

SESAR		Active							LOC/APT	
AOP25		De-icing management tool								
REG	ASP	MIL	APO	USE	INT	IND	NM	MET	AIS	USP

Subject matter and scope

The objective is addressing a de-icing management tool to be used on airports with an Airport Collaborative Decision Making (A-CDM) implementation, during de-icing conditions.

It aims at improving the predictability of aircraft de-icing operations by increasing the accuracy of information related to when the procedure is going to take place, how long it will take and when the aircraft will be ready to taxi for departure, which is currently calculated at best by predetermined estimates. The concept envisages that de-icing operations are no longer characterised by the A-CDM as 'adverse conditions', i.e. a state that is in need of collaborative recovery procedures, but rather a part of normal operations in the winter period. The de-icing process can therefore become predictable under certain weather conditions and treated as a regular procedure in normal operations.

The implementation of the objective allows for the scheduling and monitoring of de-icing operations by addressing two key functions:

- The first of which is to accurately estimate the duration of the de-icing and/or anti-icing procedures for a given airframe. This elapsed time is dependent on three parameters: the aircraft type, the prevailing weather conditions at the airport during the aircraft's visit and the number of de-icing rigs used for the application of de-icing and anti-icing fluids.
- The second function is to calculate a de-icing sequence that optimises available resources and allocates them to slots in a timeline while taking into account the constraining variables that limit how the problem can be optimised. For on-stand and after-push operations de-icing rigs are assigned to these slots, while remote de-icing considers the track availability at the designated location, i.e. the de-icing pad.

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.

Applicability Area(s) & Timescale(s)

Applicability Area (Subject to local needs)			
Timescales:		From:	By:
IOC used for Analytics functioning only - not for implementation planning		01/07/2022	Applicability Area
FOC used for Analytics functioning only - not for implementation planning			31/12/2030

References

European ATM Master Plan

Ol step -	[POI-0070-AQ]-Improved management of de-icing operations at airports									
	Enablers -	AIRPORT-04								

Legend:	WXYZ-001	Covered by SLoA(s) in this objective	WXYZ-002 zzz	Covered by SLoA(s) in another objective Objective covering the enabler	WXYZ-003	Not covered in the Implementation Plan
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Applicable legislation

None

Essential Operational Changes

Airport and TMA performance

SESAR Solution

#116 - De-icing Management Tool

ICAO GANP - ASBUs

- none -

AOP25	De-icing management tool
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Deployment Programme

- none -	
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European Plan for Aviation Safety

- none -	
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Operating Environments

Airport

Stakeholder Lines of Action (SLoAs)

SLoA ref.	Title	From	By
AOP25-ASP01	Adapt the A-CDM platform to exchange information with the de-icing management tool		
AOP25-ASP02	Implement procedures for the use by ATC of the enhanced A-CDM information		
AOP25-ASP03	Safety assessment		
AOP25-ASP04	Training		
AOP25-ASP05	Operational use		
AOP25-APO01	Implement a de-icing management tool		
AOP25-APO02	Implement procedures for the use of the de-icing management tool		
AOP25-APO03	Safety assessment		
AOP25-APO04	Training		
AOP25-APO05	Operational use		

Description of finalised and deleted SLoAs is available on the eATM Portal @ https://www.eatmportal.eu/working/depl/essip_objectives

Expected Performance Benefits

Safety:	-
Capacity:	Better use of existing airport capacity.
Operational Efficiency:	Increased predictability and flexibility of airport operations (integration of airport operations with the network).
Cost Efficiency:	-
Environment:	More efficient airport operations.
Security:	-

Detailed SLoA Descriptions

AOP25-ASP01	Adapt the A-CDM platform to exchange information with the de-icing management tool	From:	By:
		-	-
Action by:	ANS Providers		
Description & purpose:	The A-CDM platform will have to accommodate information exchanges with the de-icing management tool. These exchanges will allow the tool to receive information from the A-CDM platform (e.g. General Flight Information, Flight Schedules, Flight Estimates, Flight Targets, Flight Actuals, Weather Information, etc) as well as to provide information to the platform (e.g. De-icing Values (time stamps) for Flight Information, De-icing Unit Sequence).		
Supporting material(s):	SJU - SESAR Solution 116: Data Pack for De-icing management tool Url : https://www.sesarju.eu/index.php/sesar-solutions/de-icing-management-tool		
Finalisation criteria:	1 - Information exchanges between the A-CDM platform and the de-icing management tool are implemented.		
AOP25-ASP02	Implement procedures for the use by ATC of the enhanced A-CDM information	From:	By:
		-	-
Action by:	ANS Providers		
Description & purpose:	Through the integration of the information provided by the de-icing management tool into the A-CDM platform, the Air Traffic Controllers who will have access to enhanced A-CDM information. The use of this information will have to be supported by specific procedures.		
Supporting material(s):	SJU - SESAR Solution 116: Data Pack for De-icing management tool Url : https://www.sesarju.eu/index.php/sesar-solutions/de-icing-management-tool		
Finalisation criteria:	1 - Procedures developed, tested and approved.		
AOP25-ASP03	Safety assessment	From:	By:

AOP25		De-icing management tool	
		-	-
Action by:	ANS Providers		
Description & purpose:	A safety assessment of the changes shall be developed and delivered to the competent authority.		
Supporting material(s):	SJU - SESAR Solution 116: Data Pack for De-icing management tool Url : https://www.sesarju.eu/index.php/sesar-solutions/de-icing-management-tool		
Finalisation criteria:	1 - Safety assessment has been developed and delivered to the competent authority.		
AOP25-ASP04	Training	From:	By:
		-	-
Action by:	ANS Providers		
Description & purpose:	All relevant staff, particularly Air Traffic Controllers having access to enhanced A-CDM information, shall be duly trained.		
Supporting material(s):	SJU - SESAR Solution 116: Data Pack for De-icing management tool Url : https://www.sesarju.eu/index.php/sesar-solutions/de-icing-management-tool		
Finalisation criteria:	1 - Training has been completed.		
AOP25-ASP05	Operational use	From:	By:
		-	-
Action by:	ANS Providers		
Description & purpose:	Once the procedures are in place, systems have been upgraded, safety assessment delivered and approved, training has been completed, a de-icing management tool is ready for operational use.		
Supporting material(s):	SJU - SESAR Solution 116: Data Pack for De-icing management tool Url : https://www.sesarju.eu/index.php/sesar-solutions/de-icing-management-tool		
Finalisation criteria:	1 - Integration of the de-icing management tool and of the A-CDM platform is put into service.		
AOP25-APO01	Implement a de-icing management tool	From:	By:
		-	-
Action by:	Airport Operators		
Description & purpose:	The main functionalities of such tool (DIMIT) should be: • An assessment of the weather (current and forecasted) in four de-icing conditions: no de-icing, low, medium and severe • Determination of Estimated De-Icing Time (EDIT) for departing flights (flights with EOBT) • Planning of de-icing operations on flights expected to be de-iced • Allocation of de-icing resources to flights planned to be de-iced • Publishing of de-icing timestamps (ECZT - Estimated Commencement of De-icing Time, EDIT - Estimated De-icing Time and EEZT - Estimated End of De-icing Time) to the A-CDM platform.		
Supporting material(s):	SJU - SESAR Solution 116: Data Pack for De-icing management tool Url : https://www.sesarju.eu/index.php/sesar-solutions/de-icing-management-tool		
ATM Master Plan relationship:	[AIRPORT-04]-De-icing support tool in a A-CDM environment		
Finalisation criteria:	1 - A de-icing management tool is put into service and integrated with the A-CDM platform		
AOP25-APO02	Implement procedures for the use of the de-icing management tool	From:	By:
		-	-
Action by:	Airport Operators		
Description & purpose:	Specific procedures for the use of the de-icing management tool by the De-icing Coordinator and by the De-icing Agent will have to be defined and implemented in order to operate the tool as well as to mitigate and manage system failures.		
Supporting material(s):	SJU - SESAR Solution 116: Data Pack for De-icing management tool Url : https://www.sesarju.eu/index.php/sesar-solutions/de-icing-management-tool		
Finalisation criteria:	1 - Procedures developed, tested and approved.		
AOP25-APO03	Safety assessment	From:	By:
		-	-
Action by:	Airport Operators		
Description & purpose:	A safety assessment of the changes shall be developed and delivered to the competent authority.		
Supporting material(s):	SJU - SESAR Solution 116: Data Pack for De-icing management tool Url : https://www.sesarju.eu/index.php/sesar-solutions/de-icing-management-tool		
Finalisation criteria:	1 - Safety assessment has been developed and delivered to the competent authority.		
AOP25-APO04	Training	From:	By:
		-	-
Action by:	Airport Operators		

AOP25	De-icing management tool		
Description & purpose:	All relevant staff, particularly De-icing Coordinators and De-Icing Agents, shall be duly trained		
Supporting material(s):	SJU - SESAR Solution 116: Data Pack for De-icing management tool Url : https://www.sesarju.eu/index.php/sesar-solutions/de-icing-management-tool		
Finalisation criteria:	1 - Training has been completed.		
AOP25-APO05	Operational use	From:	By:
		-	-
Action by:	Airport Operators		
Description & purpose:			
Supporting material(s):	SJU - SESAR Solution 116: Data Pack for De-icing management tool Url : https://www.sesarju.eu/index.php/sesar-solutions/de-icing-management-tool		
Finalisation criteria:	1 - De-icing management tool is put into service.		

