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

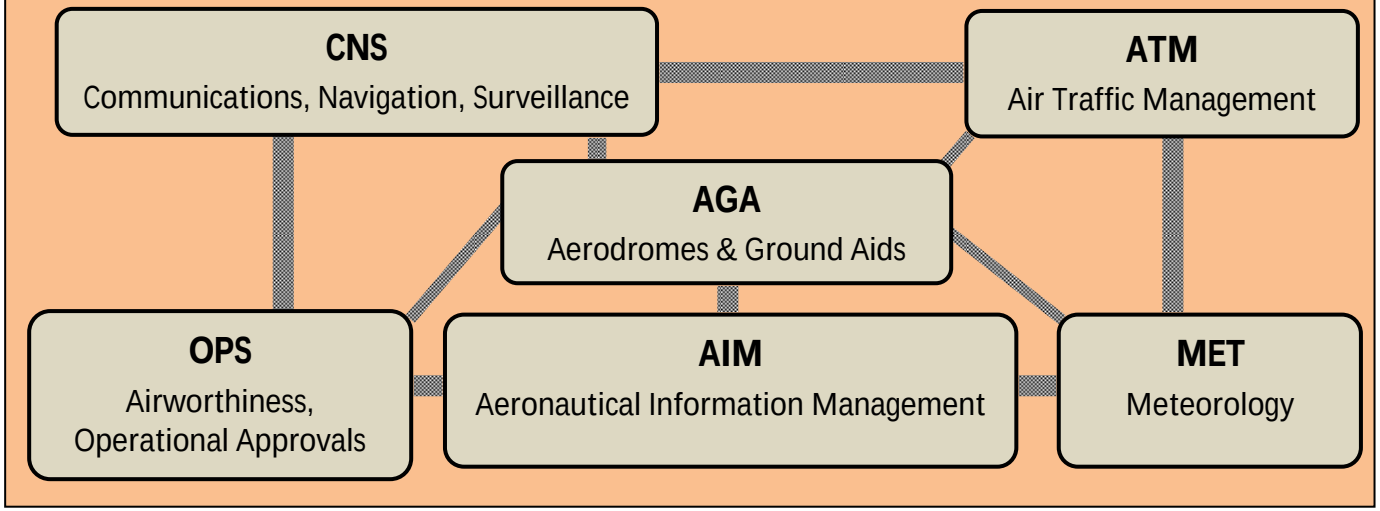
Key Principles:

Performance-Based System

Seamless | *Safe* | *Interoperable*

Areas of Plan Coverage

Areas are interdependent to varying degrees



Airspace / Air Navigation Plan: Task Groups

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

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