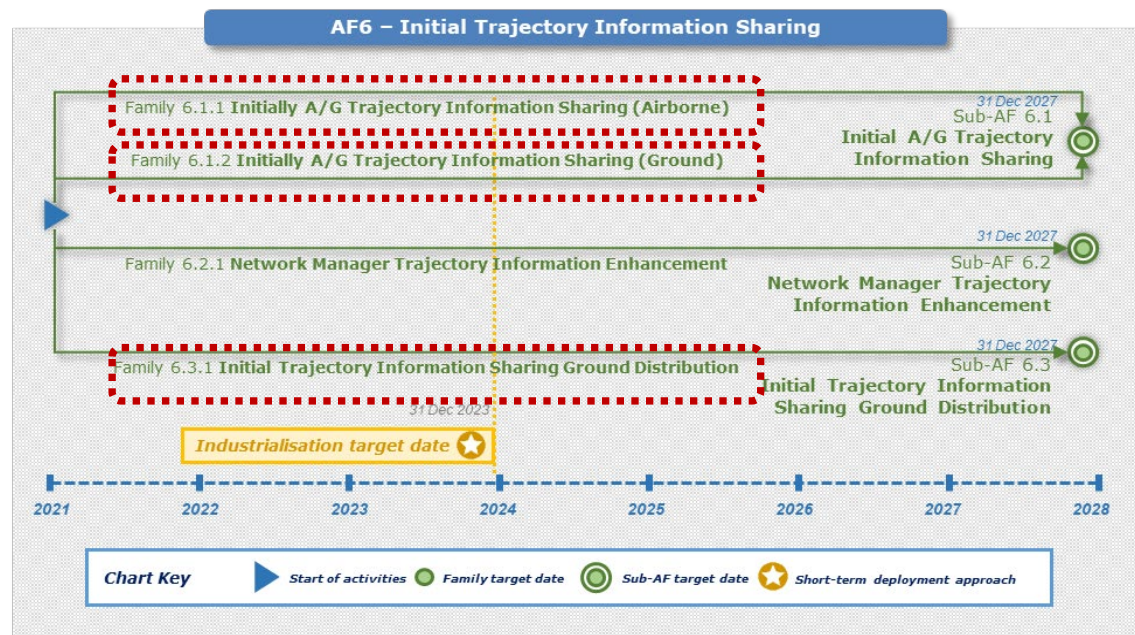
The ADS-C Common Service (SESAR Solution) has been identified as a good solution to implement AF6 in a harmonized and synchronised way across Europe





SDP Deployment Programme and Short-term deployment approach (3/3)

The Short-Term Deployment Approach identifies the SDP Families where the stakeholders should focus in the short term by elaborating implementation projects to meet the CP1



Families prioritised in 2023	Description	Stakeholders	Implementation Target Date
Family 6.1.1	Initially A/G Trajectory Information Sharing (Airbone)	Airspace Users	31/12/2027
Family 6.1.2	Initially A/G Trajectory Information Sharing (Ground)	ANSPs	31/12/2027
Family 6.3.1	Initially Trajectory Information Sharing Ground Distribution	ANSPs Network Manager	31/12/2027



Provided that the Industrialisation Target Date is passed