OBJ

AOP12 — Improve Runway and Airfield Safety with Conflicting ATC Clearances (CATC) Detection and Conformance Monitoring Alerts for Controllers (CMAC)

Detection and alerting of conflicting ATC clearances (CATC) to mobiles (aircraft and vehicles) and non-conformance to procedures and clearances (CMAC) for traffic on the movement area. These functionalities will improve runway and airfield safety by providing early detection of hazardous situations that may potentially put the vehicles and aircraft at risk of collision.

CMAC and CATC shall be performed by the ATC system based on 'A-SMGCS Surveillance' (former A-SMGCS Level 1), the clearances, given to mobiles by the controller and known constraints such as the assigned runway, holding point, the route of the mobile and the aircraft type.

The controller shall input all clearances given to aircraft or vehicles into the ATC system using an Electronic Clearance Input (ECI) means such as the Electronic Flight Strip (EFS).

Different types of CATC shall be identified (for example Line-Up vs. Take-Off). Some may only be based on the controller input; others may in addition use other data such as 'A-SMGCS Surveillance' data.

CMAC shall alert controllers when aircraft and vehicles deviate from ATC instructions, procedures. The detection of Conflicting ATC Clearances shall aim to provide an early prediction of situations that if not corrected would end up in hazardous situations that would be detected in turn by the Runway Monitoring and Conflict Alerting (RMCA) if in operation.

RMCA (former A-SMGCS Level 2), CATC and CMAC are the three functionalities of the 'A-SMGCS Airport Safety Support' service.

RMCA (covered by Implementation Objective AOP04.2) is seen as a pre-requisite for the deployment of the complete A-SMGCS 'Airport Safety Support' Service.
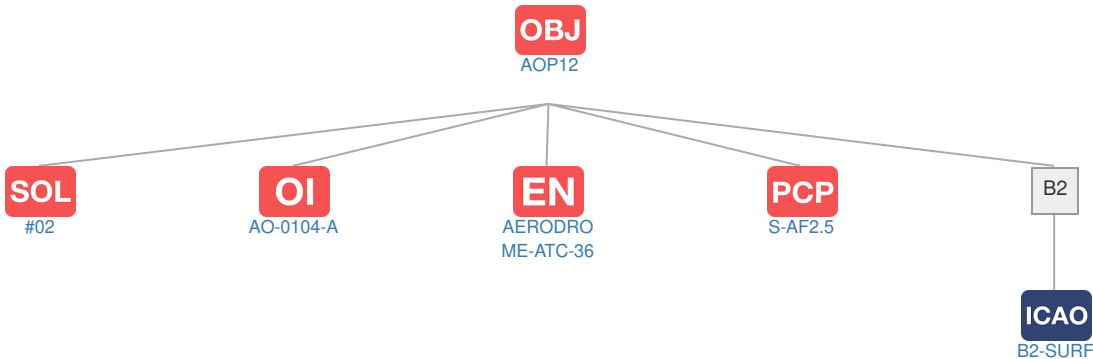
Note: Safety nets have been defined for and through regulation/specifications for other environments and RWY environment partly. If the term 'Airport safety net' is not consistent with those definitions, it will however be used in this objective for consistency with PCP terminology. Actually, this objective is affecting the safety nets and controller support tools envelopes. RMCA is a RWY safety net and provides alerts on hazardous situations on the RWY regardless of whether the a/c have been cleared or not by ATC, which fits perfectly on the safety nets umbrella.

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 / Airspace Users
Type	PCP
Scope	Airport
Status	Removed

Context

Related Elements

Source: European ATM Portal - **Report produced:** 29-04-2024 - **Date refresh:** 28-09-2023
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Applicability Area(s) and Timescales

Applicability Area (PCP Airports):   See list of airports in MP Level 3 Implementation Plan - Annexes
(As in PCP Regulation for S-AF2.5)

Timescales	From	By	Applicable to
Initial operational capability	01-01-2015	-	Applicability Area (PCP Airports)
Full operational capability	-	01-01-2021	Applicability Area (PCP Airports)

Links to ATM Master Plan Level 2

OI Operational Improvment Steps

Code	Title	IOC	FOC	Related Elements
AO-0104-A	Airport Safety Nets for Controllers at A-SMGCS Airports	31-12-2019	31-12-2023	SOL OI EN OBJ DS PCP ICAO

EN Enablers

Code	Title	IOC	Related Elements
AERODROME-ATC-36	Airport surveillance data processing and distribution upgraded to store and forward flight plan data	31-12-2006	STK OI OBJ

SOL Links to SESAR Solutions

Code	Title	Program	Related Elements
#02	Airport Safety Nets for controllers: conformance monitoring alerts and detection of conflicting ATC clearances	SESAR1	SOL OI OBJ DS EOC PCP ICAO

PCP Links to PCP ATM Sub-Functionalities

Code	Title	Related Elements
S-AF2.5	Airport Safety Nets	SOL OI EN OBJ ICAO

ICAO Block Modules

Designator	Title	Related Elements
B2		
B2-SURF	Optimized Surface Routing and Safety Benefits (A-SMGCS Level 3-4 and SVS)	SOL OI OBJ PCP

References

Applicable legislation
Regulation (EU) No 716/2014 on the establishment of the Pilot Common Project
Applicable ICAO Annexes and other references
None
Deployment Programme 2022
-
Operating Environments
Airport

Expected Performance Benefits

Safety	Improved runway and airfield safety by providing early detection of hazardous situations that may potentially put the vehicles and aircraft at risk of collision. Improved situational awareness of all actors.
Capacity	-
Operational efficiency	-
Cost efficiency	-
Environment	-
Security	-

Stakeholder Lines of Action

Code	Title	From	By	Related Enablers
ASP01	Install required 'Airport Safety Nets'	01-01-2015	01-01-2021	EN
ASP02	Train aerodrome control staff on the functionality of 'Airport Safety Nets'	01-01-2015	01-01-2021	
ASP03	Implement digital systems such as electronic flight strips (EFS)	01-01-2015	01-01-2021	EN
APO01	Train all relevant staff on the functionality of 'Airport Safety Nets'	01-01-2015	01-01-2021	
USE01	Train Pilots on the functionality of 'Airport Safety Nets'	01-01-2015	01-01-2021	

Supporting Material

Title	Related SLoAs
EUROCONTROL - Integrated Tower Working Position (ITWP) Baseline HMI Description - V1.0 / 10/2020 https://www.eurocontrol.int/publication/integrated-tower-working-position-itwp-human-machine-interface-hmi-description	ASP03
EUROCONTROL - SPEC-171 - EUROCONTROL Specification for Advanced-Surface Movement Guidance and Control System (A-SMGCS) Services - Edition 2.0 / 04/2020 https://www.eurocontrol.int/publication/eurocontrol-specification-smgcs-services	APO01, ASP01, ASP02
SJU - SESAR Solution 02: Data Pack for airport safety nets for controllers http://www.sesarju.eu/sesar-solutions/high-performing-airport-operations/airport-safety-nets-controllers-conformance	APO01, ASP01, ASP02, USE01

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Consultation & Approval

Working Arrangement in charge	Airport Operations Team (AOT)
Outline description approved in	-
Latest objective review at expert level	-
Commitment Decision Body	Provisional Council (PC)
Objective approved/endorsed in	10/2015
Latest change to objective approved/endorsed in	10/2015

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