



# UAE's Collaborative Performance Model

Workshop on Global Air Navigation Plan and National  
Air Navigation Plan (GANP & NANP)

(Cairo, Egypt, 5 - 8 March 2023)



## Agenda

- Background Glimpse
- How Does it Make Sense to all involved?
- States Roles & Responsibilities (National Level)
- PIRGs Roles & Responsibilities (Regional Level)
- Future Vision of the UAE
- UAE's Experience & Success Story
  - Setting of National KPIs
  - Governance & How it's Being Done
  - NASAC
  - Documentations & ASBU Implementations
  - UAE's Three Sequential Timeframe



## Background Glimpse

- Based on the recommendation of the 11<sup>th</sup> ANC in 2003, as well as the 35th Session of the ICAO Assembly in 2004, a **performance-based approach** to air navigation planning and implementation was endorsed and the relevant guidance, **Manual on Global Performance of the Air Navigation System** (Doc 9883), was developed in 2008.
- In alignment, the UAE published an IP during the 12<sup>th</sup> ANC in 2012 ([AN-Conf/12-IP/60](#)) informing the global aviation community on its ATM Strategic Plan 2012 – 2030 which is intended to support the evolution to a future ATM system
- The 6<sup>th</sup> edition of the **Global Air Navigation Plan** (Doc 9750) describes a performance-based approach for implementing the Aviation System Block Upgrades (ASBUs).
- It also introduces a 3-phased future development plan for the performance-based approach and potential **global** key performance indicators (KPIs) in three key performance areas (KPAs) of







## States Roles & Responsibilities

- States contribute to the development of the GANP by providing expertise:
  - On local and regional matters
  - Insight into the operational considerations required to meet ICAO provisions
- States contribute to the implementation of the GANP by developing NANPs to ensure the provision of essential ANS for:
  - International civil aviation
  - Modernization of their air navigation system based on local performance and operational needs, taking into consideration regional requirements
- Contribute to the implementation of the GANP by:
  - Sharing best practices and lessons learned from implementation challenges
  - Performing cost-benefit analyses
  - Assessing environmental impact, human performance, and safety





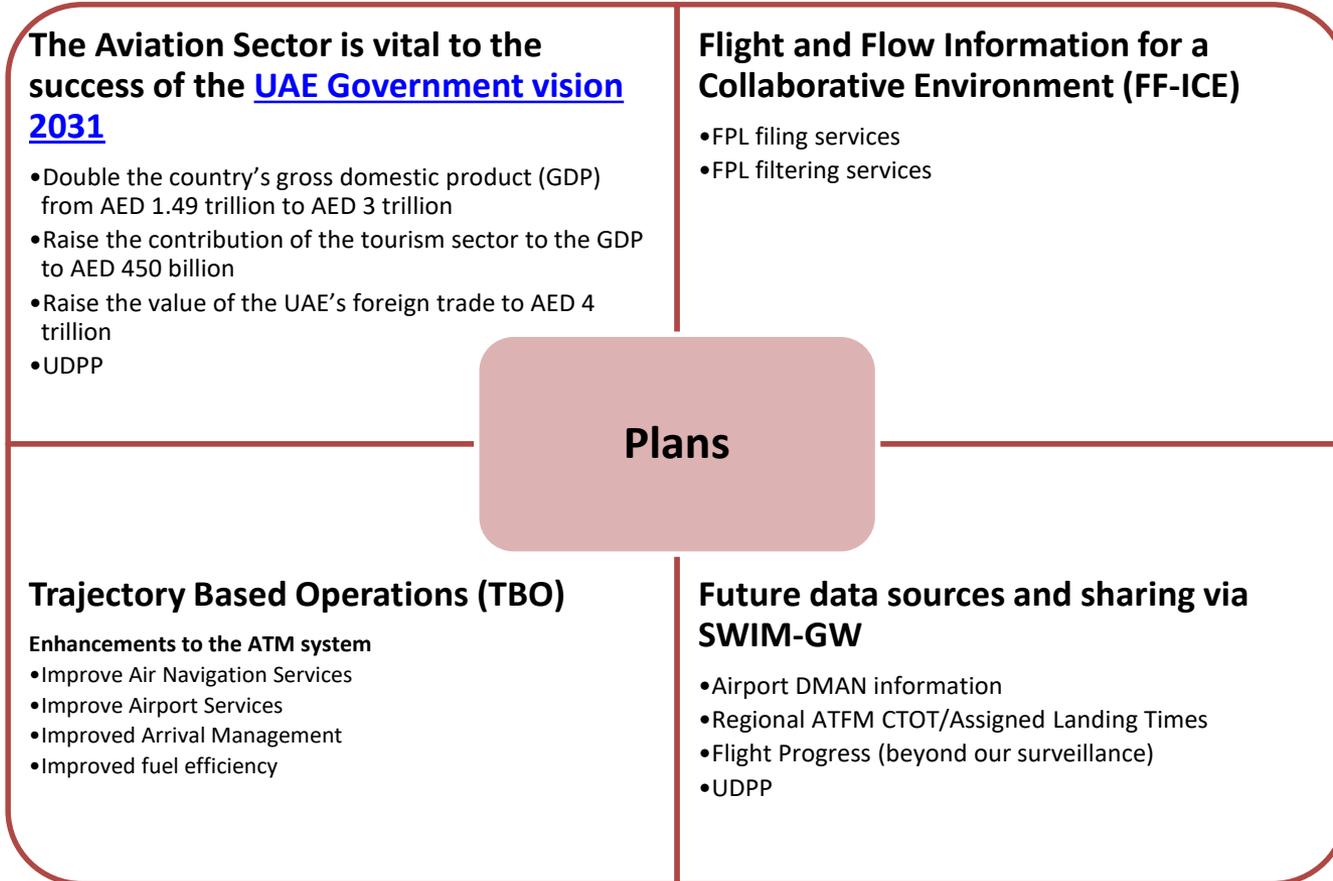
## PIRGs Roles & Responsibilities

- PIRGs are responsible for defining regional planning and implementation priorities, aligned with the GANP, through Volumes I, II and III of ANPs
- They are also responsible for the identification of air navigation deficiencies taking into account the ANPs
- In Volumes I and II of the ANPs, PIRGS define stable (Volume I) and dynamic (Volume II) planning elements related to:
  - The assignment of responsibilities to States for the provision of aerodrome and air navigation facilities and services
  - The assignment of responsibilities to States for the current to medium-term mandatory regional requirements related to aerodromes and air navigation facilities and services to be implemented by States in accordance with regional air navigation agreements
- In Volume III of the ANPs, PIRGs identify dynamic/flexible planning elements for modernizing the regional air navigation system, following a **performance-based approach**.
- As part of this approach, PIRGs define regional performance objectives, using the key performance indicators (KPIs) of the GANP to:
  - Achieve the global performance ambitions
  - Identify operational improvements within the ASBU framework to be implemented by States, based on regional requirements.





# Future Vision of the UAE





## UAE's Experience & Success Story

Through active engagement with the UAE Aviation Community and global aviation stakeholders, the UAE GCAA was able to identify, understand and focus strategic alignment to ensure common objectives are developed within the following:

GANP

ICAO MID Region  
Air Navigation  
Strategy

UAE Airspace  
Policy

UAE ATM  
Strategic Plan

UAE PBN  
Implementation  
plan

National Airspace  
Advisory  
Committee  
(NASAC)



# ATM Community Expectations and Key Performance Areas (KPAs)

KPA – 01  
Access and equity

KPA – 02  
Capacity

KPA – 03  
Cost effectiveness

KPA – 04  
Efficiency

KPA – 05  
Environment

KPA – 06  
Flexibility

KPA – 07 Global interoperability

KPA – 08  
Participation by the ATM community

KPA – 09  
Predictability

KPA – 10  
Safety

KPA – 11  
Security



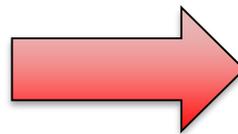
## UAE's Experience & Success Story

In 2012 GCAA conducted a study to evaluate capabilities of the UAE Airspace

This highlighted

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Recommendations



GCAA adopted

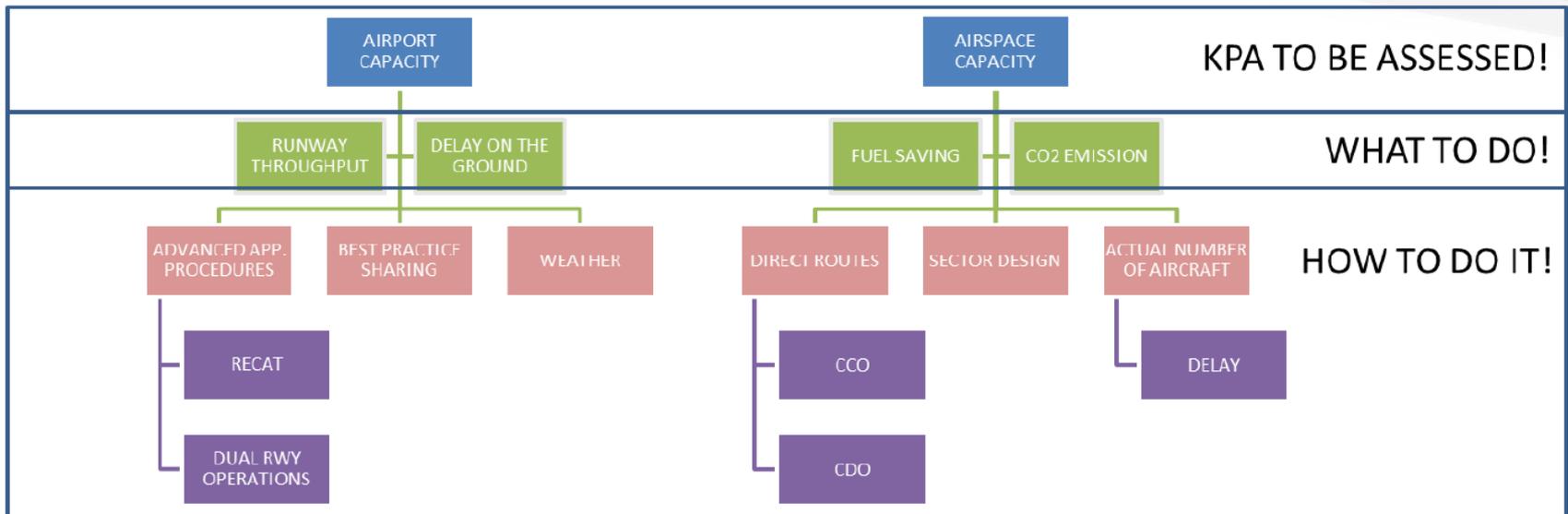
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Recommendation

15 were considered as key recommendation



# Common Evaluation Criteria





## Setting of National KPIs

Fair and equitable access to all airspace, airports and ATM services based on Best Capable – Best Served

UAE airspace considered as a “National Asset” with the implementation of Flexible Use Airspace for Civil and Military operations based on real-time needs

Seamless Air Navigation Service Provision throughout the UAE

PBN Route Structure throughout UAE

Flight Procedures tailored for optimum climb and descent to runways in use

Airport infrastructures that maximize throughput and minimize congestion

Balancing traffic demands and capacities in a collaborative manner

Interoperability of ATM systems within the UAE and with neighboring FIRs



## Governance & How it's Being Done

### Establishment of the UAE National Airspace Advisory Committee (NASAC)

ICAO's Global Air Traffic Management Operational Concept: international vision for integrated and interoperable ATM system

UAE complying with ICAO requirements, ensuring safe, secure and efficient UAE airspace management

## Purpose

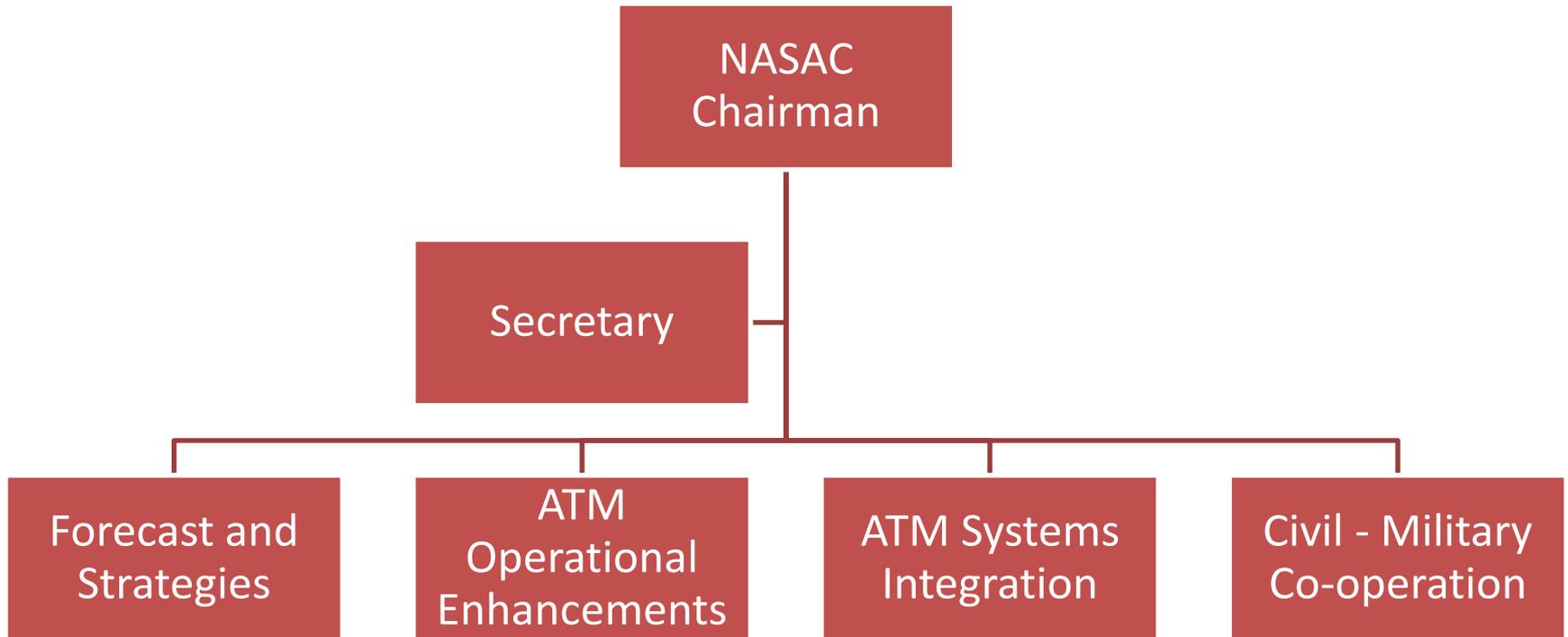
Effective platform for collaborative airspace management involving all aviation stakeholders

## Objective

provides an industry-wide representation forum for developing the industry position on airspace matters as the basis for strategic advice to the GCAA



# NASAC Organizational Structure





## NASAC Working Group Functions

### Forecast & Strategy

Responsible for developing Air Traffic Forecast and ATM strategies

### ATM Operational Enhancements

Addresses the operational matters in the UAE airspace, including airspace operational enhancement initiatives

### ATM System Integration

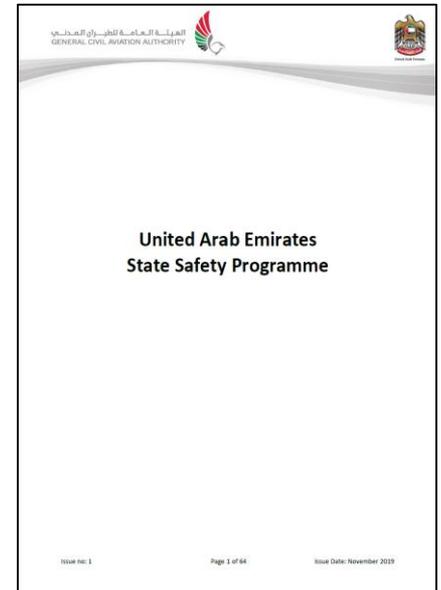
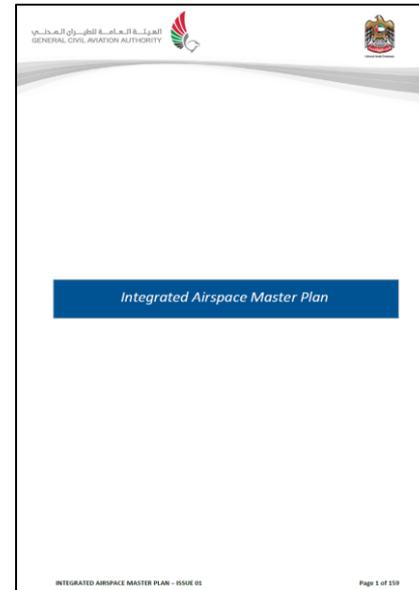
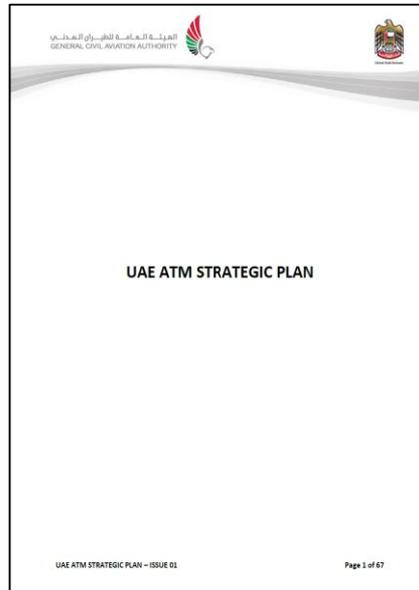
Focuses on continuous improvement of ATM systems in the UAE towards increased interoperability

### Civil – Military Cooperation

Focuses on matters related to Civil Military co-operation including but not limited to: ESCAT procedures, enabling FUA and enhancing use of the UAE airspace



# Documentations & ASBU Implementations



All documents are publicly available on the GCAA Website:

<http://www.gcaa.gov.ae>



## ASBU Implementations & Monitoring

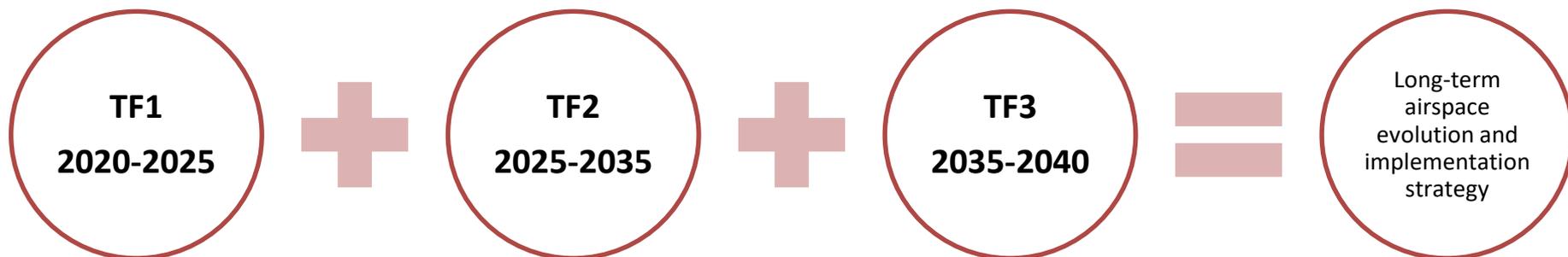
The UAE Government expects that GCAA will continue to reform the UAE's airspace and move towards closer alignment with the ICAO GANP and ASBU system, while adopting proven international best practice and reflecting the agreed regional priorities of the MID region.

Under the Airspace Restructuring Program 3 (ARP 3), a detailed design was developed, to achieve the operational objectives for the period 2016-2020. This was validated, and the performance objectives consolidated, in the IAMP covering the period 2016-2020.

This IAMP is a strategic document that covers the subsequent timeframe and it is built on ARP 3 design and network delivered on 07 December 2017. The IAMP 2020-2035 provides a roadmap for further developments and for supporting traffic growth up to 2040.



## The Three Sequential Timeframe



The UAE is assumed to implement the ICAO ASBU Block 1 requirements by 2025 due to limited information and past delays in implementing Block 0 targets

Full PBN airspace implementation in the UAE is likely to occur in TF2 to support increasing traffic demand, in line with the European implementation deadline of 1 January 2024

However, UAE is strategically targeting ASBUs and implementing each target according to needs, most of the time ahead of the global deadlines/targets. i.e. implementation of Free Route Airspace (FRA) which is expected in Q3 2023



## Resources

1. The Chicago Convention <http://www.icao.int/publications/Pages/doc7300.aspx>
2. UAE Civil Aviation Law 20 of 1991  
<https://www.gcaa.gov.ae/en/Pages/aboutgcaa/Laws.aspx>
3. UAE GCAA Law 4 of 1996 <https://www.gcaa.gov.ae/en/Pages/aboutgcaa/Laws.aspx>
4. UAE GCAA Airspace Policy
5. UAE GCAA ATM Strategic Plan
6. UAE GCAA Integrated Master Airspace Plan
7. UAE GCAA State Safety Program
8. Global Air Traffic Management Operational Concept ICAO Doc 9854
9. The Aviation System Block Upgrades THE FRAMEWORK FOR GLOBAL HARMONIZATION – July 2016
10. ICAO Global Air Navigation Plan Strategy
11. ICAO GANP – 6<sup>th</sup> Edition <https://www.icao.int/airnavigation/pages/ganp-resources.aspx>
12. MID REGION AIR NAVIGATION STRATEGY MID Doc 002
13. ICAO MID Air Navigation Plan Vol I, II, & III



**Questions?**



**Thank You**