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|--|---|
| 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 |