Workshop on Civil Aviation Master Planning For Civil Aviation Director Generals

Varadero, Cuba, 27 June 2023

Goal of the Workshop

This workshop intends to provide Director Generals of State's Civil Aviation Authorities (CAAs) with information regarding the importance of civil aviation master planning and guidelines required to develop, implement, and update a Civil Aviation Master Plan (CAMP) including the recovery from the impacts of COVID-19, in accordance with the relevant ICAO provisions.

Workshop Objectives

- Provide information regarding the importance of civil aviation master planning
- Provide general guidelines on how to develop a CAMP
- Analyze aspects of the civil aviation context and national plans
- Explain the planning process for management and implementation of a CAMP
- Raise awareness on the importance of planning for the sustainable funding of CAMP initiatives

🕐 **Workshop Schedule**

Sessions	Modules
Session 1: 2 Hours	Module 1: Preparation for the Development of a CAMP Module 2: The State Aviation System and National Plans Module 3: Development, Approval and Implementation of a CAMP Module 4: Economic and Financial Development of the Civil Aviation System
Break for 30 Minutes	
Session 2: 1 Hour 30 Minutes	CAMP Q&A Session: Dialogue with Directors of Civil Aviation regarding their experience with the CAMP and iinterventions from States who have participated in previous CAMP events

Civil Aviation Master Planning

The course provides senior and middle managers of **State's Civil Aviation Authorities** (CAAs) with the competencies required to develop, implement, and update a **Civil Aviation Master Plan** (CAMP) including the recovery from the impacts of COVID-19, in accordance with the relevant **ICAO** provisions.

Format: Blended course (online + classroom). The course will feature case study approach, with a final examination.

Duration: 1.5 hour online + 5 days in classroom or virtual classroom.

Group Delivery Options:

•Training Centres in the TRAINAIR PLUS Programme

•In-house training

Individual Enrollment Options:

•Upcoming Training Sessions on ICAO Website

ICAO TRAINING

To obtain detailed information, please contact us at: globalaviationtraining@icao.int

Module 1 - Preparation for the Development of a CAMP

The objective, purpose and principle characteristics of CAMP

Overall Objective of the CAMP

➢ To set forth a long-term, strategic plan for comprehensive and sustainable development of a State's civil aviation system in a manner that is in alignment with the State's overall economic and social development objectives.

    ➢ More particularly, the CAMP provides a roadmap for the growth and future development of airports, airspace management, manufacturing, ANS provision and oversight responsibilities including safety, security and economic regulation.

Characteristics

Long-term	5 – 10+ years
Strategic	Visionary; future-orientated; aspirational; potential; roadmap; high-level priorities; planning processes; a view of a potential future for civil aviation within a State
Comprehensive	A "Master Plan"; a single point of reference for underlying plans associated with all relevant aspects of civil aviation including regulatory / oversight, airports, carriers and Air Navigation Service Providers (ANSPs)
Sustainable	Able to be maintained; continued over a period of time; capable of evolving
Aligned with economic and social development objectives	Consistent with and contributing to a State's national development goals

Scope

CAMP

| Capacity and Efficiency | Safety | Security | Air Transport | Environmental Protection |

| Air Navigation | Airport Development Planning | | Policy | Facilitation |

Purpose

1 | **Provide management with a strategic and coherent planning tool** for the development of an integrated aviation system: CAA-airports-airlines-ANSPs

2 | **Provide a platform for stakeholder engagement** to ensure that all are aligned and working toward a shared vision and framework for future growth

3 | **Provide linkages** to other transportation plans (road-rail-ship) and socio-economic activities (trade and tourism) in the National Development Plan

4 | **Facilitate coordinated funding and investments** throughout the aviation system

Who is the CAMP for?

➢ Government Ministries or Departments related to:

- Transport
- Defense
- Environment
- Security / Home
- Planning and Finance
- Tourism

- Infrastructure Development
- Economic Affairs
- Foreign Affairs / External Relations
- Facilitation

➢ Industry Stakeholders

- Airlines, airport authorities, air navigation service providers, aviation training organizations, maintenance organizations, manufacturers, organizations representing pilots, air traffic controllers, and other groups of operational personnel.

➢ Financing Institutions, Donor States and Investors

Delegated to whom?

Delegated to:

➢ The Civil Aviation Authority (Ministry of Transport), to manage the development, coordination and implementation of the CAMP.

➢ The CAMP may involve multiple regulatory and administrative agencies. If so, it is necessarily a document of shared accountabilities.

How Does the CAMP Add Value?

> Provides a coherent framework for strategic planning processes

> Manages growth in a consistent and deliberate fashion

> Provides a single point of reference for all key aspects of the State's civil aviation system

> Enables clear and consistent decision-making

> Helps prioritize the allocation of resources

> Identifies long-term capacity building and training needs

> Engages Stakeholders and creates 'buy-in' for a shared vision

… continued

How Does the CAMP Add Value?
(continued)

> Identifies and unites short-term and longer-term visions

> Helps prioritize work plans and phasing of projects

> Allows for comparative cost estimates

> Leads to savings in the long run

> Attracts private and public sector funding and investments

> Elevates and promotes air transport into the State's national development planning

> Contributes to the achievement of the UN Sustainable Development Goals

Key Takeaways

➢ The CAMP is a dynamic long-term strategic planning document that provides the framework for future growth of civil aviation in the State

➢ The CAMP enhances the capability of a State to use aviation as an effective means to achieve economic development, in particular, to increase accessibility to funding and financing for aviation infrastructure development and investment in air connectivity.

National Aviation Planning Framework
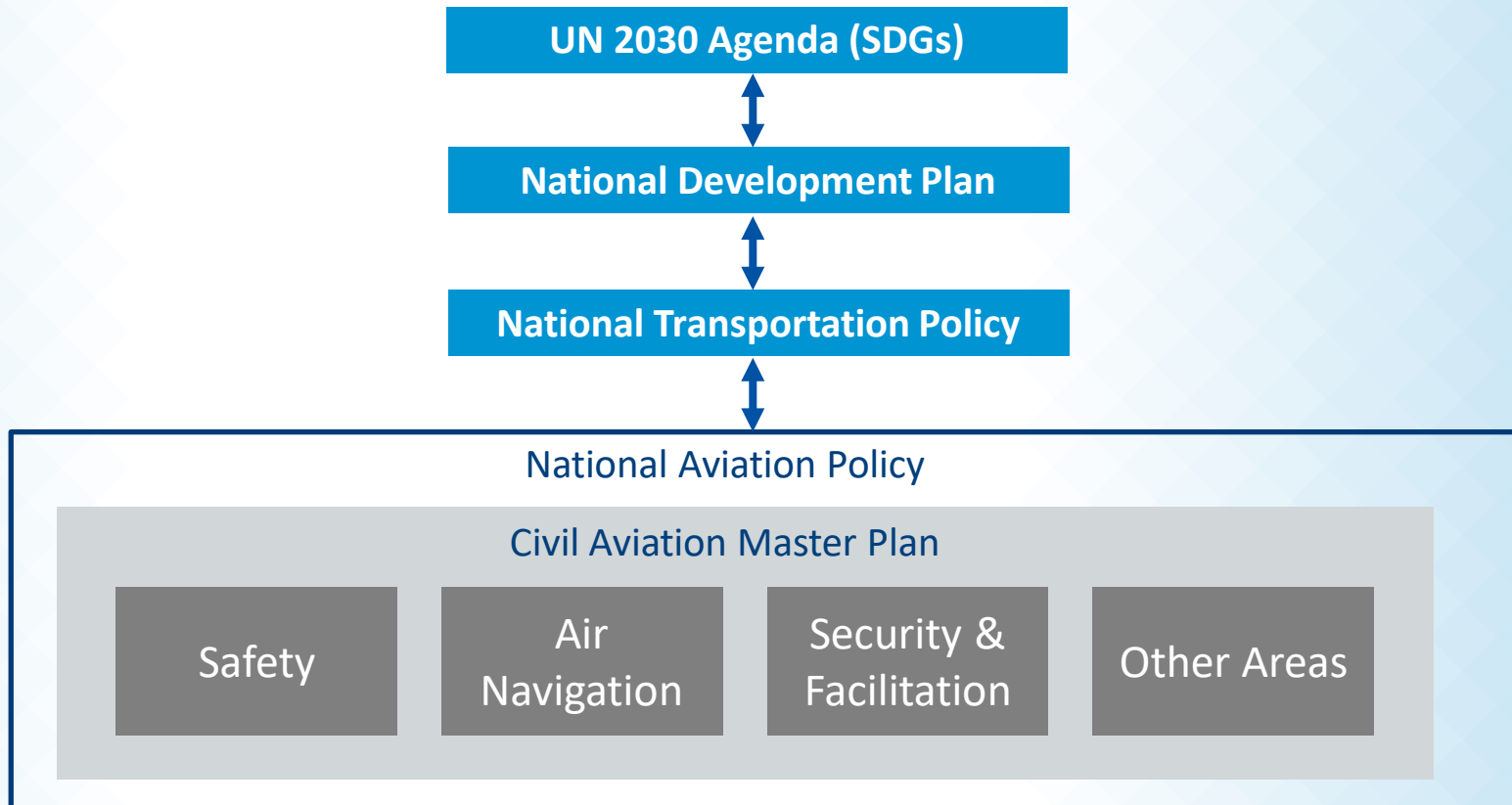
Linkages

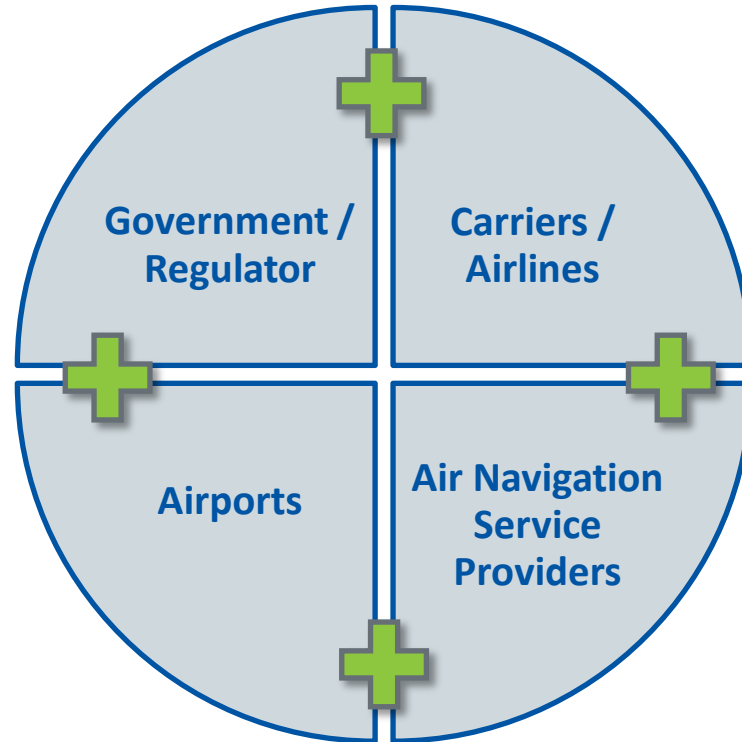## Why are these linkages so important?

F-U-N-D-I-N-G

Including aviation in a national development plan linked to the UN Agenda facilitates financing of large-scale projects and promotes donor support for the implementation of the CAMP.

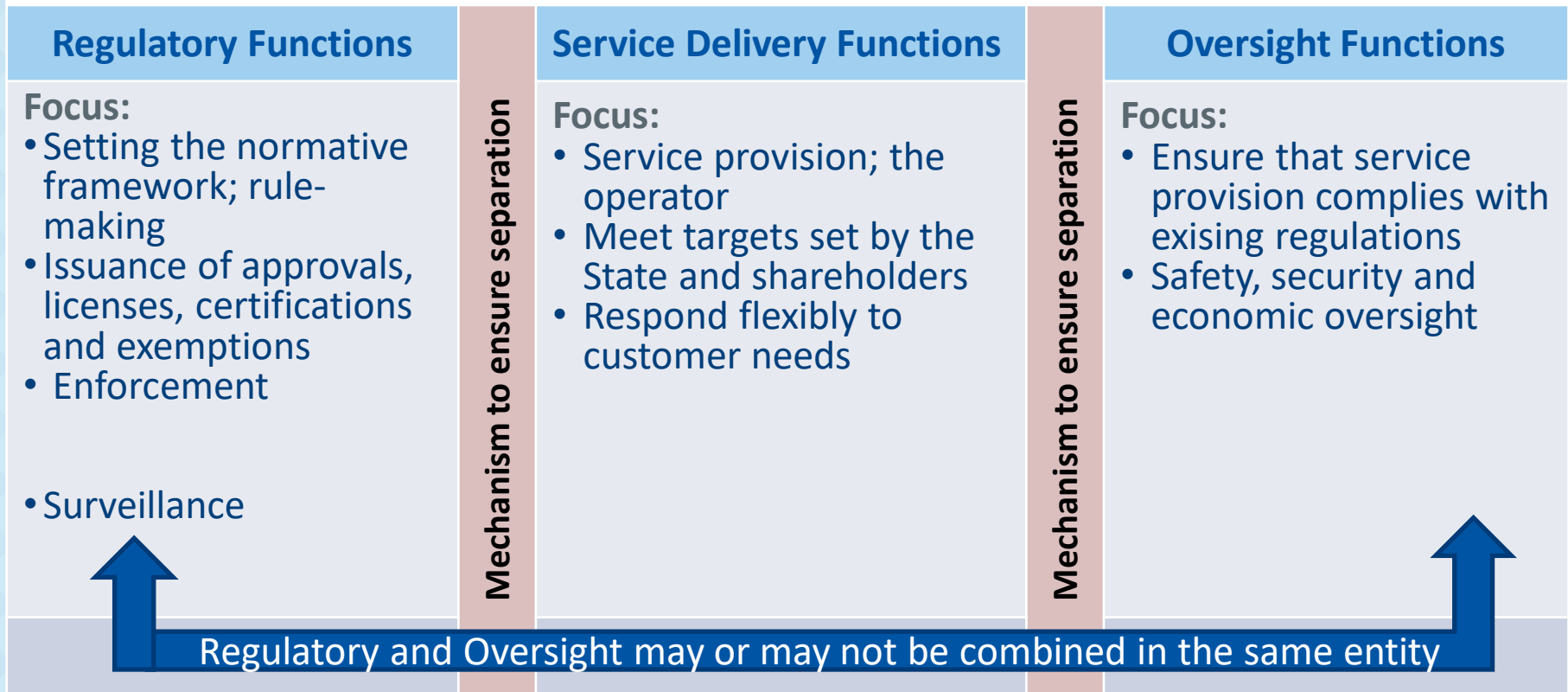# Civil Aviation Organization

The CAMP and the Aviation System

- **Governance**
- **Ownership and Control Structures**
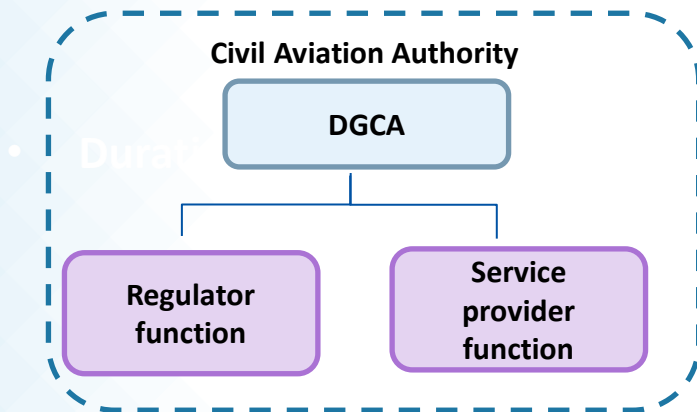- **Management**

Civil Aviation Organization

➢ Continuing trend toward autonomous CAAs, corporatization, commercialization and privatization of airports and air navigation service providers

➢ Benefits
- Revenues generated are transparently re-invested in aviation facilities
- Users contribute directly to the maintenance and development of the facilities (user-pays principle)
- Reduces financial burden on government
- Encourages growth of a business culture, thereby increasing efficiency and improving quality of services
- Enables access to private capital markets
- **Facilitates the establishment of a clear separation between regulatory and operational functions**

ICAO

## SEPARATION BETWEEN REGULATION, SERVICE PROVISION AND OVERSIGHT

Regulatory Functions	Mechanism to ensure separation	Service Delivery Functions	Mechanism to ensure separation	Oversight Functions
Focus: • Setting the normative framework; rule-making • Issuance of approvals, licenses, certifications and exemptions • Enforcement • Surveillance	Mechanism to ensure separation	**Focus:** • Service provision; the operator • Meet targets set by the State and shareholders • Respond flexibly to customer needs	Mechanism to ensure separation	**Focus:** • Ensure that service provision complies with exising regulations • Safety, security and economic oversight

Regulatory and Oversight may or may not be combined in the same entity

Ensuring Independence between Regulator and Service Providers

Functional Separation

Organizational Separation

Civil Aviation Authority

DGCA

Regulator function

Service provider function

Civil Aviation Authority

Industry
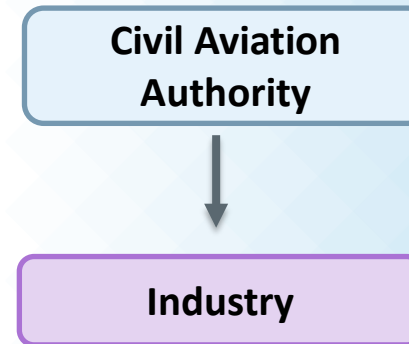
Delegation of Safety / Security Oversight Functions and Activities

The State may consider delegating activities when:

- there are insufficient resources or competences
- there is a lack of specialized entities within the State

Note: The ultimate responsibility for Safety/Security remains with the State

The State still needs sufficient personnel to :

- interact with the delegated entity
- process the information received from the delegated entity
- ensure that the delegated functions are carried out effectively

Module 2 – The State Aviation System and National Plans

State's Aviation Context

State Context

- An overview of the State's aviation system, its size (traffic level and growth), and how it relates to activities in other sectors of the economy
- An "as-is" assessment of the aviation system

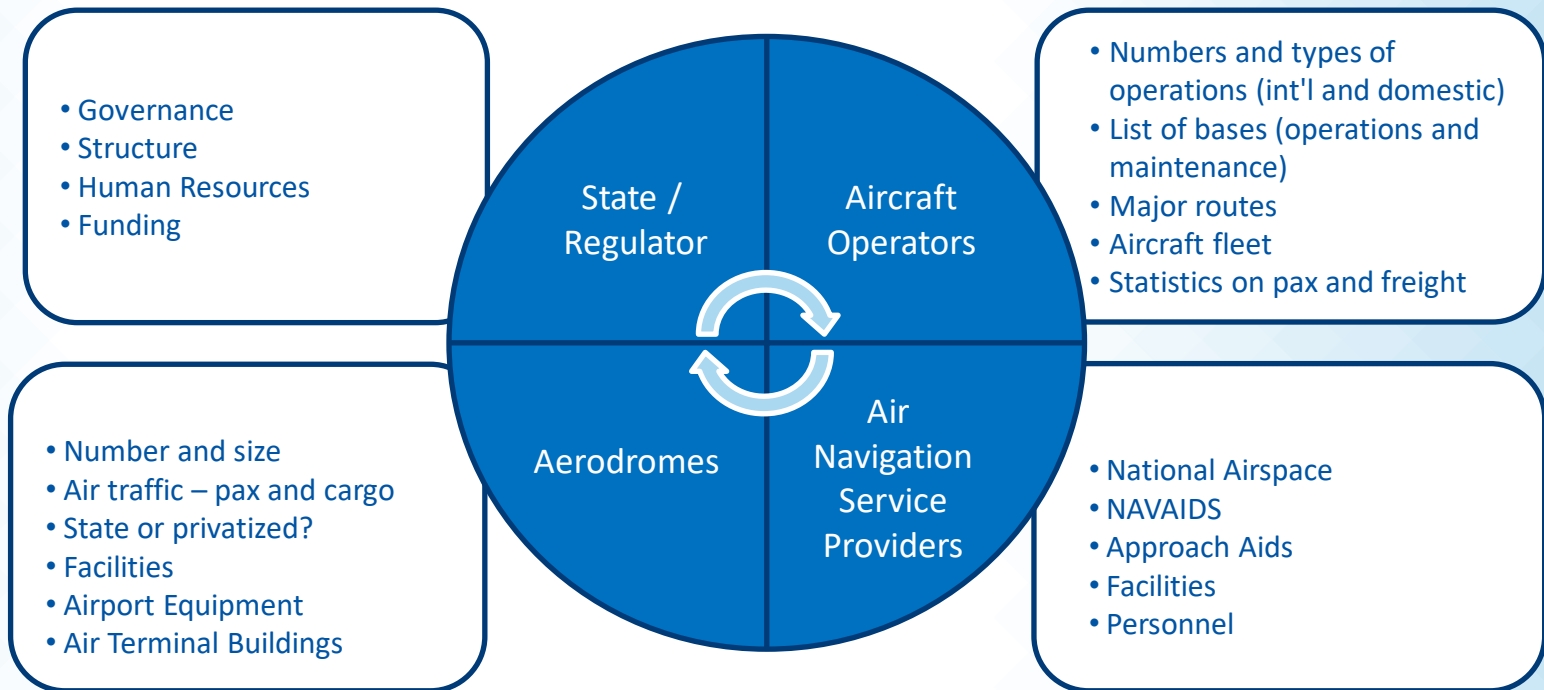| Overview of the Aviation System |
|---|
| Economic Factors |
| Traffic Forecasts and Trends |
| Institutional Factors |
| Legal, Policy and Regulatory Factors |
| Other Transport Factors |

Overview of the State's Aviation System

State / Regulator
- Governance
- Structure
- Human Resources
- Funding

Aircraft Operators
- Numbers and types of operations (int'l and domestic)
- List of bases (operations and maintenance)
- Major routes
- Aircraft fleet
- Statistics on pax and freight

Aerodromes
- Number and size
- Air traffic – pax and cargo
- State or privatized?
- Facilities
- Airport Equipment
- Air Terminal Buildings

Air Navigation Service Providers
- National Airspace
- NAVAIDS
- Approach Aids
- Facilities
- Personnel

National Aviation Plans

Plans for Specific Areas of Aviation Activity

National Plans
National Aviation Safety Plan (NASP)
National Air Navigation Plan (NANP)
National Civil Aviation Security Programme (NCASP)
National Air Transport Facilitation Programme (NATFP)
National Aviation Plan -- Pandemic Preparedness (NAP-PP)
Environmental State Action Plan (Env SAP)
National Airport Development Plan/Airport Master Plans

National Aviation Safety Plan (NASP)

National Plans
NASP
NANP
NCASP
NATFP
NAP-PP
Env SAP
National Airport Development Plan/Airport Master Plans

➢ The master planning document containing the strategic direction of a State for the management of aviation safety for a set time period

- lists national safety issues
- sets national aviation safety goals and targets
- presents safety enhancement initiatives (SEIs) to address identified safety deficiencies and achieve national safety goals and targets

➢ Examples of States' NASPs can be found in the GASP Library

Guidance on NASP Development

Manual on the Development of
Regional and National Aviation
Safety Plans, Doc 10131

GASP 2023-2025,
Doc 10004
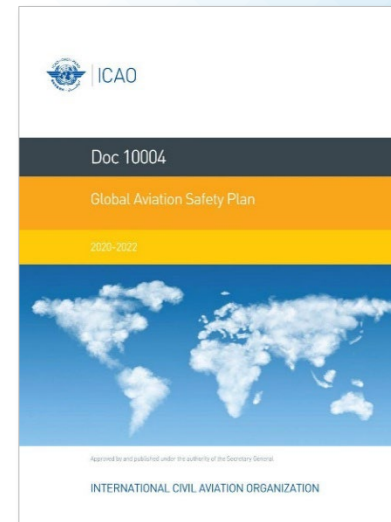
NASP – RASP – GASP

Aviation Safety Planning

Strategy *Global Aviation Safety Plan*	Action Plan *Global Aviation Safety Roadmap*

Regional Aviation Safety Plan

National Aviation Safety Plan
Action Plan(s) *(e.g. Surveillance Activities, Runway Safety Programme*

National Air Navigation Plan (NANP)

National Plans
NASP
NANP
NCASP
NATFP
NAP-PP
Env SAP
National Airport Development Plan/Airport Master Plans

➢ State's strategy for the safe and efficient management of its airspace and air navigation system

➢ Supports air navigation facilities and services

- Communications, navigation and surveillance infrastructure
- Meteorology
- Aeronautical Information
- Search and Rescue
- Air Traffic Management
- Aerodromes and Aerodrome Operations

NANP – RANP – GANP

➢ Regional ANPs bridge the global provisions in ICAO SARPs / the GANP and States' national ANPs

- Do you have a National ANP?

- Is your National ANP aligned with the Regional ANP?

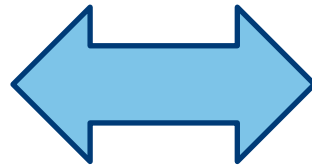- Is your National ANP aligned with the GANP?

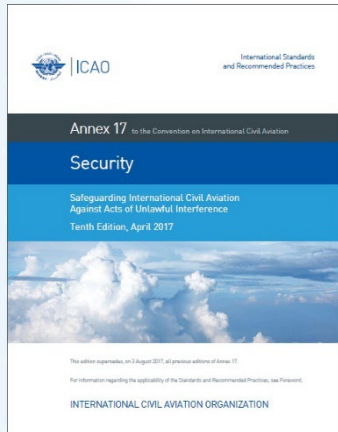Sample NANPs (from NACC region) are available online.

GANP

Regional ANPs

State ANPs
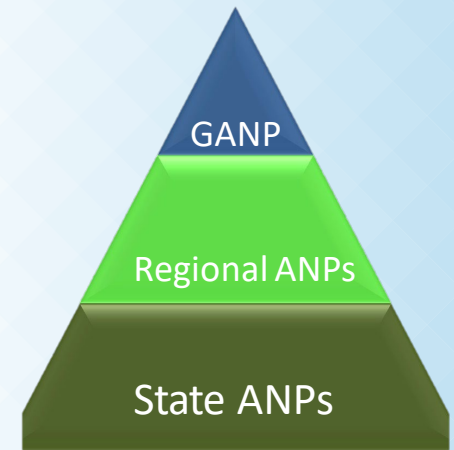
Security and Facilitation

National Plans
NASP
NANP
NCASP
NATFP
NAP-PP
Env SAP
National Airport Development Plan/Airport Master Plans

National Civil Aviation Security Programme

⬄

National Air Transport Facilitation Programme

Annex 17

Annex 9

NCASP ⬅➡ NATFP

Finding the Right Balance

| Security	Facilitation
Illegal immigration	Tourism
Narcotics	Commerce
People smuggling	Better passenger experience
Organized crime	Increased capacity
Terrorism	Smaller queues
Regional conflicts	Registered travelers
Asylum seekers	Optimization of infrastructure
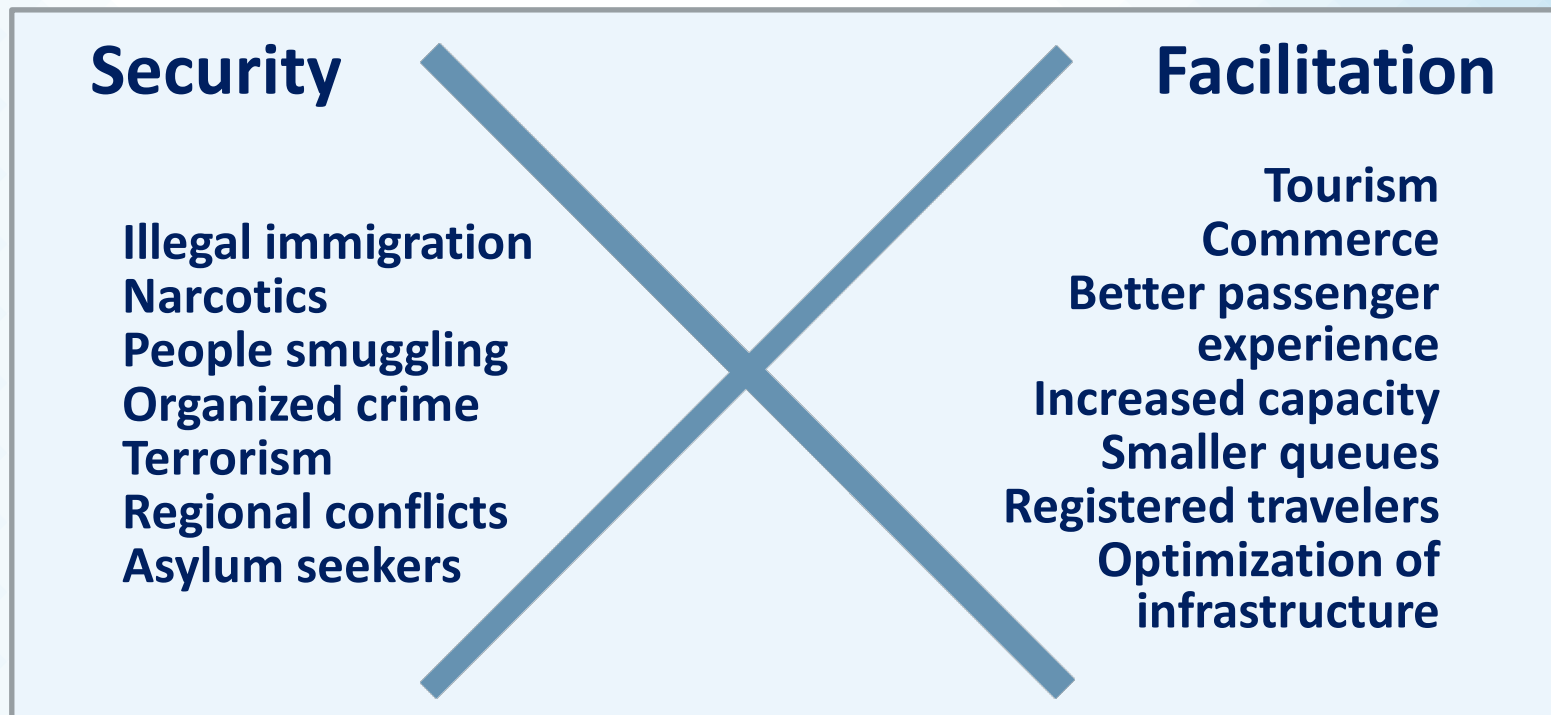
Global Aviation Security Plan (GASeP)

➤ Addresses the needs of States and industry in guiding all aviation security enhancement efforts through a set of internationally agreed priority actions, tasks and targets.

➤ Security management Systems (SeMS) Doc 8973 provides entities with a structured approach to managing security as an integral part of their overall business.

National Air Transport Facilitation Programme (NATFP)

Reason: Means of coordinating activities between departments or agencies of the State concerned with or responsible for various aspects of facilitation of national civil aviation
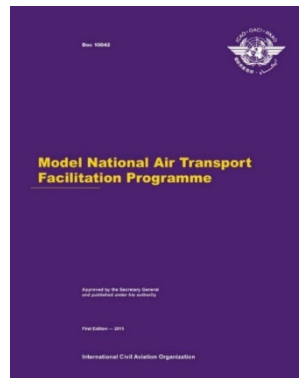
Mandate: A41-17 Appendix C: National Cooperation on Facilitation matters

- improve the effectiveness and efficiency of clearance control formalities

- establish national FAL committees

- national regulations & practices conform to Annex 9 SARPs

- solve day-to-day FAL problems

- study FAL problems & coordinate with other States

Environment State Action Plan

Action Plan on Emissions Reduction

National Plans
NASP
NANP
NCASP
NATFP
NAP-PP
Env SAP
National Airport Development Plan/Airport Master Plans

This initiative enables States to establish a long-term strategy on climate change for the international aviation sector, involving all interested parties at national level.
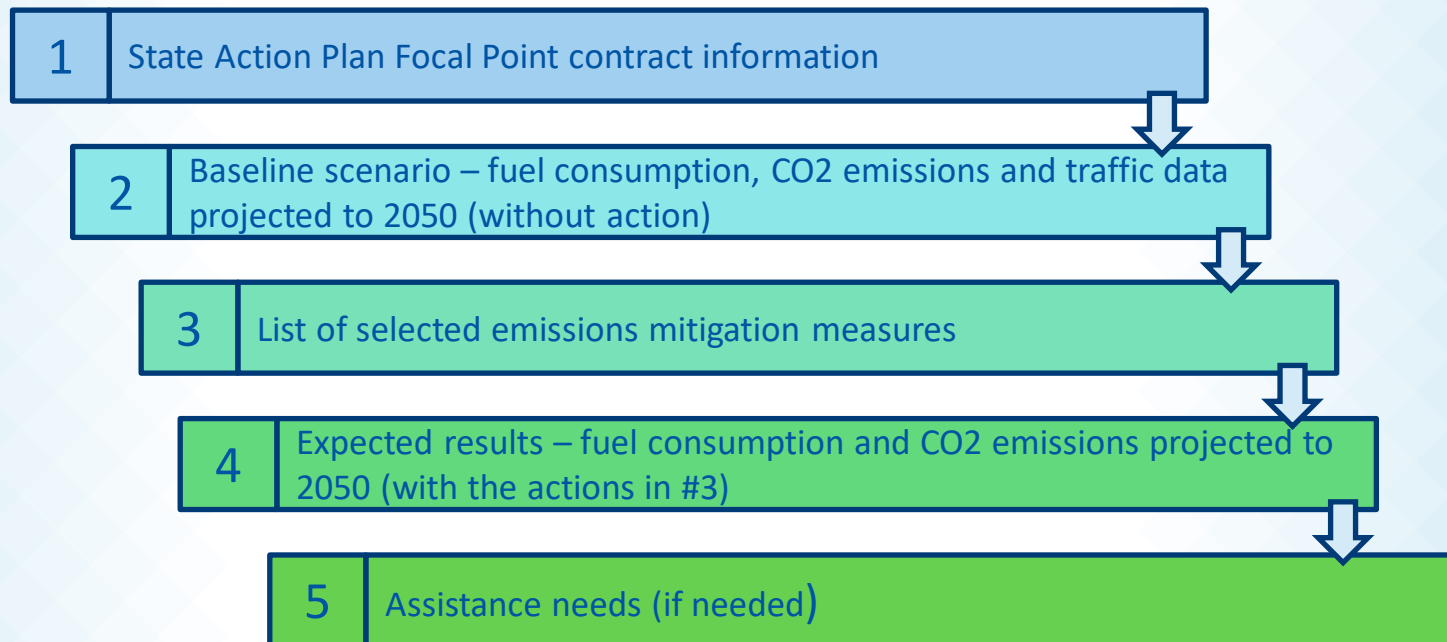
Contents of the State Action Plan

Action Plan on Emissions Reduction

1	State Action Plan Focal Point contract information

2	Baseline scenario – fuel consumption, CO_2 emissions and traffic data projected to 2050 (without action)

3	List of selected emissions mitigation measures

4	Expected results – fuel consumption and CO_2 emissions projected to 2050 (with the actions in #3)

5	Assistance needs (if needed)

National Airport Development Plan/Airport Master Plans

National Plans
NASP
NANP
NCASP
NATFP
NAP-PP
Env SAP
National Airport Development Plan/Airport Master Plans

- Critical components of the CAMP and the National Aviation Planning Framework

- Guides development and business strategy of both new and existing airports

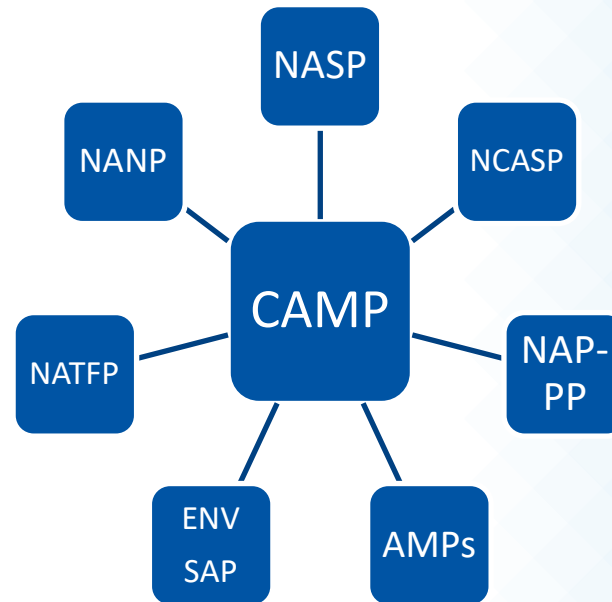- Delivers a long-term development strategy that supports the vision of the airport's future

Plans for Specific Areas of Aviation Activity

Key Takeaway
The CAMP will serve as a single point of reference for the national aviation plans and key aspects of the State's civil aviation system

SWOT and PESTLE Analysis

SWOT Analysis

A key strategic planning technique: assesses the current situation and identifies issues (internal & external) with the greatest strategic significance to the Organization.

The SWOT Analysis:

- Strengths
- Weaknesses } **Internal**
- Opportunities
- Threats } **External**

Using the SWOT Analysis to Formulate Strategy
Summary

The SWOT analysis is about building on strengths, minimizing weaknesses, seizing opportunities and counteracting threats

	Strengths	Weaknesses
Opportunities	**Strategies to take advantage of opportunities that fit the Organization's strengths** e.g. Use our strong cadre of Safety Inspectors to improve the safety profile of the State by rolling out SMS implementation packages to industry	**Strategies to reduce weaknesses so as to take advantage of opportunities** e.g. Train or hire airworthiness experts to acquire technical expertise to oversee a proposed MRO for the region
Threats	**Strategies to use strengths to reduce external threats** e.g. Use the newly developed robust CAMP to obtain financing for airport infrastructure improvements to enhance safety of flights during monsoon season)	**Strategies to ensure weaknesses do not make the business vulnerable to external threats** e.g. Take immediate steps to address the Significant Safety Concern (SSC) identified during the ICAO audit to avoid losing the confidence of the travelling public to competing touristic destinations in the region

PESTLE Analysis

SWOT: focuses more on actions that can be taken internal to the business environment

PESTLE: identifies external factors and influences

Political
Economic
Social
Technology
Legal
Environment

Both are complementary - the PESTLE analysis works well for both the Opportunities and Threats section of the SWOT

SWOT and PESTLE Analyses

Key Takeaway

The SWOT and PESTLE analyses are complementary tools in strategic planning and decision-making that allow you to maximize strengths, lessen weaknesses, take advantage of opportunities and identify potential threats

Module 3 – Development, approval and implementation of CAMP

Project Management of the CAMP

Key Concepts of the Project Management Approach

Coordination
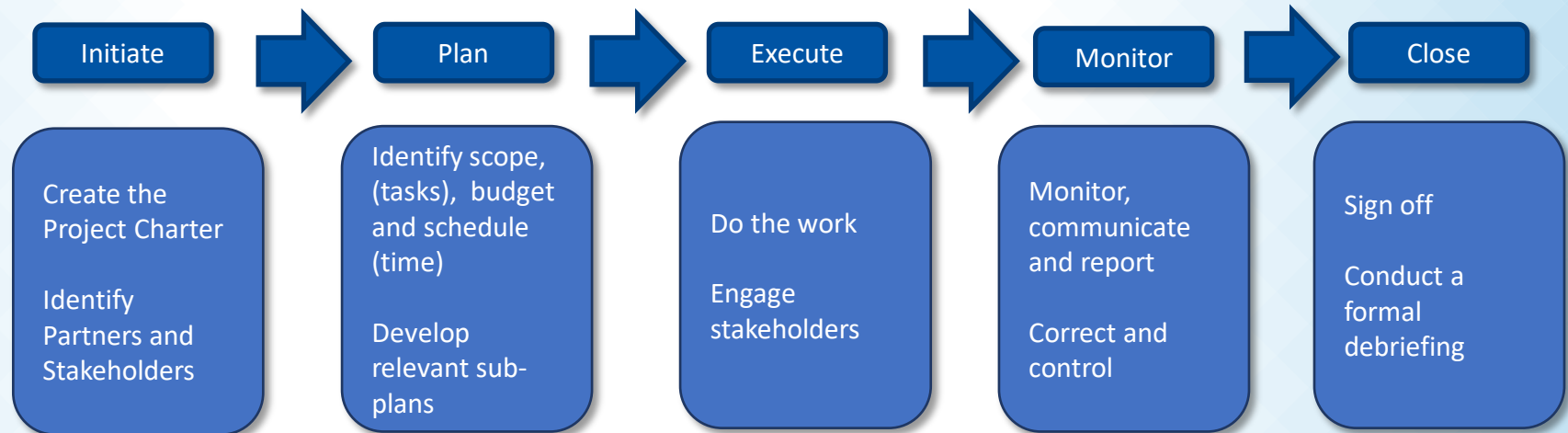
* Cooperation

* Consultation

* Harmonization

Communication

* CAMP team

* Stakeholders: project participants and users

Holistic

* Government departments, aerodromes, air operators, ANSPs

* Emerging issues related to new technologies / innovation

Summary: Project Lifecycle

Initiate → **Plan** → **Execute** → **Monitor** → **Close**

Initiate	Plan	Execute	Monitor	Close
Create the Project Charter

Identify Partners and Stakeholders | Identify scope, (tasks), budget and schedule (time)

Develop relevant sub-plans | Do the work

Engage stakeholders | Monitor, communicate and report

Correct and control | Sign off

Conduct a formal debriefing |

Steering Committee

- Any entity that has accountability for a component of the CAMP should be considered a partner and represented on a CAMP Steering Committee.

- Partners contribute to the strategic planning process

- The Committee's role is to provide support, guidance and oversight of CAMP progress

Establishing Strategic Priorities

First Order Priorities

- Identified significant audit findings MUST be dealt with IMMEDIATELY, prior to embarking on the CAMP

- Required National Plans

- A well-functioning, sustainable Civil Aviation Authority: appropriately funded, structured and staffed

URGENT

This matter requires

IMMEDIATE

ATTENTION

Strategic Priorities
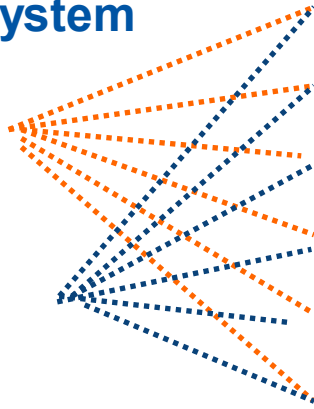## National Development Goals

Consider the extent to which proposed strategic initiatives will contribute to the State's national development goals

Strategic Priorities

The Aviation System

- **Regulatory / oversight system**

- **Air Operators**

- **Airports**

- **Air Navigation Services**

**Current status
+
future demands**

- **Regulation**
- **Organization**
- **Personnel**
- **Procedures**
- **Facilities**
- **Equipment**

Human Resources to Support CAMP Implementation

Human Resource Planning Process

The CAMP should identify the need to recruit and retain well-trained and competent personnel to meet each of the CAMP objectives.

The HR planning process should include:
- Developing forecasts of HR requirements
- Assessing current HR capacities in each area of activity
- Conducting a gap analysis
- Developing action plans to recruit, train and retain the required resources.

Module 4 – Economic and Financial Development of the Civil Aviation System

Charges and Taxes

User charges

- Levies that are designed and applied specifically to recover the costs of providing facilities and services for civil aviation (Article 15 of the Convention and Doc 9082)

- User charges contribute directly to the management and financing of infrastructure and equipment of airports and ANSPs

- Example of user charges: landing charges; parking and hangar charges; passenger service charges; security charges; noise-related charges; emissions-related aircraft charges; approach and aerodrome control charges; route air navigation services charges.

Main Principles of User Charges

Non-discrimination

Cost-relatedness

Transparency

Consultation with users

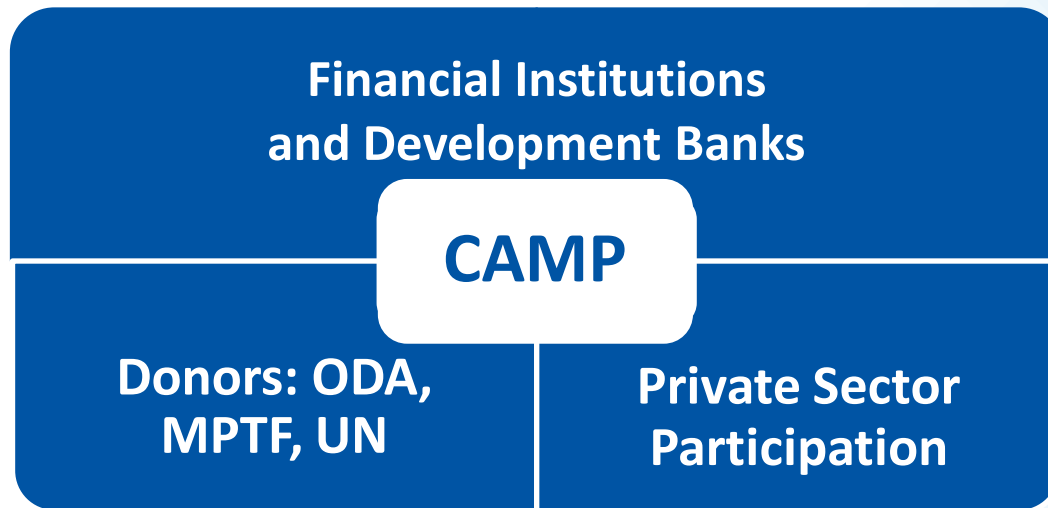# Charges and Taxes

Aviation Tax

- A levy that is designed to raise national or local government revenues, which are generally not applied to civil aviation in their entirety or on a cost-specific basis (Doc 8632)

- Taxes are *imposed* on passengers and air carriers, the receipts from which are not necessarily used for the provision of facilities related to air transportation

Sources of Funding

Sources of Funding
Loans, Grants, Investments

Financial Institutions and Development Banks

CAMP

Donors: ODA, MPTF, UN

Private Sector Participation

Development Banks

World Bank

THE WORLD BANK
IBRD · IDA

Asian Development Bank

ADB ASIAN DEVELOPMENT BANK

Inter-American Development Bank

IDB

China Development Bank

国家开发银行
CHINA DEVELOPMENT BANK

European Central Bank

EUROPEAN CENTRAL BANK
EUROSYSTEM

African Development Bank Group

AFRICAN DEVELOPMENT BANK GROUP

European Bank for Reconstruction and Development

European Bank
for Reconstruction and Development

Caribbean Development Bank

CARIBBEAN DEVELOPMENT BANK

New Development Bank

New Development Bank

Development Bank of Latin America

CAF DEVELOPMENT BANK OF LATIN AMERICA

Asian Infrastructure Investment Bank
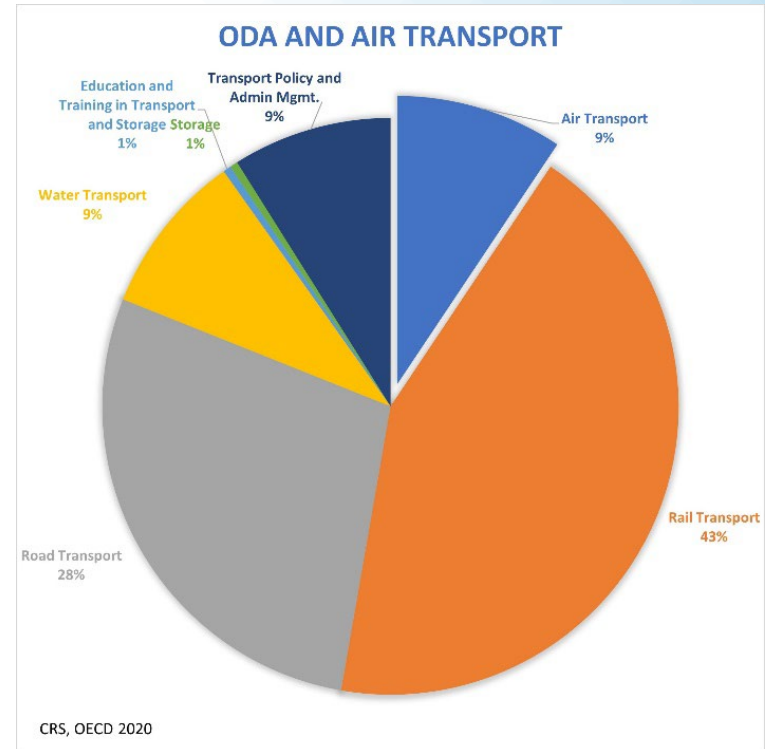
AIIB ASIAN INFRASTRUCTURE INVESTMENT BANK

ODA and Air Transport

Why is aviation receiving such a limited amount of international public finance and assistance despite its multiple links to development and other economic sectors?!

⬇️

- Multiple sectors competing for funding
- States are not elevating the aviation sector to their national development plans
- Aviation initiatives are not being linked to the SDGs
- Lack of Master Plans

ODA AND AIR TRANSPORT

Education and Training in Transport and Storage 1%

Transport Policy and Admin Mgmt. 9%

Storage 1%

Air Transport 9%

Water Transport 9%

Rail Transport 43%

Road Transport 28%

CRS, OECD 2020

Private Sector Participation

Why the move towards autonomous entities?

- Financial and operational autonomy
- Recycle aviation user charges
- Reduce government's financial support
- Encourage a business culture
- Improve quality of services
- Establish a clear distinction between regulator and operator

A41-27encourags Member States to consider the establishment of autonomous entities to operate airports and ANSPs.

Ownership and Management Options

- Government ownership

- Management contract

- Lease or concession

- Transfer of minority ownership

- Public-private partnerships

- Private sector ownership and control

Privatization: Guidance Material

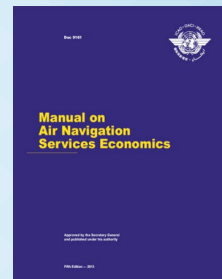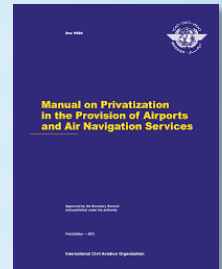**Doc 9980 Manual on Privatization in the Provision of Airports and Air Navigation Services**

Ownership, Control and Governance

ANSPs **Chapter 2 of Doc 9161**
Manual on Air Navigation Services Economics

Airports **Chapter 2 of Doc 9562**
Airport Economics Manual

Sustainable Funding of the CAA and Oversight Functions

Funding of Oversight Activities
USOAP CMA Data – by Global

- **36.5%** States safety oversight authorities do not have sufficient financial resources to meet their national and international obligations (PQ 2.051)

- **49.5%** of States accident investigation authorities do not have sufficient financial resources to meet their national and international obligations (PQ 6.105)

- **59.9%** do not have sufficient qualified personnel (PQ 2.053)

- **51.1%** have the ability to attract, recruit and retain sufficiently qualified / experienced technical personnel (PQ 2.103)

Different Financing Schemes

| State-allocated budget	Fees and charges collected from those participating in the aviation system	Fees and charges collected from those using services within the aviation system
As part of bigger governmental or ministry budget or individual allocated for CAA	Such as licence and approval fees	Such as levies on passengers or fuel

The source of funding depends on the circumstances of that State. For example, a State that has a small aviation industry may find that it is not enough for its CAA to rely only on fees and charges to fund its regulatory activities. A State may need to have multiple sources of funding for its aviation activities.

Regional Cooperation
Regional Safety Oversight Organizations (RSOOs)

RSOOs are a means through which a group of States collaborate, share best practices, safety oversight tasks and resources, with the aim to establish and maintain an effective aviation safety oversight system

ICAO Document Safety Oversight Manual, Part B - The Establishment and Management of a Regional Safety Oversight Organization, Doc 9734B
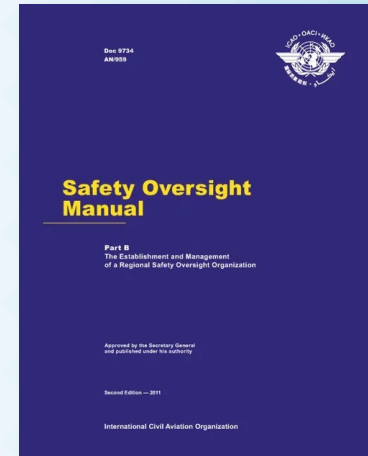
Benefits of Regional Cooperation

- **Harmonization**
  - o Promote uniformity of oversight including legislation, policy and procedures
  - o establishing objectives, priorities and indicators and the setting of measurable targets to address safety related deficiencies
- **Increased effectiveness and efficiency by sharing experience and resources**
  - o Access to necessary expertise through the sharing and pooling of scarce and expensive human resources
  - o Enable safety inspectors to gain experience more quickly, thus enhancing professionalism and confidence
  - o Faster improvement of safety oversight

RSOO Key Factors

- Mandate, empowerment and interfaces with Member States

- Clearly defined responsibilities and activities

- Sustainable funding

- Human Resources

Sustainable Funding of CAA and Oversight Functions

Key takeaway

States should consider diversified sources of funding as well as regional cooperation and partnerships to ensure sustainable funding and the fulfillment of safety, security, and economic oversight functions.

Civil Aviation Master Planning

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ICAO TRAINING

End of Workshop