

SMGCS & A-SMGCS

The European Experience

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Your safety is our mission.

Definitions

→ What is an SMGCS

→ No official ICAO definition

→ EU guidance material:

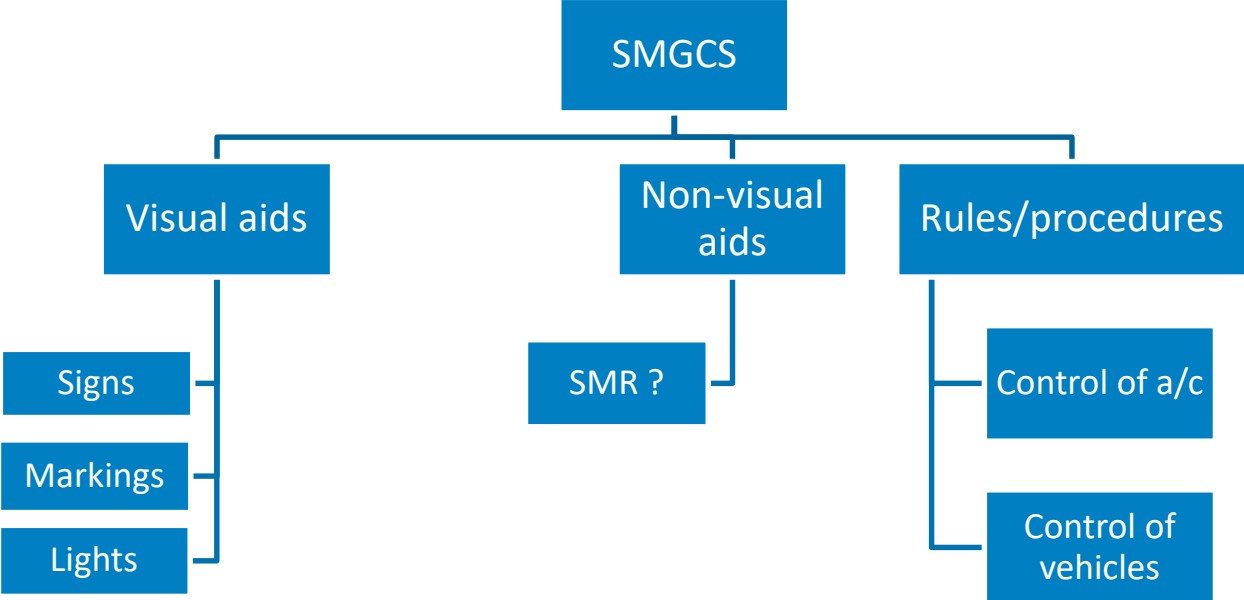
The SMGCS system comprises an appropriate combination of visual aids, non-visual aids, procedures, control, regulation, management and information facilities (Source: ICAO Doc 9476)

→ What is an A-SMGCS

→ ICAO Doc 9830

A-SMGCS: A system providing routing, guidance and surveillance for the control of aircraft and vehicles in order to maintain the declared surface movement rate under all weather conditions within the aerodrome visibility operational level (AVOL) while maintaining the required level of safety.

How we understand SMGCS



Need for SMGCS

- Already available at each aerodrome, however
 - different level of complexity based on:
 - aerodrome design characteristics
 - operational and meteorological conditions
 - human factors principles
- Need to be coordinated with air traffic services

What we check

- Visual aids
 - Compliance with the EASA Certification Specifications (based on Annex 14)
- Non-visual aids
 - SMR for operations below RVR 350 m
 - SMR for operations on higher RVR if traffic flow cannot be maintained by alternative procedures and facilities
- Procedures
 - LVPs (if required)
 - Standard taxi routes for complex aerodromes
 - Vehicle driving rules
 - Transponder operating procedures (if applicable)
 - Communication procedures
 - Operation of stop-bars (if provided)

A-SMGCS in EU

→ Aerodromes in the scope

- 18 aerodromes

- mainly hub aerodromes

- Important to the overall European ATMN to minimize delays

- Weather conditions

→ Objectives

- Enabling ATCOs to prevent hazards and incidents resulting from ATCO, flight crew or vehicle driver operational errors or deviations

- Detection and alerting of conflicting ATC clearances to aircraft and deviation of vehicles and aircraft from their instructions, procedures or routing that may potentially put the vehicles and aircraft at risk of a collision

A-SMGCS in EU

→ Functionalities

- Conflicting ATC clearances – CATC
- Conformance monitoring of alerts for controllers – CMAC
- Runway monitoring and conflict alerting – RMCA

→ How

- High level of automation
- Use of electronic flight strips (EFS)
- Integration with Flight Plan and Surveillance Data
- Connection with Airfield Lighting System
- Connection with Aerodrome Operational Database (AODB)

References

- ICAO Annex 14 Vol I – Aerodromes
- ICAO Doc 4444 – PANS-ATM
- ICAO Doc 9476 – SMGCS Manual
- ICAO Doc 9830 – A-SMGCS Manual
- ICAO EUR Doc 013 – Guidance Material on AWO at aerodromes
- ICAO Doc 7030 – Regional Supplementary Procedures
- EUROCAE ED-87D – MASPS for A-SMGCS including Airport Safety Support Service, Routing Service and Guidance Service
- Regulation (EU) 2021/116

Thank you very much for your attention

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