



AOP15 — Enhanced traffic situational awareness and airport safety nets for the vehicle drivers

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Enhanced Situational Awareness and Airport Safety Nets for the vehicle drivers should be used by those vehicle drivers who are allowed to operate in the manoeuvring area of an aerodrome.

The system consists of the following improvements for the vehicle drivers:

1. Provision of an Airport Moving Map in the vehicle, together with the display of the surrounding traffic, to enhance the driver's situation awareness: The Airport Moving Map function indicates the position of the vehicle on the airfield and the Ground Traffic Display function displays other traffic operating on the movement area of the airport. The other traffic to be displayed includes both aircraft and vehicles.
2. Provision of alerts to vehicle drivers to warn them of situations that if not corrected could end up in hazardous situations. Two types of alerts are considered:
 - a) Traffic alerts to warn the vehicle driver of a potential or actual conflict with an aircraft. Traffic alerts are not triggered with another vehicle but only with an aircraft.
 - b) Area infringement alerts to warn the vehicle driver when the vehicle is in a closed or restricted area while the vehicle is operating on the manoeuvring area.

The alerts are provided to the vehicle drivers in the form of an aural and/or visual alert with two levels of alert severity depending on the severity of situations:

- Caution alert for the less critical situations; and
- Warning alert for the most critical situations.

Two implementations have been considered for the generation of alerts:

1. Alerts may be generated by an on-board system; or
2. Alerts may be generated by a centralised server (connected to the A-SMGCS) with an uplink to the vehicle.

In implementation of this functionality, the frequency load of 1030/1090 MHz should be considered.

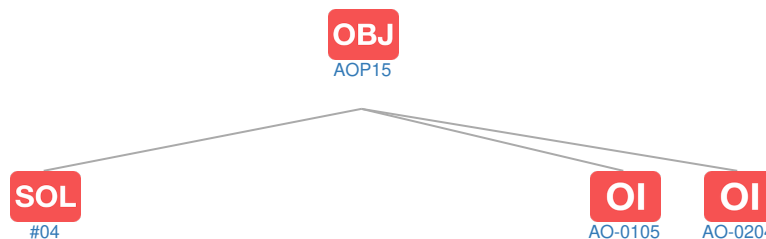
Increased situational awareness is essential for operations at airports especially in adverse weather conditions or other similar operating situations. Situational Awareness is important for vehicle drivers as they need to operate within the manoeuvring area regardless of weather conditions.

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	Regulator / Airport Operator / International Organisations and Regional Bodies
Type	SESAR
Scope	Local/Airport
Status	Active

Context

Related Elements

















Applicability Area(s) and Timescales

Applicability Area: (Subject to local needs)







Timescales	From	By	Applicable to
IOC used for Analytics functioning only - not for implementation planning	31-05-2019	-	Applicability Area
FOC used for Analytics functioning only - not for implementation planning	-	01-01-2030	Applicability Area

Links to ATM Master Plan Level 2

OI Operational Improvement Steps

Code	Title	IOC	FOC	Related Elements
AO-0105	Airport Safety Net for Vehicle Drivers	31-12-2022	31-12-2026	      
AO-0204	Airport Vehicle Driver's Traffic Situational Awareness	31-12-2022	31-12-2026	      

SOL Links to SESAR Solutions

Code	Title	Program	Related Elements
#04	Enhanced Traffic Situational Awareness and Airport Safety Nets for the vehicle drivers	SESAR1	     

PCP Links to PCP ATM Sub-Functionalities

Code	Title	Related Elements
No record found		

ICAO ICAO Block Modules: No associated data

References

Applicable legislation

None

Applicable ICAO Annexes and other references

None

Deployment Programme 2022

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Operating Environments

Airport

Expected Performance Benefits

Safety	This improved situational awareness combined with an alerting/warning system in case potential hazardous situations are detected, will not only improve safety for the vehicles operating in the manoeuvring area but also provide a safety enhancement for the aircraft operations, both on taxiways and runways, at the airport.
Capacity	-
Operational efficiency	-
Cost efficiency	-
Environment	-
Security	-

Stakeholder Lines of Action

Code	Title	From	By	Related Enablers
REG01	Promulgate the procedures for use of Enhanced Situational Awareness and Airport Safety Nets for vehicle drivers	01-04-2019		
APO01	Install "Onboard Ground Vehicle System" to process and display the own position and surrounding traffic			EN
APO02	Install SNET function in "Onboard Ground Vehicle System", to provide alerts to vehicle drivers			EN
APO03	Develop the procedures for use of "Onboard Ground Vehicle System" and SNET			
APO04	Develop safety assessment of the changes imposed by "Onboard Ground Vehicle System" and SNET			
APO05	Train all relevant staff in the use of "Onboard Ground Vehicle System" and SNET			
INT01	Develop standard for interface between A-SMGCS and On Board Ground Vehicle System			

Supporting Material

Title	Related SLoAs
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	INT01, REG01
SJU - SESAR Solution 04: Data Pack for Enhanced traffic situational awareness and airport safety nets for the vehicle drivers https://www.sesarju.eu/sesar-solutions/enhanced-traffic-situational-awareness-and-airport-safety-nets-vehicle-drivers	APO01, APO02, APO03, APO04, APO05, INT01, REG01

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	05/2019
Latest change to objective approved/endorsed in	-