



AOP05 — Airport Collaborative Decision Making (A-CDM)

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Implement Airport CDM (A-CDM) to enhance the operational efficiency of airports and improve their integration into the Air Traffic Management Network (ATMN) while maintaining or improving the safety levels. These objectives are achievable by increasing the information sharing between the local ANSP, airport operator, aircraft operators, ground handlers, the NM and other airport service providers; and improving the cooperation between these partners to enhance the predictability of events and optimise the utilisation of resources therefore increase the efficiency of the overall system.

The Airport CDM concept is built on the following elements:

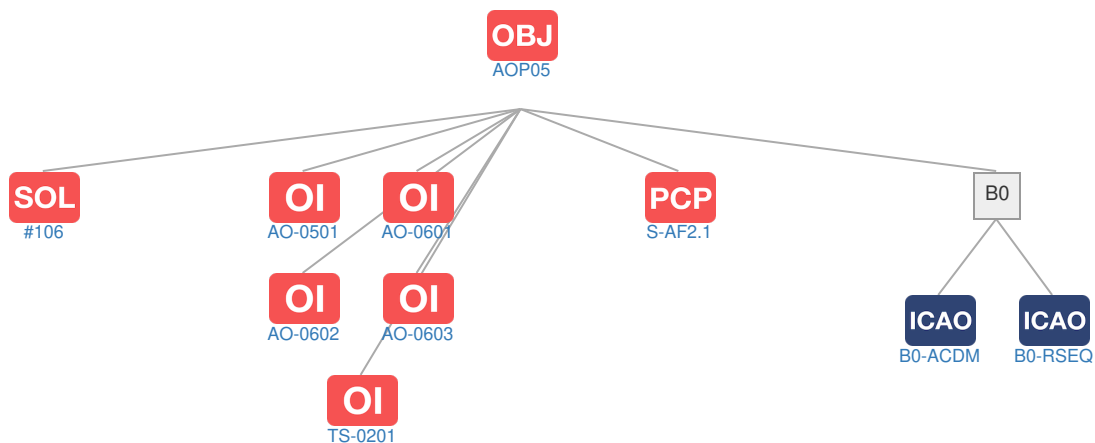
- The foundations for Airport CDM are Information Sharing and the Milestone Approach. They consist in collaborative information sharing and monitoring of the progress of a flight from the initial planning to the take off. Those two elements allow the airport partners to achieve a common situational awareness and predict the forthcoming events for each flight.
- Variable Taxi Time Calculation, Collaborative Pre-Departure Sequencing (i.e. initial DMAN) and CDM in Adverse Conditions allow the airport partners to further improve the local management of airport operations, whatever the situation at the airport.
- Once A-CDM has been implemented locally, the link with the ATMN can be strengthened through the exchange of flight update messages between the CDM airport and the NM. This last building block of the A-CDM concept facilitates the flow and capacity management, helps reduce uncertainty and increases efficiency at the network level.

NOTE FOR MILITARY AUTHORITIES: It is the responsibility of each military authority to review this Objective IN ITS ENTIRETY and address each of the SLoAs that the military authority considers RELEVANT for itself. This has to be done on top and above of the review of "MIL" SLoAs which identify actions EXCLUSIVE to military authorities.

Edition	2022
Stakeholders	Air Navigation Service Provider / Airport Operator / Airspace Users / Network Manager
Type	SESAR
Scope	Airport
Status	Active

Context

Related Elements



Applicability Area(s) and Timescales

Applicability Area: See list of airports in MP Level 3 Implementation Plan - Annexes

Timescales	From	By	Applicable to
Initial operational capability	01-01-2004	-	Applicability Area
Full operational capability	-	31-12-2020	Applicability Area

Links to ATM Master Plan Level 2

OI Operational Improvement Steps

Code	Title	IOC	FOC	Related Elements
AO-0501	Improved Operations in Adverse Conditions through Airport Collaborative Decision Making	31-12-2007	31-12-2011	EN OBJ ICAO
AO-0601	Improved Turn-Round Process through Collaborative Decision Making	26-06-2010	26-06-2014	EN OBJ ICAO
AO-0602	Collaborative Pre-departure Sequencing	26-06-2010	26-06-2014	OI EN OBJ DS PCP ICAO
AO-0603	Improved De-icing Operation through Collaborative Decision Making	26-06-2010	26-06-2014	EN OBJ ICAO
TS-0201	Basic Departure Management (Pre-departure Management)	31-12-2010	31-12-2014	SOL OI EN OBJ DS PCP

SOL Links to SESAR Solutions

Code	Title	Program	Related Elements
#106	DMAN Baseline for integrated AMAN DMAN	SESAR1	OI OBJ DS EOC PCP

PCP Links to PCP ATM Sub-Functionalities

Code	Title	Related Elements
S-AF2.1	DMAN synchronised with Predeparture sequencing	SOL OI EN OBJ ICAO

ICAO ICAO Block Modules

Designator	Title	Related Elements
B0		
B0-ACDM	Improved Airport Operations through Airport-CDM	OI OBJ PCP
B0-RSEQ	Improved Runway Traffic Flow through Sequencing (AMAN/DMAN)	SOL OI OBJ

References

Applicable legislation

None

Applicable ICAO Annexes and other references

ICAO Annex 14 - Aerodromes

Deployment Programme 2022

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Operating Environments

Airport

Terminal Airspace

En-Route

Network

Expected Performance Benefits

Safety	-
Capacity	Improved through optimal use of facilities and services, better use of airport and ATFM slots.
Operational efficiency	Improved system efficiency and predictability. Significant decrease in fuel burn through better timed operations.
Cost efficiency	Increased airport revenue through additional flights and passengers.
Environment	Reduced noise and emissions due to limiting engine ground running time due to better timed operations.
Security	-

Stakeholder Lines of Action

Code	Title	From	By	Related Enablers
ASP01	Define and agree performance objectives and KPIs at local level, specific to ANSP in accordance with A-CDM Manual guidelines	01-01-2004	01-01-2021	
ASP02	Define and implement local Air Navigation Service (ANS) procedures for information sharing through Letters of Agreement (LoAs) and/or Memorandum of Understanding (MoU) in accordance with A-CDM Manual guidelines	01-01-2004	01-01-2021	EN
ASP03	Define and implement local procedures for turnaround processes in accordance with CDM manual guidelines	01-01-2004	01-01-2021	EN
ASP04	Continually review and measure airport performance in accordance with Airport CDM Manual guidelines	01-01-2004	01-01-2021	
ASP05	Define and implement variable taxi-time and predeparture sequencing procedure (i.e. initial DMAN) according to airport CDM Manual guidelines	DELETED		EN
ASP06	Define and implement procedures for CDM in adverse conditions, including the de-icing according to airport CDM Manual guidelines	01-01-2012	01-01-2021	EN
APO01	Define and agree performance objectives and KPIs at local level specific to airport operations in accordance with A-CDM Manual guidelines	01-01-2004	01-01-2021	
APO02	Define and implement local airport operations procedures for information sharing through Letters of Agreement (LoAs) and/or Memorandum of Understanding (MoU) in accordance with A-CDM Manual guidelines	01-01-2004	01-01-2021	EN
APO03	Define and implement local procedures for turnaround processes in accordance with CDM manual guidelines (baseline CDM)	01-01-2004	01-01-2021	EN
APO04	Continually review and measure airport performance in accordance with Airport CDM Manual guidelines	01-01-2004	01-01-2021	
APO05	Define and implement the exchange of messages, Flight Update Message (FUM) and Departure Planning Information (DPI) between NMOC and the airport in accordance with A-CDM Manual guidelines	01-03-2005	01-01-2021	EN
APO06	Define and implement procedures for CDM in adverse conditions including the de-icing according to airport CDM Manual guidelines	01-06-2006	01-01-2021	EN
USE01	Define and agree performance objectives and KPIs at local level, specific to aircraft operators, in accordance with A-CDM Manual guidelines	01-01-2004	01-01-2021	
USE02	Define and implement local aircraft operators procedures for information sharing through LoAs and/or MoU in accordance with A-CDM manual guidelines	01-01-2004	01-01-2021	EN
USE03	Define and implement local procedures for turnaround processes in accordance with A-CDM manual guidelines	01-01-2004	01-01-2021	EN
USE04	Continually review and measure airport performance in accordance with Airport CDM Manual guidelines	01-01-2004	01-01-2021	
USE05	Define and implement procedures for CDM in adverse conditions including the de-icing according to A-CDM Manual guidelines	01-01-2012	01-01-2021	EN
NM01	Update NM systems and define procedures to support the exchange of messages, Flight Update Message (FUM) and Departure Planning Information (DPI) between NMOC and airports in accordance with A-CDM Manual guidelines	FINALISED		EN

Supporting Material

Title	Related SLoAs
ETSI - EN 303 212 - Airport Collaborative Decision Making (A-CDM); Community Specification for application under the Single European Sky Interoperability Regulation EC 552/2004 - Ver. 1.1.1 - OJ 2010C168/04 / 06/2010 https://www.etsi.org/deliver/etsi_en/303200_303299/303212/01.01.01_30/en_303212v010101v.pdf	APO01, APO02, APO03, APO04, APO05, APO06, ASP01, ASP02, ASP03, ASP04, ASP06, USE01, USE02, USE03, USE04, USE05
EUROCAE - ED-141 - Minimum Technical Specifications for Airport Collaborative Decision Making (Airport-CDM) Systems 10/2008 https://eshop.eurocae.net/eurocae-documents-and-reports/ed-141/#non-member	APO01, APO02, APO03, APO04, APO05, APO06, ASP01, ASP02, ASP03, ASP04, ASP06, USE01, USE02, USE03, USE04, USE05
EUROCAE - ED-145 - Airport-CDM Interface Specification 10/2008 https://eshop.eurocae.net/eurocae-documents-and-reports/ed-145/	APO01, APO02, APO03, APO04, APO05, APO06, ASP01, ASP02, ASP03, ASP04, ASP06, USE01, USE02, USE03, USE04, USE05
EUROCAE - ED-146 - Guidelines for Test and Validation Related to Airport CDM Interoperability 10/2008 https://eshop.eurocae.net/eurocae-documents-and-reports	APO01, APO02, APO03, APO04, APO05, APO06, ASP01, ASP02, ASP03, ASP04, ASP06, USE01, USE02, USE03, USE04, USE05
EUROCONTROL - Airport CDM Implementation Manual - Edition 5.0 / 03/2017 https://www.eurocontrol.int/sites/default/files/publication/files/airport-cdm-manual-2017.PDF	APO01, APO02, APO03, APO04, APO05, APO06, ASP01, ASP02, ASP03, ASP04, ASP06, USE01, USE02, USE03, USE04, USE05

Consultation & Approval

Working Arrangement in charge	Airport Operations Team (AOT)
Outline description approved in	-
Latest objective review at expert level	04/2012
Commitment Decision Body	Provisional Council (PC)
Objective approved/endorsed in	07/2003
Latest change to objective approved/endorsed in	07/2013