AOP11.2 — Extended Airport Operations Plan

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The iAOP and Extended AOP are so interdependent and sharing the same operational “philosophy” that it is relevant to also include information about iAOP.

Airport Operations Plan (AOP) means a single, common and collaboratively agreed rolling plan used by all involved airport stakeholders whose purpose is to provide common situational awareness and to form the basis upon which airport stakeholder decisions relating to process optimisation for operations can be made.

The AOP shall make all the information that is relevant for the network available to the NOP in real time.

The AOP is the principal source of information used and shared by all involved airport stakeholders. It requires individual stakeholders to make changes within their own sphere of operations. These changes shall be synchronised in order to be consistent and provide common situational awareness.

The AOP supports operations at airports with an increased scope and sharing of data between the airport and the Network Manager, building upon the airport collaborative decision making (A-CDM) supporting systems.
The AOP is a rolling plan comprising different phases including Planning, Execution and Monitoring and Post-operations, that interacts with a number of services, systems and stakeholders gathering information from several systems.

Main stakeholders are Airport Operators. Stakeholders also impacted are all the other involved airport stakeholders such as but not limited to:

• Aircraft operators;
• Ground handlers;
• De-icing handlers;
• ANSPs;
• Network Manager;
• MET services providers;
• Support services (police, customs and immigration, etc.).

The AOP can be implemented in two steps: Initial AOP (iAOP) and Extended AOP.

The Extended AOP supports landside and airside operations at airports with an increased scope and sharing of data between the airport and the Network Manager. The extended AOP is the fundamental tool supporting the following four operational services by improving the overall operational efficiency and increasing resilience of the airport and the network to resist disruptions such as but not limited to, adverse weather conditions, closure of a runway, security alerts.

The Extended AOP increases the iAOP scope, beyond the airside operating environment and addresses processes within the landside and terminal infrastructure that have a performance impact on flight predictability and efficiency. In this case the Extended AOP monitors the progress of passengers through the airport from check-in to the gate. Monitoring data is stored in the AOP and allows stakeholders to increase their confidence around TOBT accuracy and stability.

The landside and airside airport stakeholders shall make changes within their own sphere of operations and shall use and share the AOP as the principal source of information for airport operations.

The Extended AOP comprises the following Performance Services:

• Steer Airport Performance Service – it is the service that develops the performance standard (i.e., goals, targets, rules, thresholds, trade-off criteria and priorities) for airport operations and sets an overall strategic direction. Airport stakeholders develop a mutually agreed performance standard in a collaborative manner on the basis of the performance regional and/or national scheme(s) and post operations analysis reports. The Steer Airport Performance service is mainly performed in the long-term and medium planning phase and the post-operations phase.

• Monitor Airport Performance service - it is the service that maintains surveillance over airport operations, airport performance (against KPAs), airport surroundings (e.g. weather monitoring), supervising airport related information and any information that can impact the airport performance, providing observations, forecasts, alerts and warnings against predefined thresholds. It is performed from the medium-term planning phase until the execution phase. This surveillance is based on the performance standard set by the Steer Airport Performance service. The Monitor Airport Performance service compares any new information created or updated in the AOP with the plan and raises warnings or alerts if a deviation is detected. The Monitor Airport Performance service also provides the airport stakeholders with a common situational awareness of the airport operations processes and performance in real time.

• Manage Airport Performance service it is the service that instantiates the AOP at the beginning of the medium-term planning phase. It uses the operational data provided by the airport stakeholders and the performance standard defined by the Steer Airport Performance service. In the short-term planning phase and the execution phase, the Manage Airport Performance service also assesses the severity of the deviations from the plan detected by the Monitor Airport Performance service and their impact on the airport processes and on the airport performance. The assessment is not only for searching for reactive solutions but also for forecasting severe disruptions or adverse conditions and, hence, to implement a proactive management. It uses the warnings and alerts and, more generally, the data contained in the AOP to make this impact assessment. It also uses event reports from the stakeholders to perform the impact assessment.
Depending on the magnitude of the deviation and the severity of the impact on the airport processes and on the airport performance, the Manage Airport Performance service triggers the relevant collaborative decision-making processes. In particular, in adverse conditions, these processes

take place in the Airport Operations Centre (APOC), where the representatives of the airport stakeholders can use simulation and decision support tools. The decisions are driven by the need to maintain an optimal performance level and to recover from a disruption as quickly and efficiently as possible. These processes result in an update of the AOP, made by the relevant airport stakeholders.

• Perform Post-Operations Analysis service – it is service that records any planned and actual data used in the airport processes during the planning and execution phases. This information is then used to produce post-operations analysis reports in the post-operations phase. These reports allow the airport stakeholders to:
• Fully understand the airport performance against the performance plan and identify the root causes of any deviation;
• Assess the continued relevance of the performance plan;
• Justify the need to improve the way the airport operations are run;
• Investigate any disruption in the operations;
• Analyse actions and decisions made during the planning and execution phases.

For the most complex and critical post-operations analysis reports, the airport stakeholders collaborate to produce an analysis and reach conclusions that will benefit the overall airport community

System requirements:

To support the Extended AOP implementation, the following elements shall be taken into account:

• Initial AOP system requirements as defined in Objective AOP11.1;
• Airport Operations Plan management tools containing the rolling plan of the airport operations and capabilities (landside and airside) for each time frame (from medium term to Post-Ops);
• Airport Performance Monitoring System to monitor performance against the goals;
• Airport Performance Assessment and Management Support System to assess the severity of the deviations from the plan detected by the Monitoring of Airport Performance service and their impact on the airport processes and on the airport performance;
• Airport Post-operations analysis tool to develop standard and ad-hoc Post-Ops Analysis reports.

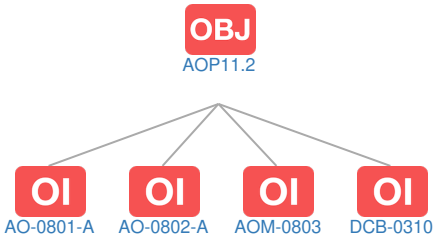
NOTE FOR MILITARY AUTHORITIES: It is the responsibility of each military authority to review this Objective IN ITS ENTIRETY and address each of the SLoAs that the military authority considers RELEVANT for itself. This has to be done on top and above of the review of "MIL" SLoAs which identify actions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

NOTE: The SLoAs listed in this document should be addressed to air navigation service providers as well as to airport operators. This is due to the fact that some airports operate their own ground control units for specific areas of responsibility at the airport. Airport operators providing air traffic control services qualify as ANSPs and are therefore covered by the ASP SLoAs. It is up to each implementer to check and select what is relevant to them, depending on local areas of responsibilities.

Edition	2022
Stakeholders	Air Navigation Service Provider / Airport Operator
Type	CP1
Scope	Airport
Status	Active

Context

Related Elements



Applicability Area(s) and Timescales

Applicability Area 1: See list of airports in MP Level 3 Implementation Plan - Annexes

Applicability Area 2 (non-CP1 Airports): See list of airports in MP Level 3 Implementation Plan - Annexes

Timescales	From	By	Applicable to
Initial Operational Capability	01-01-2021	-	Applicability Area 1 + Applicability Area 2 (non-CP1 Airports)
Full Operational Capability / Target Date	-	31-12-2027	Applicability Area 1 + Applicability Area 2 (non-CP1 Airports)

Links to ATM Master Plan Level 2

OI Operational Improvment Steps

Code	Title	IOC	FOC	Related Elements
AO-0801-A	Collaborative Airport Planning Interface	31-12-2020	31-12-2025	SOL OI EN OBJ DS PCP ICAO
AO-0802-A	A-CDM process enhanced through integration of landside (passenger only) process outputs	31-12-2023	31-12-2027	SOL OI EN DS ICAO
AOM-0803	Dynamically Shaped Sectors Unconstrained By Predetermined Boundaries	-	-	
DCB-0310	Improved Efficiency in the Management of Airport and ATFCM Planning	31-12-2021	31-12-2025	SOL OI EN DS ICAO

SOL Links to SESAR Solutions

Code	Title	Program	Related Elements
No record found			

PCP Links to PCP ATM Sub-Functionalities

Code	Title	Related Elements
No record found		

ICAO ICAO Block Modules: No associated data

References

Applicable legislation
Regulation (EU) No 2021/116 on the establishment of the Common Project One
Applicable ICAO Annexes and other references
None
Deployment Programme 2022
Family 2.2.2 - Extended AOP
Operating Environments
-

Expected Performance Benefits

Safety	Enhanced predictability.
Capacity	Improved airport resilience/limiting capacity reduction in degraded situations.
Operational efficiency	Enhanced predictability.
Cost efficiency	-
Environment	Enhanced predictability.
Security	-

Stakeholder Lines of Action

Code	Title	From	By	Related Enablers
ASP01	Extended AOP Data/Operational elements implementation	01-01-2021	31-12-2027	
ASP02	Airport Performance Services Implementation	01-01-2021	31-12-2027	
ASP03	Data quality service	01-01-2021	31-12-2027	
ASP04	Safety assessment	01-01-2021	31-12-2027	
ASP05	Training	01-01-2021	31-12-2027	
ASP06	Operational use	01-01-2021	31-12-2027	
APO01	Extended AOP Data/Operational elements implementation	01-01-2021	31-12-2027	
APO02	Airport Performance Services implementation	01-01-2021	31-12-2027	
APO03	Data quality service	01-01-2021	31-12-2027	
APO04	Safety assessment	01-01-2021	31-12-2027	
APO05	Training	01-01-2021	31-12-2027	
APO06	Operational use	01-01-2021	31-12-2027	

Supporting Material

Title	Related SLoAs
SDM - Standardisation and Regulation support to CP1 deployment 2021, Deliverable D1.1.1 07/2021 https://www.sesardeploymentmanager.eu/publications/deployment-programme	APO01, APO02, APO03, APO04, APO05, APO06, ASP01, ASP02, ASP03, ASP04, ASP05, ASP06

Consultation & Approval

Working Arrangement in charge	-
Outline description approved in	-
Latest objective review at expert level	-
Commitment Decision Body	-
Objective approved/endorsed in	-
Latest change to objective approved/endorsed in	-