AOP24 — Optimised use of runway configuration for multiple runway airports

This Implementation Objective focuses on the Runway Manager (RMAN), a support tool for the Tower Supervisor to determine the optimal runway configuration and distribution of demand according to capacity and local constraints.

During the Medium/Short term Planning Phase, the RMAN tool checks the intentional demand versus the available capacity and it is capable of forecasting imbalances, raising alarms and alerts based on the indicators provided.

In the Execution Phase, the Runway Management tool monitors departure, arrival and overall delay and punctuality, in addition to the capacity shortage proposing changes if necessary.

Since the demand is continuously evolving along time, the RMAN continuously computes the optimal runway configuration and the associated Forecasted Landing (FLDT) and Take Off (FTOT) Times of arrival and departures flights that maximises the runway throughput.

As described before, in the same phase, the Integrated Runway Sequence function calculates Target Landing and Take-Off Times based on the flight plan information and considering the active runways.

The combination of the Runway Manager and the Integrated Runway Sequence has the aim of improving the punctuality of flights and reducing flight duration and average delay. The Forecasted Times calculated by the RMAN are provided to the Integrated Runway Sequence using them to calculate the final Target Times.

As a conclusion TLDT and TTOT calculated by the Integrated Sequence follows the Runway DCB Plan allowing the feedback to the RMAN to monitor the status of the Runway and to detect possible imbalances.

NOTE 1: This is an "Initial" objective to provide advance notice to stakeholders. Some aspects of the objective require further validation.

NOTE 2: 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

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
Type	SESAR
Scope	Airport
Status	Initial

Context

Related Elements

OBJ
AOP24

OI
TS-0313

Applicability Area(s) and Timescales

Applicability Area: See list of airports in MP Level 3 Implementation Plan - Annexes
(Not yet defined - Potentially Multiple Runway Airports in ECAC+ States)

Timescales	From	By	Applicable to
IOC used for Analytics functioning only - not for implementation planning	01-01-2020	-	
FOC used for Analytics functioning only - not for implementation planning	-	31-12-2030	

Links to ATM Master Plan Level 2

OI Operational Improvment Steps

Code	Title	IOC	FOC	Related Elements
TS-0313	Optimized Use of Runway Capacity for Multiple Runway Airports	31-08-2026	31-08-2030	SOL EN DS

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
None
Applicable ICAO Annexes and other references
None
Deployment Programme 2022
-
Operating Environments
-

Expected Performance Benefits

Safety	Safety maintained while increasing capacity
Capacity	Increased airport capacity
Operational efficiency	Both fuel efficiency as well as CO2/Flight Time Efficiency
Cost efficiency	-
Environment	-
Security	-

Stakeholder Lines of Action

Code	Title	From	By	Related Enablers
ASP01	Implement a Runway Demand and Capacity system			
ASP02	Adapt the ATC System to support optimal runway configuration			
ASP03	Develop appropriate procedures			
ASP04	Safety assessment			
ASP05	Training			
ASP06	System in use			
APO01	Implement a Runway Demand and Capacity system			
APO02	Develop appropriate procedures			
APO03	Safety assessment			
APO04	Training			
APO05	System in use			

Supporting Material

Title	Related SLoAs
No record found	

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	-