



ICAO

INTERNATIONAL CIVIL AVIATION ORGANIZATION

A UN SPECIALIZED AGENCY

*Workshop on the Implementation of
Amendment 82 to Annex 3 to Chicago
Convention and the PANS-MET*

(Praia, Cabo Verde, 30 March – 3 April 2026)



Session 3: Operational and institutional impacts

PPT3.3. Regulatory compliance and safety oversight requirements

ICAO, WACAF Office

Overview

01 Introduction

03 Regulatory Compliance Requirements

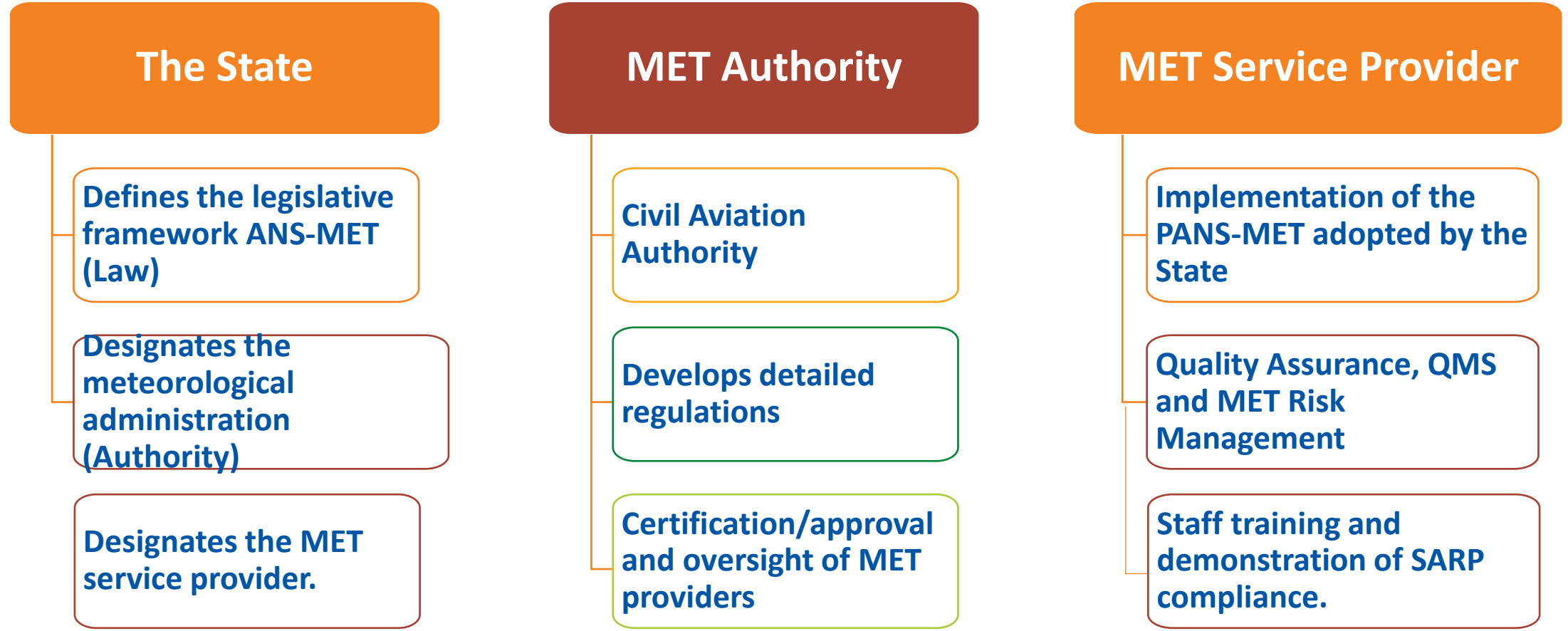
02 Roles of States, CAAs and MET Providers

04 Safety oversight requirements

1. Introduction

- Amendment 82 to Annex 3 – *Meteorological service for International Air Navigation*, and the PANS-MET, Doc 10157 :
 - ◇ Provide a distinction between regulatory requirements and implementation methods.
 - ◇ Clarify the responsibilities between:
 - **Meteorological Authority (Regulation & Oversight)**
 - **Meteorological service provider (operational implementation)**
- The implementation of Annex 3 and PNS-MET implies an adaptation of the national compliance and surveillance framework.

2. Roles of States, CAAs and MET Providers



3. Regulatory compliance requirements

3.1. Transposition into the National Framework

Resolution adopting Amendment 82



Adoption of
AMBD 82 to A3

Approval of the PANS-TEM Doc 10157



Approval of
PANS-MET Doc 10157

States to:

- Ensure that **Article 28 of the Civil Aviation Act is reflected** in the National Civil Aviation Act.
- Update the national MET regulations **incorporating the new provisions of Amendment 82.**
- **Notify the ICAO of differences** (Art. 38 CC).
- **Adopt the PANS-MET** in national regulations.
- Explain roles, responsibilities and interfaces (MET Administration, MET Service Provider, ATS, AIM, etc.).

3. Regulatory compliance requirements

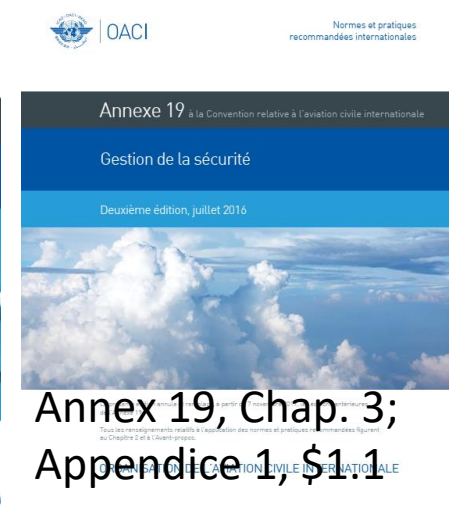
3.2 Clarification of responsibilities

- Amendment 82 clarifies:
 - Regulatory function.
 - Service provision function.
 - Official designation of the MET provider.
 - Contractual framework in case of outsourced service provision.
- **A3, 21st Ed Chap. 2 Definitions**
- *Meteorological authority.* The entity arranging for the provision of meteorological service for international air navigation on behalf of a Contracting State, and providing regulation and oversight of the meteorological service
- *Meteorological service provider.* The relevant entity designated to provide meteorological service for international air navigation on behalf of a Contracting State..
- A3 Chap. 2 STD 2.1.4 Each Contracting State shall designate the entity, hereinafter referred to as the **meteorological authority**, to **arrange for the provision** of meteorological service for international air navigation on its behalf..
- A3 Chap. 2 STD 2.1.5 Each Contracting State shall designate an entity (or several entities), hereinafter referred to as the meteorological service provider, to provide meteorological service for international air navigation on behalf of the Contracting State.
- A3 Chap. 3 STD 3.3.1 A Contracting State, having accepted the responsibility for providing air traffic services within a flight information region (FIR) or a control area (CTA), **shall establish**, in accordance with regional air navigation agreement, **one or more MWOs**, or **arrange for another Contracting State to do so**.

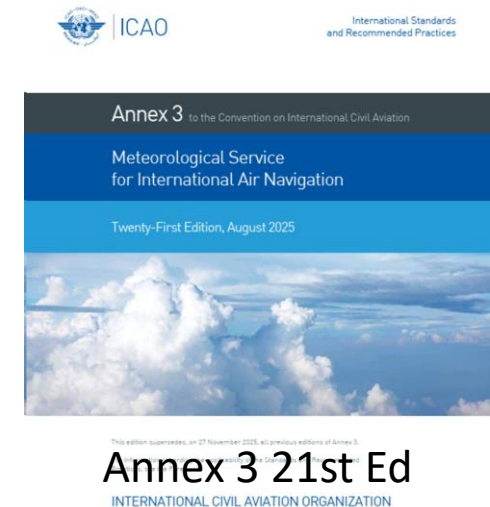
3. Regulatory compliance requirements

3.3. National MET Compliance Process

- Promulgation of the Civil Aviation Act.
- Incorporation of SARPs into national MET regulations.
- Adoption of the PANS-MET in national regulations.
- Review of manuals, SLAs, letters of agreement (MET–ATS, etc.), internal procedures.
- Gap Analysis Annex 3 & PANS-MET vs National Situation (Gap Analysis).
- Corrective action plan with priorities, deadlines and responsibilities.



Annex 19, Chap. 3;
Appendix 1, §1.1



Annex 3 21st Ed
INTERNATIONAL CIVIL AVIATION ORGANIZATION

3. Regulatory compliance requirements

3.4. Compliance

- MET service providers to:
 - ◇ Update the operational operating procedures (SOPs) in accordance with the PANS-MET adopted by the State;
 - ◇ Apply SOPs incorporating the PANS-MET procedures adopted by the State;
 - ◇ Strengthen the management of hazardous phenomena (volcanic ash, tropical cyclones, space weather).
 - ◇ Review/develop quality processes and procedures incorporating the new services introduced by Amendment 82 (SWX, QVA, VONA, Radioactive Emissions into the atmosphere, etc.);
 - ◇ Demonstrate compliance with SARPs (Annex 3);
 - ◇ Gradually develop their capacity to exchange meteorological information in digital format (e.g. IWXXM).

3. Regulatory compliance requirements

3.5. Quality Assurance and Quality Management System for MET

- MET Service Providers to:
 - ◇ Implement effective quality assurance of meteorological information;
 - ◇ Identify and manage risks related to meteorological services, including risks associated with digitalization and interoperability;
 - ◇ Implement and maintain a Quality Management System (QMS) for meteorological information in compliance with ICAO/WMO requirements;
 - ◇ Ensure traceability of OPMET data;
 - ◇ Establish a mechanism for monitoring the performance of meteorological services.

3. Regulatory compliance requirements

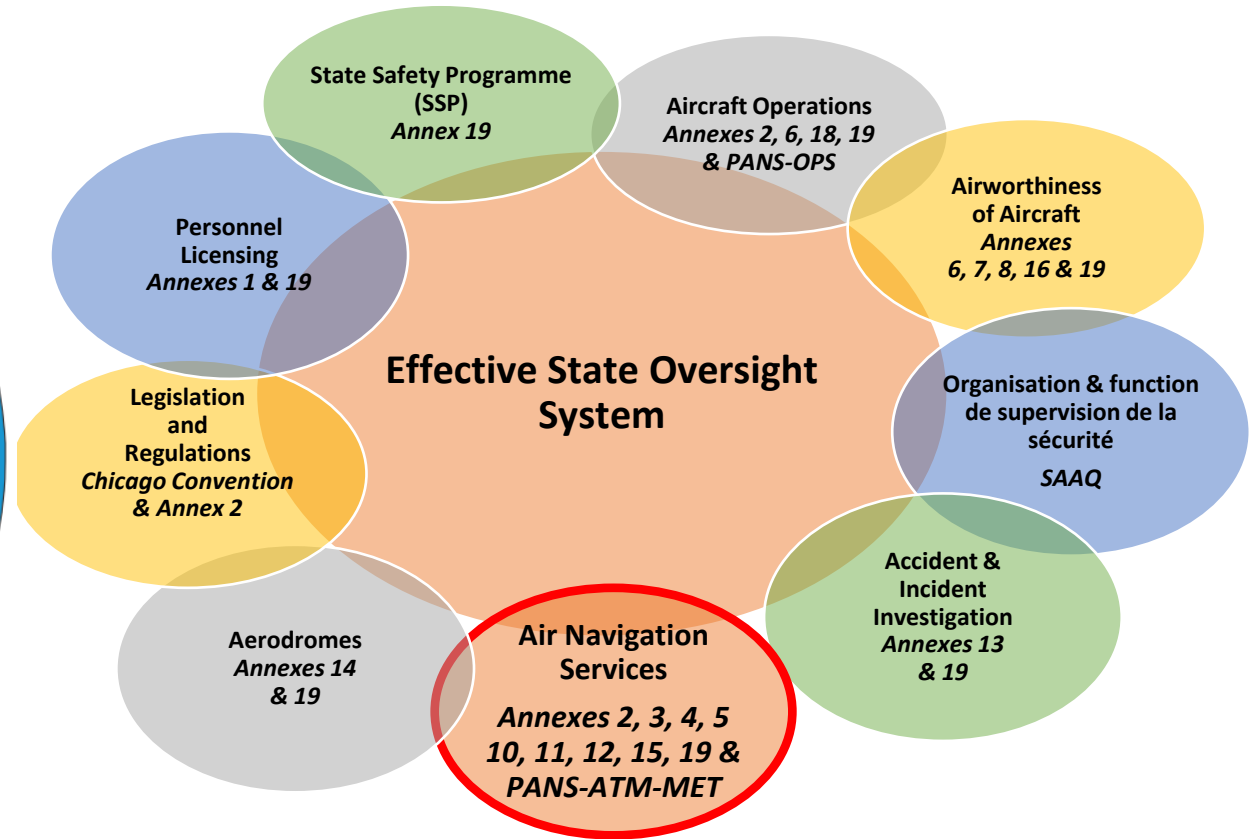
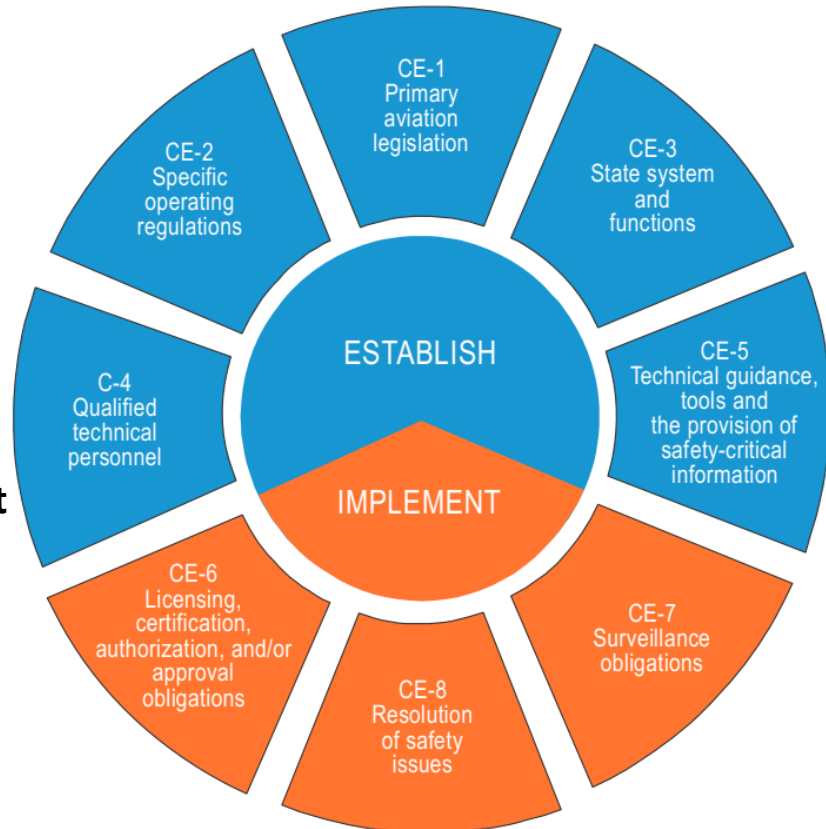
3.6. Integration of the new requirements of Amendment 82

- Identify the **new requirements impacting national regulations** and MET services.
- **Update national regulations** and technical documentation.
- **Develop a transition plan** including the implementation of systems, training, procedures, etc.
- **Leverage support from the WACAF Office** and regional projects (CODEVMET-AFI).

4. Safety oversight requirements

4.1. Continuous surveillance

Effective safety oversight system requires **eight (8) critical elements (ECs)**.



- Five elements are related to the establishment of the system, and three elements are related to the implementation of the system

- Nine (9) audit areas

4. Safety oversight requirements

4.3. Oversight Principles and ‘Risk-Based Oversight Approach’

- Oversight is based on the eight critical elements of the State safety oversight system.
- Oversight relies on a combined compliance/performance/risk-based approach.
- In terms of MET indicators, oversight focuses on data integrity, system availability, quality, timeliness of information provision, safety events, etc.
- Integration of MET oversight into the State’s overall ANS framework.

4. Safety oversight requirements

4.3. Implementation of the PANS-MET

- **PANS-MET, Doc 10157: detailed MET procedures to facilitate the transition to the SWIM environment.**
- **Integration of PANS-MET into national regulations:**
 - ◇ **Option 1: Direct integration into regulations;**
 - ◇ **Option 2: Through national guidance material and manuals.**
- **National PANS-MET Plan: for the establishment of processes, systems, human resources, training, etc.**
- **Demonstration of compliance during USOAP CMA activities and regional assessments.**

4. Safety oversight requirements

4.4. New challenges related to digital transformation

- Amendment 82 introduces additional challenges, including:
 - ◇ Validation of digital data (IWXXM)
 - ◇ System interoperability
 - ◇ Security of data exchanges (SWIM)
 - ◇ Resilience of MET infrastructures

***Note:** Oversight should now cover systems and data flows, not only traditional products.*

Safety oversight requirements

Means of assessing the conformity of MET service Providers

- Periodic audits and inspections;
- Acceptance/Approval of Manuals;
- Follow-up of non-conformities and corrective action plans;
- Safety Event Analysis.



Thank You!