



AOP14.1 — Remote Tower Services

The remote tower concept enables air traffic control services (ATS) and aerodrome flight information services (AFIS) to be provided at aerodromes where such services are either currently unavailable, or where it is difficult or too expensive to implement and staff a conventional manned facility.

This Objective proposes to remotely provide ATC services and AFIS for one aerodrome handling low to medium traffic volumes or two low-density aerodromes (simultaneous by one operator), typically with traffic schedules comprising single movements, rarely exceeding two simultaneous movements per aerodrome. The basic configuration, which does not include augmentation features, is considered suitable for ATC and AFIS provision at low density airfields. However, the level and flexibility of service provision can be enhanced through the use of augmentation technology, such as an ATC surveillance display, surveillance and visual tracking, infra-red cameras etc.

This Objective also covers the possibility to apply the remote tower concept as a contingency solution in facility known as Remote Contingency Tower (RCT). This solution can be used when the local tower is not available and services need to be provided from a back-up location. The target environment for the majority of RCTs will be medium density aerodromes that are economically important.

NOTE 1: Being a Local objective, to be applied at individual States or ATC Unit level, to achieve their performance targets the objective does not have a mandatory implementation deadline. As indicative guidance, the FOC of the OI Steps on which all the three SESAR Solutions (#12; #13, #52; #71) are based are 31/12/2024 for SDM-0201 and 15/11/2023 for SDM-0205.

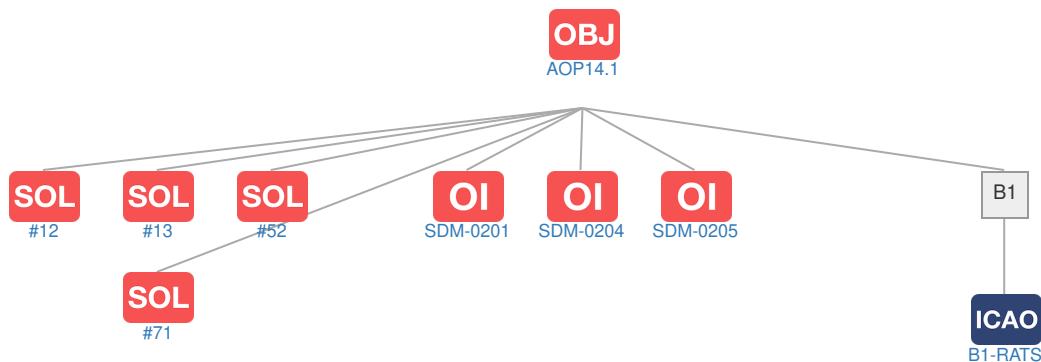
NOTE 2: This objective is linked to SESAR Solutions #12, #13, #71, and #52.

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 / Air Navigation Service Provider / Airport Operator
Type	SESAR
Scope	Local/Airport
Status	Active

Context

Related Elements



Applicability Area(s) and Timescales

Applicability Area: (Low to medium complexity aerodromes, 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
SDM-0201	Remotely Provided Air Traffic Service for Single Aerodrome	31-12-2020	31-12-2024	SOL OI EN OBJ DS ICAO
SDM-0204	Remotely Provided Air Traffic Service for Contingency Situations at Small to Medium Aerodromes (with a Single Main Runway)	17-01-2021	17-01-2025	SOL OI EN OBJ DS ICAO
SDM-0205	Remotely Provided Air Traffic Services for Two Low-density Aerodromes	15-11-2019	15-11-2023	SOL OI EN OBJ DS ICAO

SOL Links to SESAR Solutions

Code	Title	Program	Related Elements
#12	Single Remote Tower operations for medium traffic volumes	SESAR1	SOL OI OBJ DS EOC ICAO
#13	Remotely Provided Air Traffic Service for Contingency Situations at Aerodromes	SESAR1	SOL OI OBJ DS EOC ICAO
#52	Remote Tower for two low density aerodromes	SESAR1	SOL OI OBJ DS EOC ICAO
#71	ATC and AFIS service in a single low density aerodrome from a remote CWP	SESAR1	SOL OI OBJ DS EOC ICAO

PCP Links to PCP ATM Sub-Functionalities

Code	Title	Related Elements
No record found		

ICAO ICAO Block Modules

Designator	Title	Related Elements
B1		
B1-RATS	Remotely Operated Aerodrome Control	SOL OI OBJ PCP

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	-
Capacity	-
Operational efficiency	Improve the uniformity of service provision at low to medium density and remote aerodromes and sustain or increase the availability of the service (for example allowing ATS to be provided at an aerodrome, which previously was unable to financially support a service).
Cost efficiency	Cost reduction for ATS by optimisation of working time and conditions of ATCOs. Remote ATS facilities with several remote tower modules will be cheaper to maintain, and enable lower operating costs due to equipment economies of scale. The financial benefit may be further increased when operating in multiple mode, although in spring 2022 no multiple operations has been approved yet. It will also significantly reduce the requirement to maintain tower buildings and infrastructure. Cost benefits of RCT due to customer retention and reduced economic loss during contingency events.
Environment	-
Security	-

Stakeholder Lines of Action

Code	Title	From	By	Related Enablers
REG01	Supervise compliance with regulatory provisions			EN
ASP01	Develop, and deliver as necessary, a safety assessment of the changes imposed by the implementation of remote tower			
ASP02	Define and implement system improvements allowing for the implementation of remote tower			EN
ASP03	Develop and implement procedures for the use of Remote Tower			
ASP04	Train all operational and technical personnel concerned			
ASP05	Implement remotely provided air traffic service for contingency situations			EN
APO01	Define and implement local airport procedures and processes for the implementation of remote tower concept			
APO02	Train all operational and technical personnel concerned			

Supporting Material

Title	Related SLoAs
EASA - ED Decision 2019/004/R - ED Decision 2019/004/R - Guidance Material on remote aerodrome air traffic services and repealing Decision 2015/014/R 02/2019 https://www.easa.europa.eu/document-library/agency-decisions/ed-decision-2019004r	AP001, AP002, ASP01, ASP02, ASP03, ASP04, REG01
EASA - NPA 2022-02 (A) and NPA 2022-02 (B) - NPA 2022-02 (A) and NPA 2022-02 (B) Remote aerodrome air traffic services https://www.easa.europa.eu/document-library/notices-of-proposed-amendment/npa-2022-02-and-npa-2022-02-b	AP001, AP002, ASP01, ASP02, ASP03, ASP04, REG01
EC - COMMISSION IMPLEMENTING REGULATION (EU) 2017/373 - (OJ L 62, 8.03.2017, p. 1) - COMMISSION IMPLEMENTING REGULATION (EU) 2017/373 of 1 March 2017 laying down common requirements for providers of air traffic management/air navigation services and other air traffic management network functions and their oversight, repealing Regulation (EC) No 482/2008, Implementing Regulations (EU) No 1034/2011, (EU) No 1035/2011 and (EU) 2016/1377 and amending Regulation (EU) No 677/2011 03/2017 https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R0373&from=EN	ASP01
EUROCAE - ED-240A - Minimum Aviation System Performance Standards (MASPS) for Remote Tower Optical Systems 10/2018 https://eshop.eurocae.net/eurocae-documents-and-reports/ed-240a/#	ASP02
EUROCONTROL - Air Navigation Systems Safety Assessment Methodology (SAM) - Version 2.1 / 11/2006 https://www.eurocontrol.int/tool/safety-assessment-methodology	ASP01
SJU - SESAR Solution 13: Data Pack for Remotely provided air traffic service for contingency situations at aerodromes https://www.sesarju.eu/sesar-solutions/remotely-provided-air-traffic-service-contingency-situations-aerodromes	ASP05

Consultation & Approval

Working Arrangement in charge	Airport Operations Team (AOT)
Outline description approved in	-
Latest objective review at expert level	05/2018
Commitment Decision Body	Provisional Council (PC)
Objective approved/endorsed in	09/2017
Latest change to objective approved/endorsed in	-