



TS-0109 — Controlled Time of Arrival (CTA) in high density/complexity environment

The CTA (Controlled Time of Arrival) is an ATM imposed time constraint on a defined point associated with an arrival runway, using airborne capabilities to improve arrival management.

Use of CTA in high density/high complexity environments is enabled through the use of improved automation and advanced support tools.

When a time constraint is needed for a flight, the ground system may calculate a CTA as part of the arrival management process, and then it may be proposed to the flight for achievement by avionics within required accuracy.

Airborne information will be used by the ground system in determining the CTA (ETA min/max) and in monitoring the implementation of the CTA.

Rationale Respecting the ideal of constraining the flight only when needed, the CTA exploits airborne and ground capabilities in the implementation of arrival flows. It does this by allowing the aircraft to self-manage its profile to a known time constraint thus enhancing a flight's time predictability over the constraint point and its flight efficiency to that constraint. Datalink exchange between flight crew and controller and the downlink of on-board 4D trajectory data will be used in CTA determination. (Link to AUO-0302-A and IS-0303-A). Environmental sustainability is subsequently improved by the enhanced efficiency of the CTA flight and by time/delay management being conducted from an earlier stage of flight until the constraint point.

Forecast V3 end date -

Benefits start date (IOC) 31-12-2023

Full benefits date (FOC) 31-12-2028

Current Maturity Level V1 finalised

Solution Data Quality Index -

Current Maturity Phase R&D

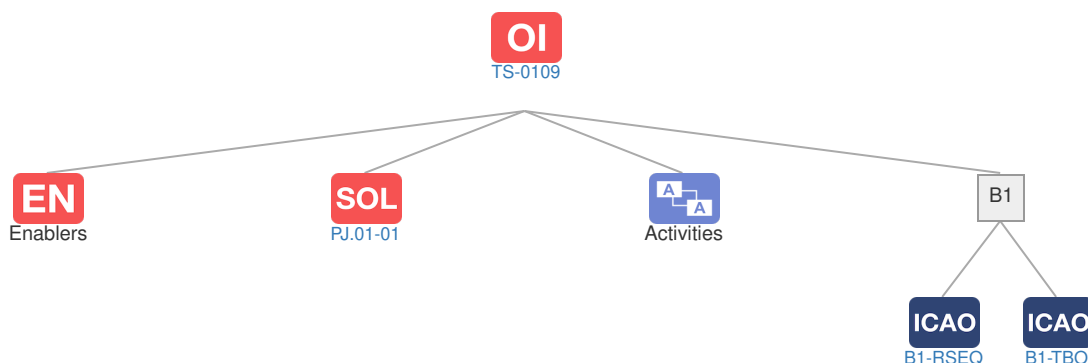
Scope Synchronised

Release R7

PCP Status -

Context

Related Elements



EN Enablers

Code	Dates																																			
	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40										
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🔒 A/C-31a						V4																														
🔒 A/C-37a	4	▼																																		
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🔒 APP ATC 148		▲																																		
🔒 BTNAV-STD-02			△																																	
🔒 ER APP ATC 100							▲	V4		V5																										
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➔ SWIM-SUPT-01a																																				
➔ SWIM-SUPT-03a																																				
➔ SWIM-SUPT-05a																																				

OI Dependent OI Steps

Relationship	Code	Title	Related Elements
Has predecessor	TS-0103	Controlled Time of Arrival (CTA) in medium density/complexity environment	SOL OI EN DS ICAO AA

SOL SESAR Solutions

Code	Title	Program	Related Elements
PJ.01-01	Extended Arrival Management with overlapping AMAN operations and interaction with DCB and CTA	SESAR 2020 Wave 1	SOL PJ OI DS EOC ICAO

PCP PCP Elements: No associated data

OBJ Implementation Objectives: No associated data

ICAO ICAO Block Modules

Designator	Title	Related Elements
B1		
B1-RSEQ	Improved Airport operations through Departure, Surface and Arrival Management	SOL OI OBJ PCP
B1-TBO	Improved Traffic Synchronisation and Initial Trajectory-Based Operation.	SOL OI PCP