



**ORGANIZACIÓN DE
AVIACIÓN CIVIL
INTERNACIONAL**



AERONAUTICAL FREQUENCY MANAGEMENT IN THE SAM REGION

From Frequency Finder database quality control to coordinated spectrum protection towards WRC-27

Agenda Item 6.2

ICAO South American Regional Office

NAM/CAR/SAM Regional WRC-27

Preparatory Workshop

SAM

31 August – 1 September 2026

1. Why aeronautical frequency management matters

Spectrum management is a CNS safety and resilience function, not only an administrative process

A finite resource

Radio spectrum is scarce, demand is increasing and aeronautical systems must retain protected access.

CNS dependency

Current and future CNS/ATM systems depend on sufficient and suitably protected radio spectrum.

Operational impact

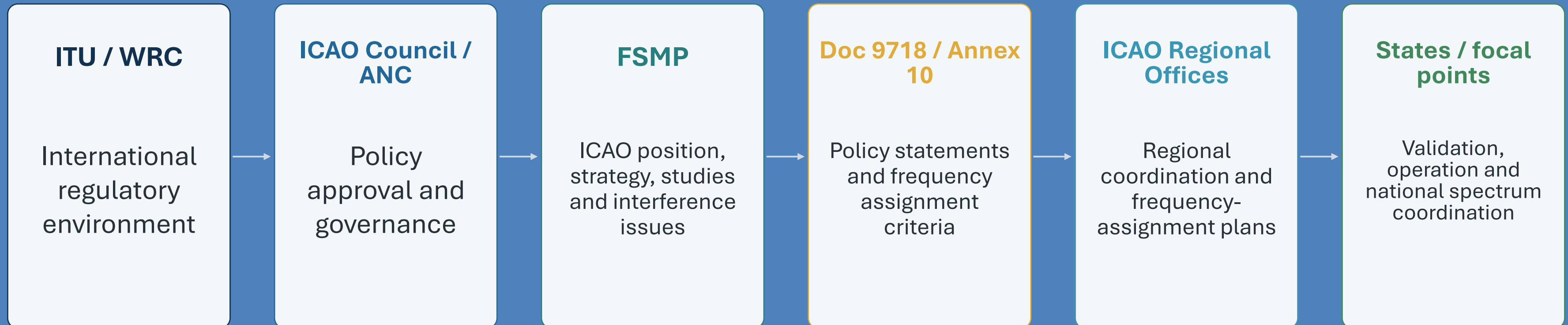
Interference, incompatible assignments or poor records can directly affect communication, navigation and surveillance services.

SAM focus: make frequency information reliable enough to support planning, compatibility analysis, coordination and protection.

2. ICAO spectrum-management framework

2

How global policy, technical criteria and regional implementation connect



The SAM Office role sits at the implementation interface: technical criteria and global policy become regional coordination with States.

3. Doc 9718: from policy to implementation

2

Two volumes, two complementary functions for regional frequency management

DOC 9718 — VOLUME I

ICAO spectrum strategy, policy statements and related information.

It supports States and ICAO in preparation for ITU/WRC activities and explains the policy basis for protecting aviation spectrum.

DOC 9718 — VOLUME II

Frequency assignment planning criteria for aeronautical radio communication and navigation systems.

It provides the technical basis used by States and Regional Offices when coordinating assignments.

In SAM, Frequency Finder quality control is the regional implementation layer of this policy-and-criteria framework.

4. The VHF COM frequency-management challenge

2

Congestion and new concepts make database quality operationally relevant

Global VHF COM channel pressure
(excluding Europe and North America)

98% in use

Accurate and consistent data is required

Compatibility between terrestrial VHF and future space-based VHF depends on reliable frequency records.

Inter-regional coordination matters

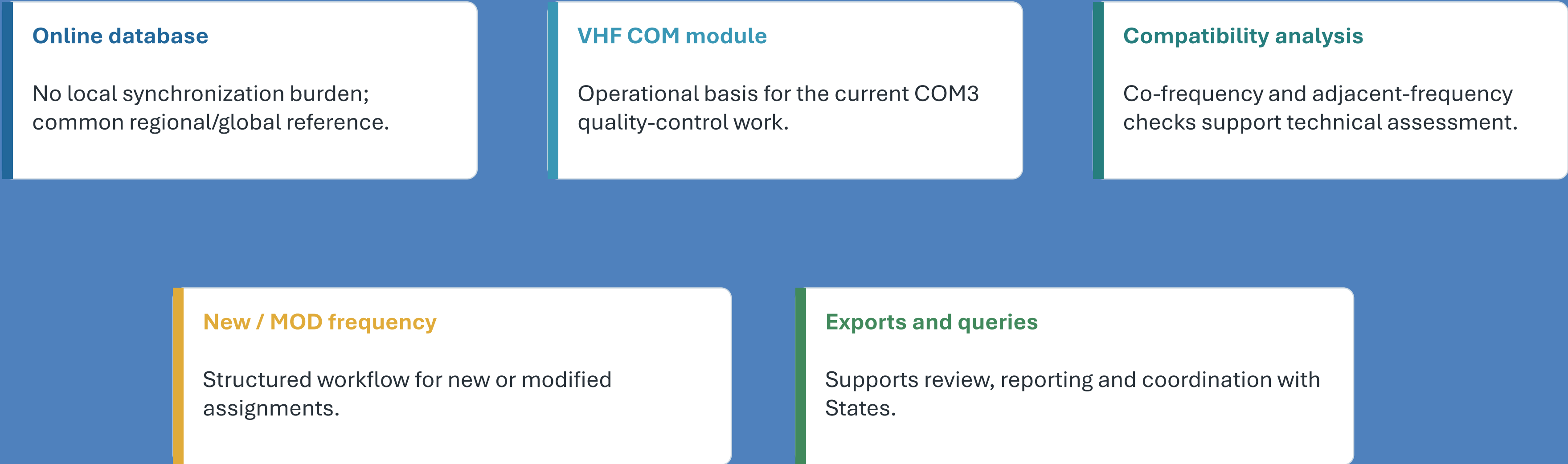
Frequency Finder is being used as the mechanism to implement broader coordination.

SAM implication

The regional quality-control process is not optional housekeeping; it is a prerequisite for future planning.

5. Frequency Finder: ICAO’s assignment-management and coordination tool

A common platform for data, analysis and coordination



Core message: Frequency Finder is not only a database — it is a regional coordination tool.

5. Frequency Finder: ICAO's assignment-management and coordination tool

2

A common platform for data, analysis and coordination

Online database

No local synchronization burden;
common regional/global reference.

VHF COM module

Operational basis for the current
COM3 quality-control work.

Compatibility analysis

Co-frequency and adjacent-
frequency checks support technical
assessment.

New / MOD frequency

Structured workflow for new or modified
assignments.

Exports and queries

Supports review, reporting and
coordination with States.

Core message: Frequency Finder is not only a database — it is a regional coordination tool.

6. SAM Frequency Finder database quality-control process

From AIP comparison to validated Frequency Finder 2 data

Validation workbook logic

Black text

AIP source — official national reference

Red text

Existing Frequency Finder VHF COM3 data requiring State check

Green highlight

AIP and Frequency Finder match, but still require confirmation

Green edits

New or corrected data provided by the State

Case 1 — In AIP and in FF

Confirm all fields and correct if needed.

Case 2 — In AIP but not in FF

Confirm it is in operational use and complete mandatory fields.

Case 3 — In FF but not in AIP

Confirm whether it is in use or out of use; obsolete records can be removed.

7. What States are validating

The quality-control process verifies both technical and operational consistency

Identification

Country, country code, ICAO code, airport/facility name, location

Coordinates

Latitude and longitude consistent with the AIP

Frequency + service

Frequency in MHz and standard service nomenclature: ACC, APP, TWR, AFIS, AOC, FIS, ATIS

DOC

Range/height or Area DOC for ACC/APP sectors

Planning fields

ER Group and Category: ICAO or NAT

Operational status

Mandatory State confirmation: in use / out of use; NAT sensitive / not sensitive

8. Roles in the SAM database quality-control cycle

2

The process requires coordinated responsibilities at global, regional and State level

STATES

- Review Excel workbooks
- Confirm frequencies
- Correct errors
- Complete missing fields
- Mark in use / out of use

ICAO HQ

- Provide source files
- Consolidate responses
- Validate the final database
- Support Frequency Finder 2

ICAO SAM OFFICE

- Coordinate with States
- Conduct focal-point review meetings
- Supervise data quality
- Ensure regional consistency

The SAM Office is the coordination bridge between State operational knowledge and ICAO's global frequency-management system.

9. SAM regional rollout: from individual workbooks to a regional picture

Country/territory-specific validation files feed one coordinated regional dataset

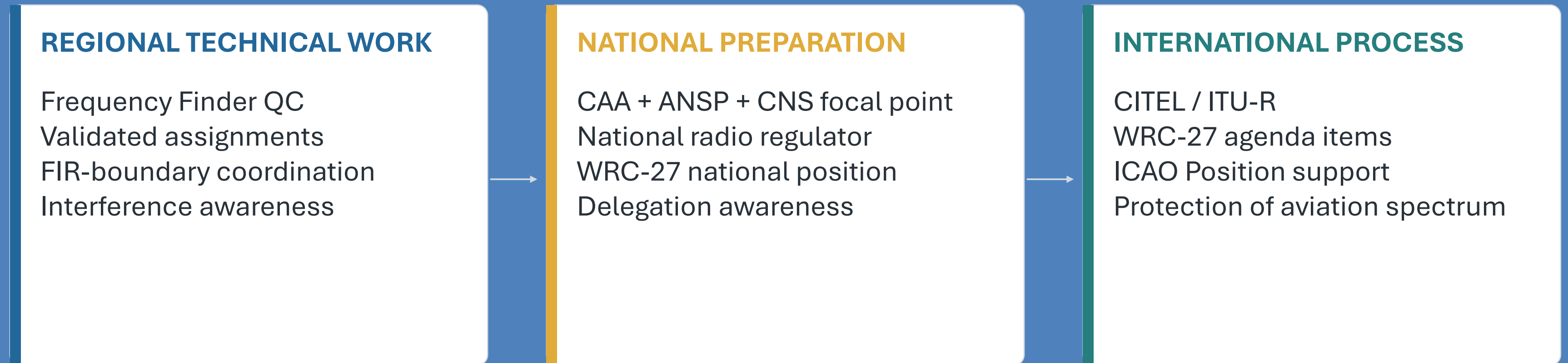


Priority review focus: ACC, APP, TWR, FIR-boundary frequencies, oceanic/remote sectors and internationally coordinated services.



10. From regional frequency management to WRC-27 preparation

Reliable SAM data supports national and regional aviation spectrum positions



SAM message: the quality of regional frequency data strengthens the technical basis for aviation participation in national and international spectrum processes.

11. What SAM needs from States now

Action-oriented outcomes for the regional frequency-management cycle

Keep data current

Update and validate assignments using the AIP as the primary reference.

Confirm operational status

Mark each frequency as in use or out of use; identify sensitive NAT records.

Complete mandatory fields

ICAO code, service, DOC, ER Group, Category and coordinates.

Use Frequency Finder systematically

Use common ICAO tools for planning, analysis and coordination.

Coordinate early

Address FIR-boundary and cross-border cases bilaterally or multilaterally.

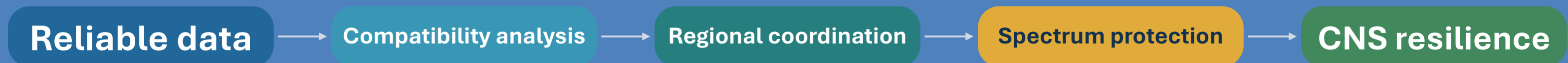
Engage national regulators

Connect aviation requirements with national spectrum and WRC-27 preparation.

SAM CLOSING MESSAGE

The regional challenge is not simply to find a frequency.

It is to maintain reliable data, apply common planning criteria, coordinate across FIR boundaries and ensure that the spectrum required by CNS remains available and protected.



ICAO South American Regional Office

Gracias

