

SESAAR		Active							APT	
AOP04.2		Advanced Surface Movement Guidance and Control System (A-SMGCS) Runway Monitoring and Conflict Alerting (RMCA) (Airport Safety Support Service = former ICAO Level 2)								
REG	ASP	MIL	APO	USE	INT	IND	NM	MET	AIS	USP

### Subject matter and scope

Runway Monitoring and Conflict Alerting (RMCA) (included in Airport Safety Support Service = former ICAO Level 2) is the first element of the A-SMGCS 'Airport Safety Support' service. Implementation Objective AOP12 covers the other elements of the Airport Safety Support service which are the Conflicting ATC clearances (CATC) and Conformance Monitoring Alerts for Controllers (CMAC).

Implementation of a Runway Monitoring and Conflict Alerting (RMCA) functionality consists of an airport surface surveillance system (i.e. A-SMGCS Surveillance Service - former ICAO Level 1) complemented with a short term conflicting alerting tool that monitors movements on or near the runway and detects conflicts between an aircraft and another mobile as well as runway incursion by intruders. Appropriate alerts are visualised on the controller's HMI.

The implementation of A-SMGCS Surveillance a pre-requisite for the implementation of Runway Monitoring and Conflict Alerting.

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 (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
Full operational capability		31/12/2025	Applicability Area

### References

#### European ATM Master Plan

Ol step -	<a href="#">[AO-0102]-Automated Alerting of Controller in Case of Runway Incursion or Intrusion into Restricted Areas</a>								
	Enablers -	AERODROME -ATC-03	ASMGCS- 0101	ASMGCS- 0102	ASMGCS- 0103	ASMGCS- 0104	ASMGCS- 0113	ASMGCS- 0114	ASMGCS- 0115
		PRO-139	PRO-201b						
Ol step -	<a href="#">- No Ol Link -</a>								
	Enablers -	CTE-S02b	CTE-S03b	CTE-S04b					

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-
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#### Essential Operational Changes

Airport and TMA performance
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#### SESAR Solution

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#### ICAO GANP - ASBUs

SURF-B0/3	Initial ATCO alerting service for surface operations
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#### Deployment Programme

- none -
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#### European Plan for Aviation Safety

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MST.029	Implementation of SESAR Runway safety solutions
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Operating Environments

Airport
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Stakeholder Lines of Action (SLoAs)

SLoA ref.	Title	From	By
AOP04.2-REG01	Approve A-SMGCS RMCA implementations for operation	DELETED	
AOP04.2-ASP01	Install required A-SMGCS RMCA function equipment	01/01/2007	31/12/2025
AOP04.2-ASP02	Train aerodrome control staff in the use of A-SMGCS RMCA in the provision of an aerodrome control service	01/01/2007	31/12/2025
AOP04.2-ASP03	Implement approved A-SMGCS RMCA operational procedures	01/01/2007	31/12/2025
AOP04.2-APO01	Install required A-SMGCS RMCA function equipment	01/01/2007	31/12/2025
AOP04.2-INT01	Coordinate amendments to the related ICAO documentation to include A-SMGCS Level 2 procedures (Airport Safety Support Service - former ICAO Level 2)	FINALISED	

Description of finalised and deleted SLoAs is available on the eATM Portal @ [https://www.eatmportal.eu/working/depl/essip\\_objectives](https://www.eatmportal.eu/working/depl/essip_objectives)

Expected Performance Benefits

<b>Safety:</b>	Better situational awareness and support to controller in detecting potentially hazardous conflicts on or near the runway or infringements of runway.
<b>Capacity:</b>	-
<b>Operational Efficiency:</b>	More efficient control of surface traffic.
<b>Cost Efficiency:</b>	-
<b>Environment:</b>	-
<b>Security:</b>	-

Detailed SLoA Descriptions

AOP04.2-ASP01	Install required A-SMGCS RMCA function equipment	From:	By:
		01/01/2007	31/12/2025
Action by:	ANS Providers		
Description & purpose:	Install A-SMGCS Runway Monitoring and Conflict Alerting system (former ICAO Level 2) in order to enable the detection of conflicts & intrusions in accordance with A-SMGCS RMCA requirements (in co-operation with Airport Operators, as appropriate). Such equipment should be provided in addition to the equipment requirements for A-SMGCS Surveillance service (former ICAO Level 1).		
Supporting material(s):	EUROCONTROL - SPEC-171 - EUROCONTROL Specification for Advanced-Surface Movement Guidance and Control System (A-SMGCS) Services - Edition 2.0 / 04/2020 Url : <a href="https://www.eurocontrol.int/publication/eurocontrol-specification-smgcs-services">https://www.eurocontrol.int/publication/eurocontrol-specification-smgcs-services</a> EUROCAE - ED-87E - MASPS for A-SMGCS including Airport Safety Support Service Routing Service and Guidance Service - April 2022 / 04/2022 Url : <a href="https://www.eurocae.net/news/posts/2022/may/ed-87e-masps-for-a-smgcs-including-airport-safety-support-service-routing-service-and-guidance-service/">https://www.eurocae.net/news/posts/2022/may/ed-87e-masps-for-a-smgcs-including-airport-safety-support-service-routing-service-and-guidance-service/</a>		
ATM Master Plan relationship:	<a href="#">[AERODROME-ATC-03]-Surface movement control workstation equipped with tools for runway incursion detection and alerting</a> <a href="#">[CTE-S02b]-Surface Movement Radar</a> <a href="#">[CTE-S03b]-ADS-B station for RAD and APT surveillance</a> <a href="#">[CTE-S04b]-Airport Multilateration (MLAT)</a>		
Finalisation criteria:	1 - Equipment that meets agreed performance requirements and specifications of A-SMGCS RMCA has been installed.		
AOP04.2-ASP02	Train aerodrome control staff in the use of A-SMGCS RMCA in the provision of an aerodrome control service	From:	By:
		01/01/2007	31/12/2025
Action by:	ANS Providers		
Description & purpose:	Train aerodrome controllers in the use of A-SMGCS RMCA systems and procedures (including phraseology) in accordance with agreed training requirements.		

AOP04.2	Advanced Surface Movement Guidance and Control System (A-SMGCS) Runway Monitoring and Conflict Alerting (RMCA) (Airport Safety Support Service = former ICAO Level 2)		
<b>Supporting material(s):</b>	EUROCONTROL - SPEC-171 - EUROCONTROL Specification for Advanced-Surface Movement Guidance and Control System (A-SMGCS) Services - Edition 2.0 / 04/2020 Url : <a href="https://www.eurocontrol.int/publication/eurocontrol-specification-smgcs-services">https://www.eurocontrol.int/publication/eurocontrol-specification-smgcs-services</a> EUROCONTROL - ATCO Rating Training - Training Plans: Aerodrome Training - Annex B: Detailed Training Plans - Edition 1.0 / 03/2004 Url : <a href="https://trainingzone.eurocontrol.int">https://trainingzone.eurocontrol.int</a>		
<b>Finalisation criteria:</b>	1 - Controllers training in accordance with agreed training requirements and programme has been completed.		
<b>AOP04.2-ASP03</b>	<b>Implement approved A-SMGCS RMCA operational procedures</b>	From: 01/01/2007	By: 31/12/2025
<b>Action by:</b>	<b>ANS Providers</b>		
<b>Description &amp; purpose:</b>	Apply agreed and validated A-SMGCS RMCA procedures as an integral part of the aerodrome control service.		
<b>Supporting material(s):</b>	EUROCONTROL - SPEC-171 - EUROCONTROL Specification for Advanced-Surface Movement Guidance and Control System (A-SMGCS) Services - Edition 2.0 / 04/2020 Url : <a href="https://www.eurocontrol.int/publication/eurocontrol-specification-smgcs-services">https://www.eurocontrol.int/publication/eurocontrol-specification-smgcs-services</a>		
<b>ATM Master Plan relationship:</b>	<a href="#">[PRO-139]-ATC Procedures (Airport) for standardised response to runway incursion alerts</a> <a href="#">[PRO-201a]-Procedures linked to Improvement of Surveillance on the Manoeuvring Area on and around the Runway</a>		
<b>Finalisation criteria:</b>	1 - Local procedures have been developed, implemented, approved/certified and are being used by controllers at airports equipped with A-SMGCS RMCA.		
<b>AOP04.2-APO01</b>	<b>Install required A-SMGCS RMCA function equipment</b>	From: 01/01/2007	By: 31/12/2025
<b>Action by:</b>	<b>Airport Operators</b>		
<b>Description &amp; purpose:</b>	Install A-SMGCS RMCA systems (former ICAO Level 2) in order to enable the detection of conflicts & intrusions in accordance with A-SMGCS RMCA requirements (in co-operation with ANSPs, as appropriate). Such equipment should be provided in addition to the equipment requirements for A-SMGCS Surveillance service (former ICAO Level 1).		
<b>Supporting material(s):</b>	EUROCONTROL - SPEC-171 - EUROCONTROL Specification for Advanced-Surface Movement Guidance and Control System (A-SMGCS) Services - Edition 2.0 / 04/2020 Url : <a href="https://www.eurocontrol.int/publication/eurocontrol-specification-smgcs-services">https://www.eurocontrol.int/publication/eurocontrol-specification-smgcs-services</a> EUROCAE - ED-87E - MASPS for A-SMGCS including Airport Safety Support Service Routing Service and Guidance Service - April 2022 / 04/2022 Url : <a href="https://www.eurocae.net/news/posts/2022/may/ed-87e-masps-for-a-smgcs-including-airport-safety-support-service-routing-service-and-guidance-service/">https://www.eurocae.net/news/posts/2022/may/ed-87e-masps-for-a-smgcs-including-airport-safety-support-service-routing-service-and-guidance-service/</a>		
<b>ATM Master Plan relationship:</b>	<a href="#">[CTE-S04b]-Airport Multilateralism (MLAT)</a>		
<b>Finalisation criteria:</b>	1 - Equipment that meets agreed performance requirements and specifications of A-SMGCS RMCA has been installed.		
<b>AOP04.2-INT01</b>	<b>Coordinate amendments to the related ICAO documentation to include A-SMGCS Level 2 procedures (Airport Safety Support Service - former ICAO Level 2)</b>	From: 01/11/2004	By: 01/01/2021
<b>Action by:</b>	<b>EUROCONTROL Agency</b>		
<b>Description &amp; purpose:</b>	The incorporation of A-SMGCS (Airport Safety Support Service - former ICAO Level 2) procedures (including phraseology) into ICAO documentation.		
<b>ATM Master Plan relationship:</b>	<a href="#">[CTE-S04b]-Airport Multilateralism (MLAT)</a>		
<b>Finalisation criteria:</b>	1 - Proposed procedures have been adopted by ICAO and published in ICAO documents (i.e. Doc. 4444, and/or Doc. 7030).		