

# Airspace and Air Navigation Plan – A Framework

**Key Concepts (Global ATM Concept):** *Seamless – Safe – Interoperable*

**Moving from equipment-based to performance-based system.**

**Measuring progress: Expectations – Key Performance Areas – Objectives by Indicators and targets.**

- Based on ICAO Global Plan, Regional Plan (if applicable) and State Plan.

**ICAO Guiding Documents:**

Global Air Traffic Management Operational Concept (DOC 9854)

Global Air Navigation Plan (Doc 9750), and Global Plan Initiatives

ICAO Documents, Manuals and Guidance Material

Asia Pacific Regional Air Navigation Plan (Doc 9673)

- Linked to the **State Safety Programme**
- Linked to the **National Airspace Policy**
- Covers-
  - ATM - Air Traffic Management
  - CNS – Communications Navigation Surveillance
  - AGA – Aerodrome & Ground Aids
  - AIM – Aeronautical Information Management
  - MET – Meteorology
  - OPS – Airworthiness, Operational Approvals

# Overview of the Framework for the Plan

## National Airspace Policy

- > Government's desired outcomes and expectations for airspace & air navigation systems
- > Policy principles to help resolve divergent views

### ICAO Guiding Documents

- Global ATM Operational Concept
- Global Air Navigation Plan
- ICAO Documents, Manuals & Guidance Material
- Asia-Pacific Regional Air Navigation Plan

## National Airspace and Air Navigation Plan

- > To reduce disruption during the transition to new systems
- > To synchronise changes and investment (= coordination)
  - > To clarify roles and resourcing

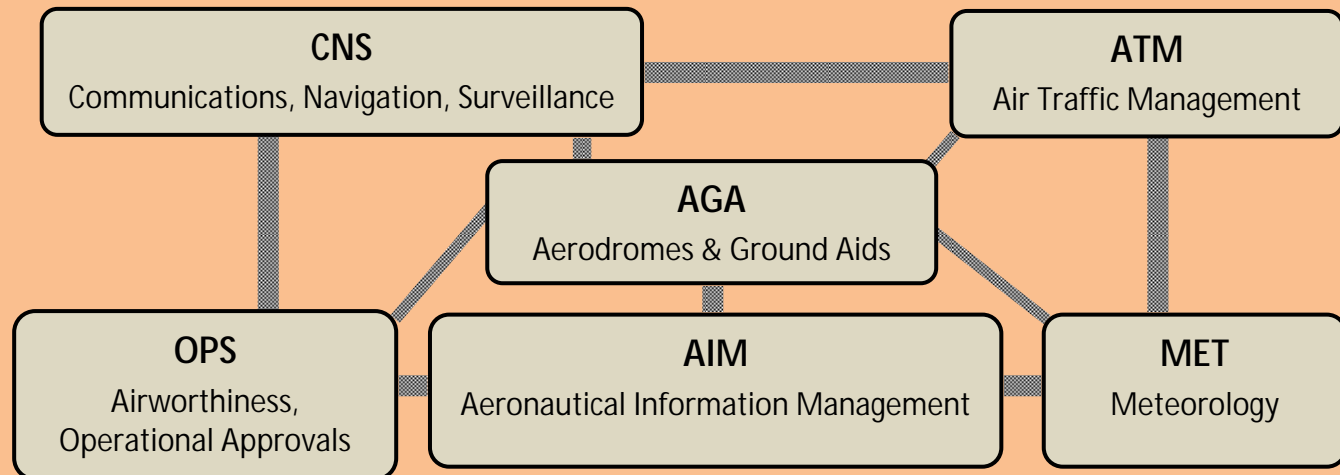
### Key Principles:

*Performance-Based System*

*Seamless | Safe | Interoperable*

## Areas of Plan Coverage

*Areas are interdependent to varying degrees*



# Airspace/Air Navigation Plan: Task Groups

| <b>Plan Group</b>     | <b>Coverage examples</b>  |
|-----------------------|---|
| <b>Airspace</b>       | <i>Controlled airspace, airspace classifications, RVSM</i>  |
| <b>ATM</b>            | <i>(Airways plan) Flow management, traffic management, trajectory management, data management</i>                         |
| <b>AIM</b>            | <i>AIS-AIM Roadmap, databases, data management, AIP, charting, NOTAMs, aerodrome mapping, terrain &amp; obstacle data</i> |
| <b>Communications</b> | <i>Satcom (voice &amp; data), datalink, CPDLC, radio spectrum protection, ADS-B In</i>                                    |
| <b>Navigation</b>     | <i>PBN Implementation Plan, Area Navigation (RNP, RNAV), ground-based nav aids, GNSS, GBAS, SBAS, procedure design</i>    |
| <b>Surveillance</b>   | <i>Radar, MLAT, ADS-B Out, ADS-C</i>  |
| <b>Meteorological</b> | <i>Automated weather observation, WXXM, volcanic ash, baro VNAV support</i>   |
| <b>Aerodromes</b>     | <i>Design, runway capability, aerodrome/airspace risk modelling</i>   |

# Requirements/Considerations

## Each Task Group will have a terms of reference and task list

The following areas will be core review areas:

- Aircraft requirements
- Licensing requirements
- Training requirements
- Security
- Environment
- Infrastructure & investment
- Transition strategy (near-, medium-, long-term)
- Regulatory requirements (inc. rules, operational approvals, ACs, guidance material)
- Data management
- Domestic vs. international

## Measures:

Expectations – Key Performance Areas – Objectives

Indicators and targets

# Potential relationships between plans

Each plan has interdependence with other plans and tasks.

The following table details potential crossovers between plans and the level of input required:

|                        |                | Input required |      |          |          |            |              |          |            |
|------------------------|----------------|----------------|------|----------|----------|------------|--------------|----------|------------|
|                        |                | Airspace       | ATM  | AIM      | Comms    | Navigation | Surveillance | Met      | Aerodromes |
| Plan under development | Airspace       |                | High | Low      | Low      | High       | Med          | Very Low | Med        |
|                        | ATM            | Med            |      | Med      | High     | High       | High         | Med      | Med        |
|                        | AIM            | Low            | High |          | Med/high | Low        | Low          | Med      | High       |
|                        | Communications | Low            | High | Low      |          | Med        | Med          | Low      | Low        |
|                        | Navigation     | High           | High | Med/high | Med      |            | Med/high     | Med      | Med        |
|                        | Surveillance   | High           | High | Low      | High     | Med        |              | Low      | Med        |
|                        | Met            | Med            | High | Med/high | Med      | Med        | Med          |          | Med        |
|                        | Aerodromes     | Med/high       | High | High     | Low      | Med/high   | Low          | Low      |            |

# Process for developing the Plan

*Based on ICAO planning concepts for a performance-based approach*

