

Deployment Scenario Title	Digital collaborative airport performance management
Deployment Scenario Description	Digital collaborative airport performance management: this addresses digital data management for airport performance, through the development and validation of rationalised predictive data driven dashboards, fed with all landside and airside leading key performance airport indicators and covering total airport management processes. This will enable stakeholders to proactively identify demand and capacity imbalances, their time frames, locations and the trajectories affected, and solve them supported by “what-if” capabilities. The Solution uses data and video analytics, big data and machine-learning techniques.
Essential Operational Change	ATM Interconnected Network
Maturity	In development phase: Key R&D Activities

Applicable Operating Environment			
Airport	Terminal Airspace	En-Route	Network

Timeline																						
2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	

Performance Contribution of the DS				
Capacity	Safety	Environment	Cost-efficiency	Operational efficiency

Stakeholders affected (at least one enabler to be deployed)						
ANSP		AO		AU		Network Manager
Civil	Military	Civil	Military	Civil	Military	
TWR	TWR	APT Operator	APT Operator	Scheduled, FOC		Network Manager

SESAR Solutions			
Solution Code	Solution Title	Solution Description	Related Elements
PJ.04-02	Enhanced Collaborative Airport Performance Management	This solution builds on work performed in SESAR 1 and moves towards the collaborative management...	SOL PJ OI DS EOC
PJ.04-W2-29	Digital Collaborative Airport Performance Management	The key R&D activity addresses the digital data management of airport performance thanks to...	PJ DS EOC

Operational Improvement Steps			
OI Step Code	OI Step Title	OI Step Description	Related Elements
AO-0814	Enhancement of Airside/Landside Performance Management	Airport Airside/Landside Performance Management is enhanced through incorporation of a...	SOL EN DS
AO-0819	Pro-active Management of Meteorological Impacts	Anticipation of impacts of a potential meteorological condition will allow to limit possible...	SOL EN DS
AO-0820	Pro-active Collaborative Management of Predicted Performance Deterioration via UDPP	Collaborative recovery procedures and associated predictive and decision support tools (limited...	SOL OI EN DS
AO-0822	Enhancement of Environmental Performance Management	Airport Operations Management often necessitates a trade-off between different performance...	SOL EN DS

Enablers						
Required/Optional	New/Inherited	Develop/Use	Enabler Code	Enabler Title	Enabler Description	Related Elements
→			AIRPORT-03b	Enhanced Airport Operation Plan (AOP) Tool	A local airport system (AOP toolset) allowing all airport CDM partners to have access to the...	STK OI EN DS
🔒			AIRPORT-03c	Light Airport Operational Plan (AOP) Management Tool (for Regional Airports)	A local management tool dedicated to regional airports allowing all airport partners to access...	STK OI EN DS
→			AIRPORT-07	Decision support processes/tools for airport operations management	Airport computer-based tools (simulation models, and/or techniques and methods) developed to...	STK OI EN DS
🔒			AIRPORT-10	Meteo Impact Assessment Tool	Integrate MET information together with its uncertainty into ATM Impact Assessment Models to...	STK OI DS
🔒			AIRPORT-34	Airport equipped with (real time) environmental monitoring systems	Airport equipped with systems for monitoring noise, emissions, air quality, etc.	STK OI DS
🔒			AIRPORT-40b	Enhanced Airport Performance Monitoring System (Airside/Landside dashboard)	A system supporting performance monitoring through key indicators, resource availability and...	STK OI EN DS
→			AIRPORT-41	Airport Operations Centre Support Tools (Dashboard)	Airport support tools (dashboard) supporting the multi-stakeholder decision making environment.	STK OI DS
→			AIRPORT-42	Tactical Capacity Planning Tools (Airside/Landside)	The tactical capacity planning tools include both the planning of infrastructure usage and the...	STK OI DS
🔒			AIRPORT-48	Advanced Airport UDPP integrated with AOP Monitoring	Advanced Airport System providing the possibility to create and update a UDPP measure using a...	STK OI DS
🔒			AIRPORT-52	DPI/API revision triggered by airport capacity constrained situations	An Airport system that provides the possibility to issue APIs (Arrival Planning Information) and...	STK OI DS

Enablers						
Required/ Optional	New/ Inherited	Develop/ Use	Enabler Code	Enabler Title	Enabler Description	Related Elements
→			AIRPORT-54	Airport Data Analysis System (Post-Ops based on Recording)	System capable of: - Automatic and user driven reporting of airport performance at various...	STK OI EN DS
🔒			ENV-05	Guidance for community relations at airports	Commonly agreed framework Community relations guidance and other support resources to help...	OI DS
🔒			ENV-06	Central environmental guidance web-portal	A single and continuously updated source of commonly agreed environmental management guidance -...	OI DS
🔒			ENV-07	(Local) monitoring of environmental performance	To ensure that environmental performance is locally monitored at airports - the results are used...	OI DS
→			HUM-008	Role of APOC supervisor	The APOC supervisor role will be responsible for initiating and leading the APOC process that...	STK OI DS 👤
→			HUM-009	New role of APOC representative from Airport Operator	A new role of Airport Operator APOC representative will be created. This new role will be...	STK OI DS 👤
→			HUM-010	New role of APOC representative from Ground Handling Agent	A new role of Ground Handler APOC representative will be created. This new role will be...	STK OI DS 👤
→			HUM-011	New role of APOC representative from Airspace User	A new role of Airspace User APOC representative will be created for each airspace user. This new...	STK OI DS 👤
→			HUM-012	New role of APOC representative from ANSP	A new role of ANSP APOC representative will be created. This new role will be responsible for: -...	STK OI DS 👤
🔒			PRO-249	Procedures Linked to Collaborative Airport Performance Management	The collaborative management of airport performance necessitates the introduction of new...	STK OI EN DS
🔒			SWIM-APS-03b	Provision of ASM-ATFCM Information Services for Step 2	Wide area communications services for collecting, disseminating and negotiating demand and...	OI EN DS \$
→			AERODROME-ATC-05	Surface movement information processing enhancements to support Total Airport DCB and collaborative airport planning	Surface movement information processing enhancements to support Total Airport DCB and...	STK OI
→			AERODROME-ATC-64	Medium-Short Term Runway Management capacity planning support tool	Runway Management capacity planning support tool (Medium-Short Term Planning timeframe) to ensure...	STK OI EN
→			AERODROME-ATC-65	Tactical Runway Management capacity planning support tool	Tactical Runway Management capacity planning support tool working in very late Short-Term...	STK OI EN

Enablers						
Required/ Optional	New/ Inherited	Develop/ Use	Enabler Code	Enabler Title	Enabler Description	Related Elements
→			AIRPORT-09	Airport Data Replay System	System capable of replaying all relevant surface movement data enriched with any other relevant...	STK OI EN
→			AIRPORT-11	Meteo Advisory Tool	Integrate the weather impact assessment output together with the airport's local ATM information...	STK OI
→			AIRPORT-12	Airport Business Intelligence System (Machine Learning based on historical data)	Airport system capable of either automatically or semi-automatically analyse large quantities of...	STK OI EN
→			AIRPORT-31	Airport CDM (levels 1, 2 & 3)	An airport is considered as achieving Airport-CDM when the Airport CDM information sharing,...	STK OI EN DS PCP
→			AIRPORT-35b	Airport CDM (level 4 - CDM integrated with landside processes)	Integration of CDM processes with landside operations - Each airport partner shall provide its...	STK OI DS
→			AOC-ATM-18	FOC adaptation to support UDPP	System supporting UDPP integrated within FOC systems to support airspace users prioritisation...	STK OI DS