Annex 2

Part 171 Aeronautical Telecommunications and Radionavigation Services (ATEL/RADNAV) Service Providers

Version 5.1 - January 2023

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Introduction

This annex is an integral part of the CASA Surveillance Manual (CSM), which should be referenced at all times. To allow for more frequent revisions, this annex can be updated independent of the CSM and other annexes. The process of updating this annex requires verification and approval from its owners and sponsors, as well as from Coordination and Safety Systems (CSS). An updated version can only be published once CSS has finalised the format, with the latest revision history data included in the revision table.

Revision history

Revisions to this annex are recorded below in order of the most recent first.

Version Nº.	Date	Parts / sections	Details
5.1	January 2023	Section 2	Update to CSM reference Additional prompts in tables
5.0	December 2019	Section 1.1	Change of where to locate Health Check mandatory elements
4.0	April 2019	Inclusion of Introduction and Revision history.	These inclusions allow for updates and revisions independent of the CSM and other annexes. deleted due to NSSP commencement
4.0	April 2019	Section 1 - Table 2	Added additional prompts to the following elements: Maintenance System Maintenance Assurance ATEL/RADNAV Operations Security Data, Records and Documents Support Systems Communications Personnel Standards Personnel Rostering
4.0	April 2019	Section 2.1	Removal of recommended Health Check timeframes.
4.0	April 2019	Section 3	Examples provided for Level 2 Operational Check Elements Removal of recommended surveillance intervals.

Version Nº.	Date	Parts / sections	Details
4.0	April 2019	Section 4	Addition of ref doc ICAO Doc 8071
			Addition of third-party audits

1 Overview

This Annex provides instructions for conducting surveillance of CASR Part 171 Aeronautical Telecommunications and Radio Navigation (ATEL/RADNAV) services and contains information relating to the following:

- Systems and Elements
- Systems and Elements – Health Checks
- Surveillance Currency Guide
- Information Sources.

2 Systems and Elements: ATEL/RADNAV Service Providers

The audit technique involves assessing the documented system, comparing it against the actual system processes. The system is assessed for compliance and sampling conducted as appropriate. The assessment of the system is achieved by a questioning technique using the four attributes (12 components) of the Management System Model (MSM), see the CSM Sections on System attributes – Management System Model and the Systems attributes (table).

The CASA description of the Aeronautical Telecommunications and Radionavigation Services (ATEL/RADNAV) Service consists of four systems incorporating 14 elements.

Table 1: System and Elements

Systems	Elements
Airways	Maintenance System
	Works Control
	Maintenance Assurance
Operations	ATEL/RADNAV Operations
	Security
	Data, Records and Documents
	Support Systems
	Communications
Personnel	Personnel Standards
	Personnel Rostering
Safety Management	Safety Policy and Objectives
	Safety Risk Management
	Safety Assurance
	Safety Promotion

Table 2: System and Elements - Airways

SYSTEM: Airways	
ELEMENT: Maintenance System	
This element describes the systems and the processes for achieving the 'what' maintenance activities that are required to be done and 'when' these maintenance activities are to be completed.	
Prompts:	
Corrective Maintenance (CM) Equipment recorded in SAP Plant Maintenance system	Preventative Maintenance (PM) equipment recorded in SAP Plant Maintenance system
Equipment linked to Technical Functional location and Service Functional location	Ensure regulated facilities have maintenance plans available in SAP
Service Restoration Times (SRT) available for corrective maintenance activity	Check PM work orders for correct data entry
Check Corrective Maintenance for correct data entry	Ensure Mean Time Between Inspections (MTBI) and tolerance for PM schedules agrees with the relevant equipment Airways Engineering Instruction (AEI)
ELEMENT: Works Control	
This element describes the systems and the processes for achieving the 'how' works activities are conducted and 'who' completes the works activities.	
Prompts:	
Ensure PM and CM work orders are carried out by appropriately Certified staff. Refer to TechCert requirements	Works plans
Review CM work orders exceeding SRT	Post-accident performance inspection
Review PM work orders exceeding scheduled date plus tolerance	Review all work group specific work orders with schedule role and/or team leader to ensure adequate resourcing
ELEMENT: Maintenance Assurance	
This element describes the systems and the processes for ensuring the ATEL or RADNAV systems are fit for service. This is accomplished primarily through the authorisation holder's internal audit processes and closes the loop on the entire Airways system.	
Prompts:	
Review of (Reliability Maintainability Availability) RMA of facilities using SAP A1 notification data extraction	Site visit maintenance validation activity
Review performance inspections	Review previous CASA audit reports
Review Standard Operating Condition (SOC) Standard Configuration Data (SCD)	Review internal Airservices Audit reports

SYSTEM: Airways	
Ensure facilities included on Part 171 ATEL/NAV Certificate	Review Part 171 Operations Manual

Table 3: System and Elements – Operations

SYSTEM: Operations	
ELEMENT: ATEL/RADNAV Operations	
This element addresses the systems that ensure the authorisation holder contains its operations to those authorised by legislation. This is primarily achieved using a properly structured organisation with appropriate communication channels. Appropriate key personnel are a key link in ensuring ATEL/RADNAV operations are not only contained but are appropriate controlled. Examples include the Business Manager Lifecycle Delivery, Business Manager Asset Strategy, Services Advisor and System Technical Advisor (previously referred to as Chief Engineer, Engineering Authority and Maintenance Authority).	
Prompts:	
Organisation structure	Supervisory personnel
Operational staff	Support staff
Staff roles and responsibilities	Local management
Safety accountabilities of management and staff	Technology Endorsements, qualifications, licensing
Management of System to Service List	Following Technology Management Framework (TFM) and other linked processes
ELEMENT: Security	
This element describes the systems that make up the control of all security aspects associated with ATEL/RADNAV system. The documented system should address security aspects relating to personnel, vehicles, animals, equipment of any sort and aircraft within the confines of ATEL or RADNAV equipment.	
Prompts:	
Security program	Document control and access
Physical and electronic security assurance	Document management and warehousing
Vehicle Access	Contingency measures
External measures (fencing)	Internal security (staff and visitor access to secure areas)
Local instructions	Log book records
ELEMENT: Data, Records and Documents	
This element addresses all technical data, design drawings, regulatory documentation and quality/procedures manuals used in the course of carrying out ATEL/RADNAV operations.	
Prompts:	

SYSTEM: Operations	
Availability / Adequacy (dependent upon planned activities)	Software management
Use of current documentation	Drawing modification and change procedure
Commissioning of new facilities	Operations Manual General
Use of current handbooks	Site logbook management, data entry and control
Use of Current Airways Engineering Instructions (AEIs)	Control of SOC/SCD
Use of current Procedure and Policy documents	Document authorisation
Drawing control	Document release management and process
DAMP documentation	Monitoring and improvement
Storage of documents and records (e.g., Orbit, Data viewer, Doc Search)	Document change management and process
ELEMENT: Support Systems	
This element addresses all aspect of operations that go into supporting the objectives of the authorisation holder. This may include, but is not limited to, aspects such as managing the use of computer systems, providing resources for travel and appropriate facilities.	
Prompts:	
Test equipment use - Training on specialised tooling/equipment; Storage/protection	Appropriate and available spares, stores and distribution
Review of tool control, monitoring and improvement	Availability/Adequacy (dependent upon planned activities); Identification (traceability, history, correction and status)
IT Support	Staff tools and PPE
Test equipment calibration	Line Replacement Unit (LRU) repair process
Replacement of aging support facilities program	Support systems for aging/legacy/obsolete facilities
Support IT systems (e.g. SAP Plant Maintenance system, rostering system)	
ELEMENT: Communications	
This element addresses aspects of the authorisation holders operation related to internal and external communications and includes but is not limited to communications with staff while in the field, use of obsolete or damaged equipment and communication links with other relevant parties.	
Prompts:	
Incident/event escalation process	Agreements with third party service providers

SYSTEM: Operations	
Agreements with aerodrome operators	Transfer of information arrangements

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Table 4: Systems and Elements – Personnel

SYSTEM: Personnel	
ELEMENT: Personnel Standards	
The ATEL/RADNAV authorisation holder is required to establish and maintain an appropriate organisation, with sound and effective management structure that uses a safety management system. The standards of personnel, including third party providers, are required to be documented detailing induction training, periodic recurrent training and any required upgrade training. A process for dealing with unsatisfactory performance should also be documented.	
Prompts:	
Base level training requirements	Staff performance review methodology
Specific equipment Training Needs Analysis (TNA)	External contractor management
Recording of qualifications e.g. Technology Endorsements, qualifications, licensing, TechCert reports	Proficiency program, Induction/OJT training, Recurrent training program, Checking and training, TechCert assessments, Technology Endorsement assessments
Course delivery and student evaluation	Technology Endorsements, qualifications, licensing and certifications, TechCert program
Adherence to people and change business rules	DAMP supervision
DAMP education and testing	Continuing Professional Development (CPD) and maintaining competency for Engineers
ELEMENT: Personnel Rostering	
This element plays a significant role in achieving safe operations as it is through rostering that the authorisation holder ensures that required tasks are carried out with appropriate personnel who have appropriate qualifications, certification, operate in accordance with legislative requirements, certification and have appropriate recency (if applicable) in order to safely conduct the planned task from the start of the duty period until completion. Rostering should take into consideration fatigue factors associated with long duty days or late-night duty. The roster should, where appropriate, be published and displayed in a prominent position.	
Prompts:	
Appropriately trained staff; Qualifications	Fatigue management
Safety accountabilities of managers	Technology Endorsements, qualifications, licensing and certifications, TechCert certification and currency
Resourcing methodology – SLAs, SRTs	Future staffing requirements
Organisation Chart	Maintenance Workload Indicator (MWI)
Roster production and management	

Table 5: Systems and Elements - Safety Management

SYSTEM: Safety Management	
ELEMENT: Safety Policy and Objectives	
This element contains the systems and processes that ensure effective governance to support the safety management system are in place, this will include processes for the review and update of the authorisation holder's management and commitment (through Safety Policy, Just Culture and Safety Objectives), the appointment of key personnel, the accountabilities of management, the Emergency Response Plan and SMS documentation.	
Prompts:	
Management commitment and responsibility – safety policy	Appointment of key personnel
Management commitment and responsibility – just culture	Relevant third-party relationships and interactions
Management commitment and responsibility – safety objectives	Coordination of emergency response plan
Safety accountabilities of managers	SMS documentation
Part 171 Operations Manual	
ELEMENT: Safety Risk Management	
This element contains the systems and processes to ensure investigation, and analysis, of the safety risks associated with identified hazards resulting in the implementation of effective safety risk controls.	
Prompts:	
Hazard identification processes – reactive	Risk assessment and mitigation
Hazard identification processes – proactive	DAMP supervision
Issue identification, management and escalation	
ELEMENT: Safety Assurance	
This element contains the systems and processes for setting, recording and evaluating system performance, conformance with regulations and company procedures, a process for the conduct of internal safety investigations, effectively manage change across the aviation activities conducted and drive continuous improvement of the SMS.	
Prompts:	
Safety performance monitoring and assessment – system performance	Internal safety investigation
Safety performance monitoring and assessment – assurance	Management of change

SYSTEM: Safety Management	
Safety performance monitoring and assessment – flight data analysis (if applicable)	Continuous improvement of SMS
DAMP supervision	
ELEMENT: Safety Promotion	
This element contains the systems and processes for ensuring personnel are appropriately trained, are aware of the SMS to a degree commensurate with their positions, which conveys safety-critical information, explains why particular safety actions are taken and explains why safety procedures are introduced or changed must be evident.	
Prompts:	
Training and education – SMS, Human Factors	Safety communication
DAMP education and testing	

1.1   Health Check

Health Check mandatory elements are available on the CASA Intranet. Details of the current mandatory elements for each authorisation type are published separately to the CASA website.

2 Surveillance Currency Guide: ATEL/RADNAV Service Providers

Surveillance level	Type	Elements
Level 1	Systems Audit	Systems and Compliance
	Health Check	Specific Elements and Compliance
	Post-authorisation Review	Entry Control Elements
Level 2	Operational Check	e.g. Specific elements, risks and compliance, including: • desktop reviews • manual reviews • key personnel interviews • site inspections • other – this includes new equipment, procedures and/or projects • Unscheduled – safety occurrence (onsite or desktop as required) Unscheduled – request from CASA Executive (onsite or desktop as required)
Note: Surveillance intervals are determined by the National Surveillance Selection Process (NSSP). Refer to the NSSP planned surveillance schedule for further information regarding surveillance intervals.		

3   Information Sources

The following is a non-exhaustive list of information sources that can be accessed to support the assessment:

- past Surveillance Reports in Sky Sentinel
- third-party audits
- past Airservices internal audit reports
- Airservices System Action Improvement Requests, SAIRs, CIRRIS reports
- Airservices HAZLOG entries
- surveys
- regulatory history, findings (Safety Finding and Safety Observations)
- past Surveillance Reports and findings (Safety Finding and Safety Observations)
- Airways System Issue Database (ASID)
- Regulatory Service activity
- project activity
- information gathered by the authorisation holder
- external information gathered from industry or other government agencies
- Enforcement action
- past accident/incident history
- risk management plans provided by the authorisation holder.
- ref doc ICAO Annex 10
- ref doc ICAO Doc 8071
- ref doc CASR 1998 Part 171
- ref doc MOS Part 171
- ref doc Airservices OPSMAN Part 171
- ref doc Airservices SMS
- management interviews
- team leader interviews
- staff interviews
- organisation chart
- Maintenance Workload Indicator (MWI).

A large portion of this information is available to the surveillance team and authorisation management team via the Data Warehouse using the PowerBI application.

Note: For advice on where and how to access required information refer to CSM – Information Capture and Access.