



ICAO

INTERNATIONAL CIVIL AVIATION ORGANIZATION

A UN SPECIALIZED AGENCY



Fourteenth Meeting of the Asia/Pacific Air Traffic Flow Management Steering Group (ATFM/SG/14)
Bangkok, Thailand, 22 – 26 April 2024

ATFM

Global Developments

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Plan Overview

Traffic Overview

Aviation and Environment

Upcoming ICAO provisions

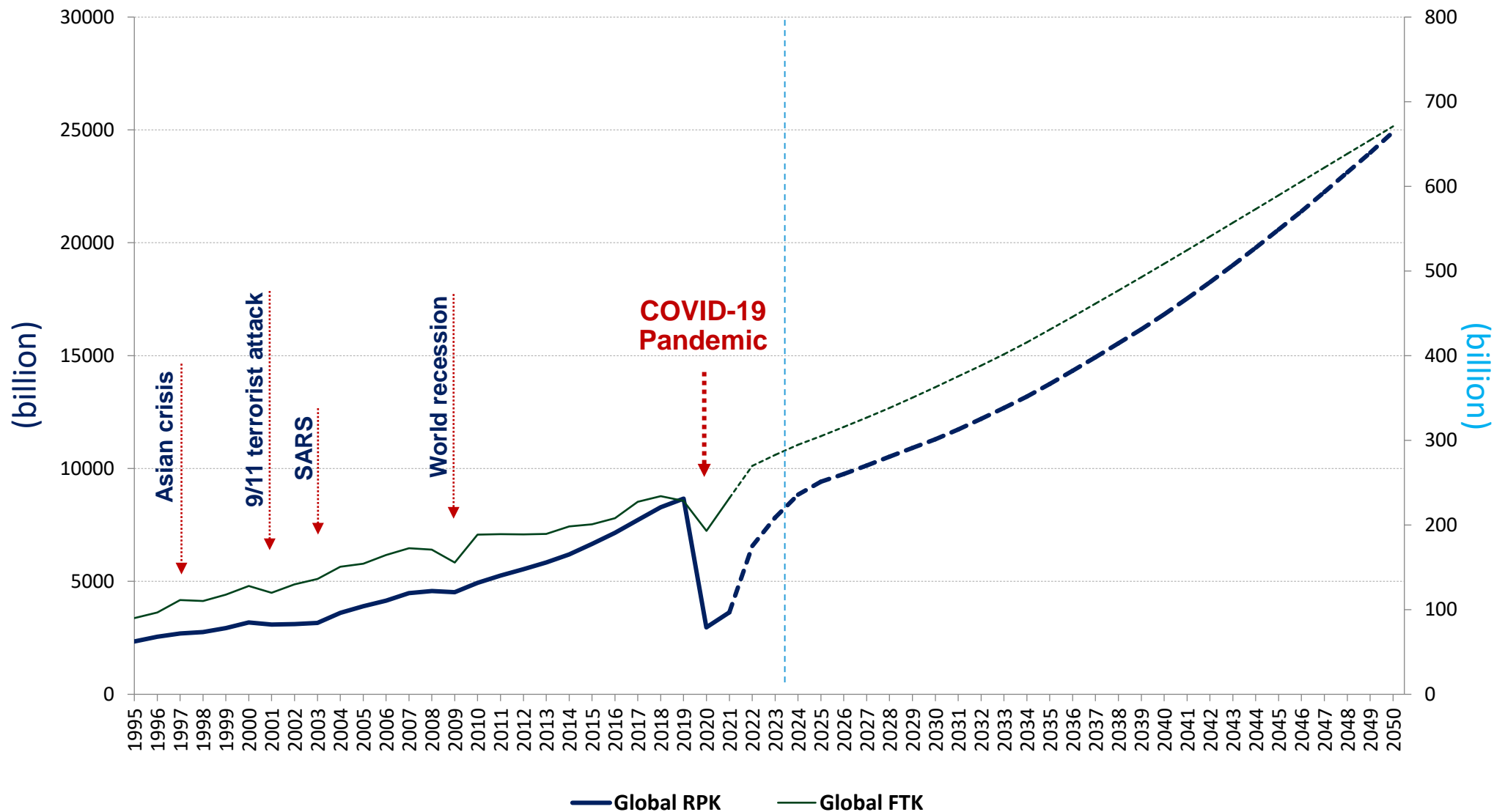
AN-Conf/14

Overview of ATFM upcoming provisions

Summary

Global traffic: The Pandemic and Recovery

Revenue Passenger-Kilometres
(billion)

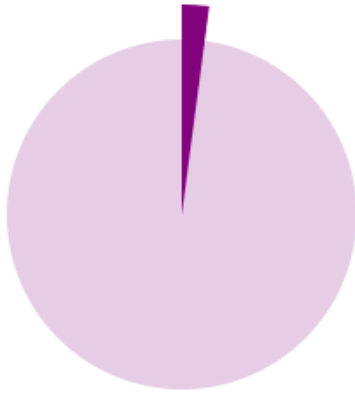


Freight Tonne-Kilometres
(billion)

Global RPK Global FTK

Aviation and Environment

(Source: Air Transport Action Group Facts and Figures)



2.1%

The global aviation industry produces around 2.1% of all human-induced CO₂ emissions. ⓘ



12%

Aviation is responsible for 12% of CO₂ emissions from all transport sources, compared to 74% from road transport.



80%

Jet aircraft in service today are well over 80% more fuel efficient per seat kilometre than the first jets in the 1950s. ⓘ



80%

Around 80% of aviation CO₂ emissions are emitted from flights of over 1,500 kilometres, for which there is no practical alternative mode of transport. ⓘ

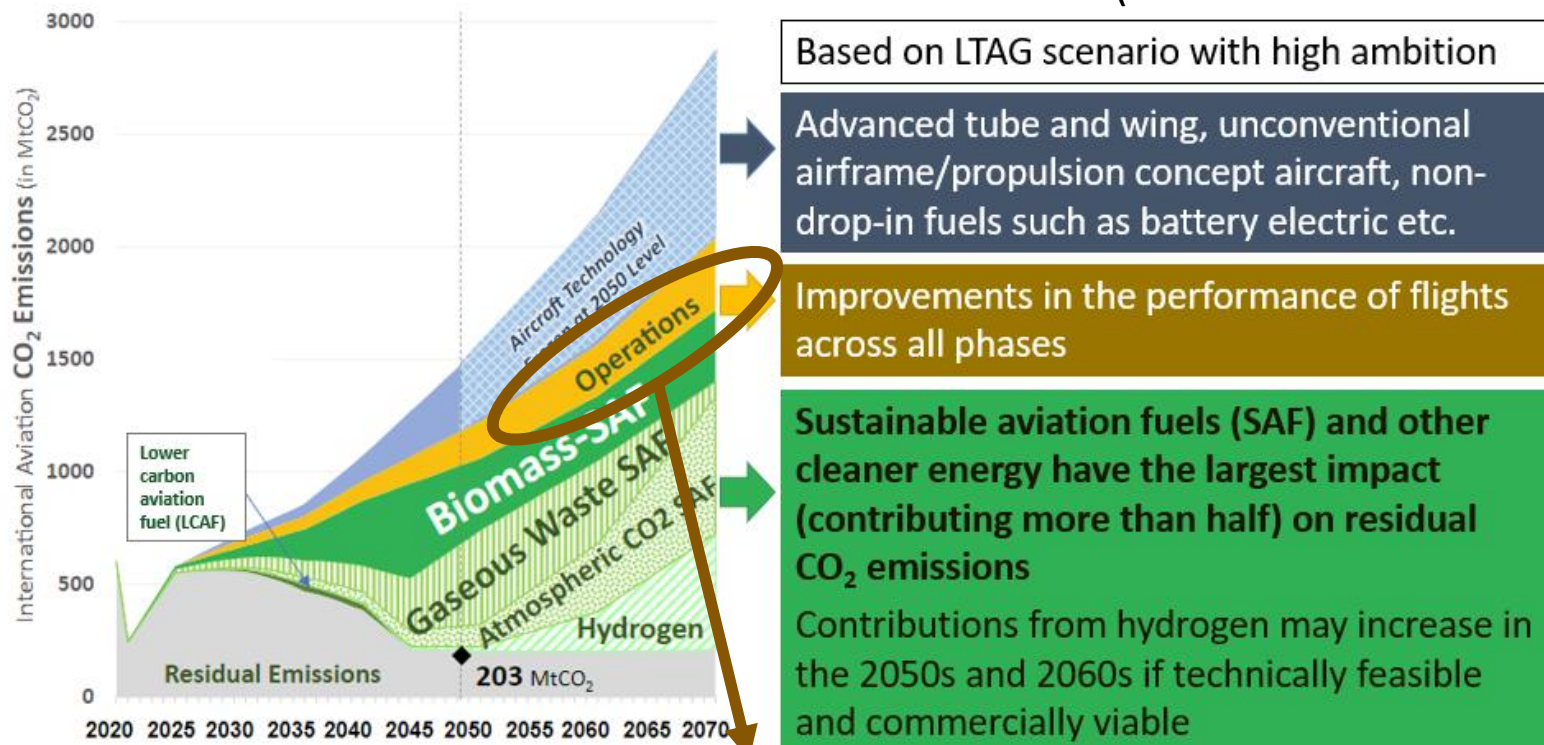


Assembly Resolution A41-21

- In support of Paris Agreement's temperature goal
- LTAG supported by wide range of stakeholders

LTAG - Technology, Operations, and Fuel

“When visualizing the ICAO basket of measures to reduce CO₂ emissions, **Air Traffic Management (ATM) and operations are often overlooked** as one of the main measures to support the decarbonization process. However, despite being depicted as a small wedge, **ATM and operations offer the highest potential** for reducing CO₂ and related **emissions in the short to medium term.**” (ICAO 2022 Environmental Report)



Theme: Performance Improvement Driving Sustainability

- 1. Prioritization and long-term strategic planning**
- 2. Timely and safe use of new technologies**
 - 2.1: Evolving aircraft technologies contributing to LTAG
 - 2.2: Addressing safety risks related to evolving aviation technology
 - 2.3: 2026-2028 Edition of the Global Aviation Safety Plan (GASP)
- 2. Air Navigation System Performance Improvement**
 - 3.1 Proposals to improve the efficiency of Air Navigation Services contributing to LTAG
 - 3.2 Phasing out legacy systems
 - 3.3 Eighth Edition of the Global Air Navigation Plan (GANP)
- 4. Hyper-connectivity of air navigation system**
 - 4.1 Connected aircraft concept and associated challenges
 - 4.2 Cybersecurity and Information System Resilience



Upcoming ICAO Provisions



aircraft address assignment as a part of the registration process	RPAS inflight handing over control	remove the prohibition to duplicate information in the AIPs	space weather information service	updates to WAFS forecasts	GADSS data and information	Use of RNAV on conventional routes and procedures	Global Aeronautical Distress and Safety System (GADSS)
Time-based separation (TBS) minima for wake turbulence	Enhanced provisions related to safety performance management	relocate paragliding and hang gliding activities from NOTAM code	Enhanced provisions related to safety intelligence.	Publication of Final Reports	CHARTING NAVIGATION SPECIFICATIONS AND ACCURACIES	Investigations involving unmanned aircraft	frees aircraft from the requirement to operate on specified tracks or ATS route
Increasing State allocation of aircraft addresses	clarify the intent of the instances where the term "altitude" is used	The in-flight weather contingencies procedure	Remote air traffic services - minor editorial	Restructured Annex 3 and the new PANS-MET	RAPS ELTs	Deletion of unused registers F1 and F2	C2 Link resilience
RPAS Take-off and landing	Enhanced provisions related to State safety programmes (SSPs)	quality assurance material in PANS-OPS, Volume II	AIRCRAFT WITH FOLDING WING TIPS.	clarify the existing definition for "meteorological authority"	IFP FOR HELICOPTER PBN OPERATIONS	Enhanced provisions related to safety management systems (SMS)	Deployable drift measurement devices
FF-ICE	RAPS Detect and Avoid	SAR point of contact responsiveness	first edition of PANS-IM	Global deficiencies in SAR	how to identify multi-part NOTAM	Consultation period of Final Reports	lower threshold MCTOM value for FDAP
Release of investigative information	dissemination of WAFS forecasts and VONA in IWXXM format	Quantitative volcanic ash information and IAVW updates	C2 Link switchovers	UAS Categories	CBTA methodology for AIM	Overlap between AOC and ROC processess	RPAS changed repsonsibilities for States



SARPS and PANS are coming online this year

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If you are looking at growing your RPAS operations....

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If you need to address adverse weather conditions

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Some new solutions are however foundational

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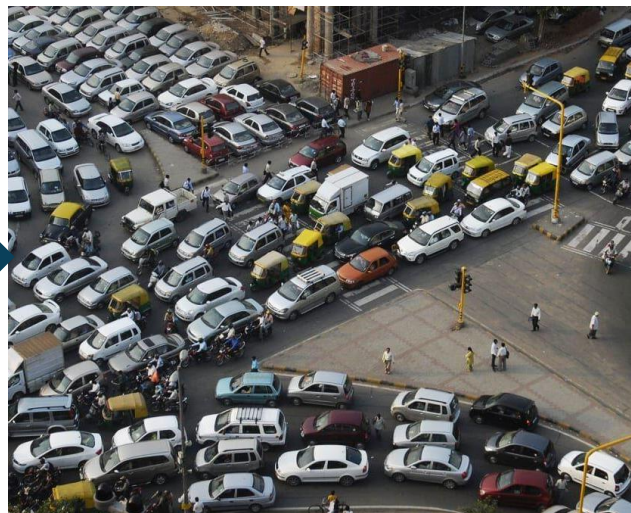


Operational Improvements

Amendment of the ICAO Provisions related to ATFM (Annex 11 and PANS-ATM) and the guidance material in Doc 9971



ATFM is **demand/capacity** balancing



ATFM Provisions - what's new?

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Current Provisions

~~ATFM service shall be implemented for airspace where traffic volume and at times exceeds the defined ATC capacity.~~

New Standards in Annex 11

- Establishment of ATFM service that supports cross-border ATFM cooperation.
- Determination and declaration of the ATC capacity in the form of **Strategic Capacity** and **Operational Capacity**.
- Coordination and communication **between ATFM units**;
- Exchange of ATFM information.

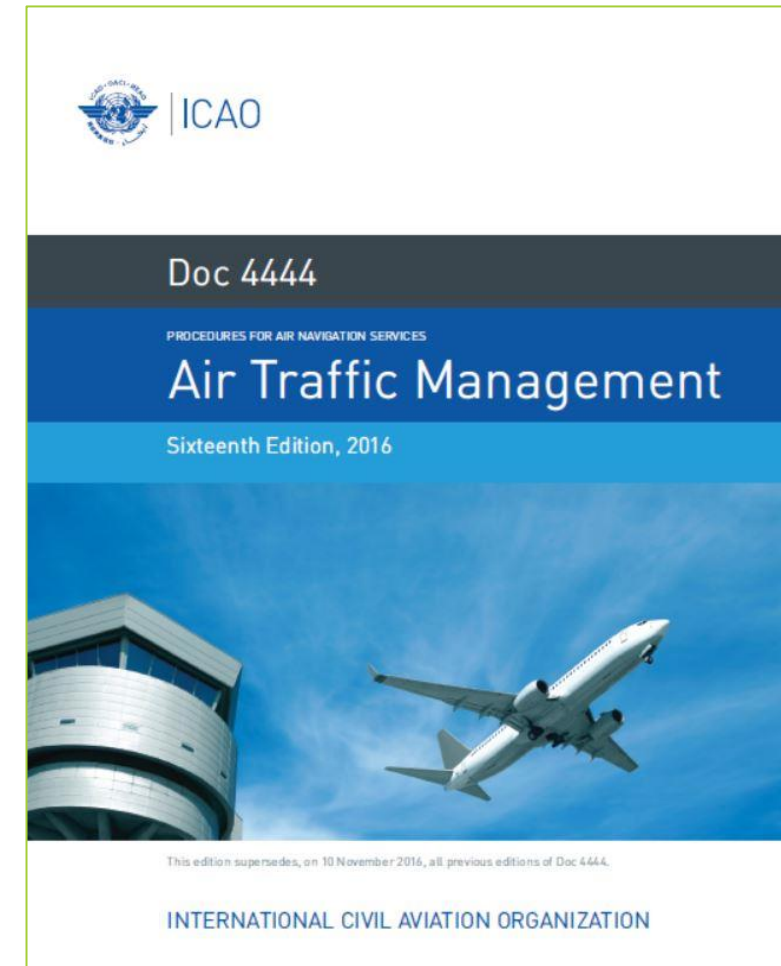
New Recommendation in Annex 11

*ATFM should be implemented on the basis of **multilateral** agreements and where possible as a **centralized** ATFM organization*

ATFM Provisions - what's new?

New and updated procedures in PANS-ATM

- Establishment and structure of ATFM service (ATFM units, ATFM area of responsibility, FMPs, etc.)
- Capacity determination (**strategic** and **operational**)
- ATFM in **4 phases**
- **Information** to be provided to **ATFM units**
- Exchange of information **between ATFM units** and the set of messages to be exchanged
- Communication of ATFM units with **ATS units, FF-ICE services units, operators, aerodromes**, etc.



ATFM Guidance - what's new?

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Doc 9971: Manual on...

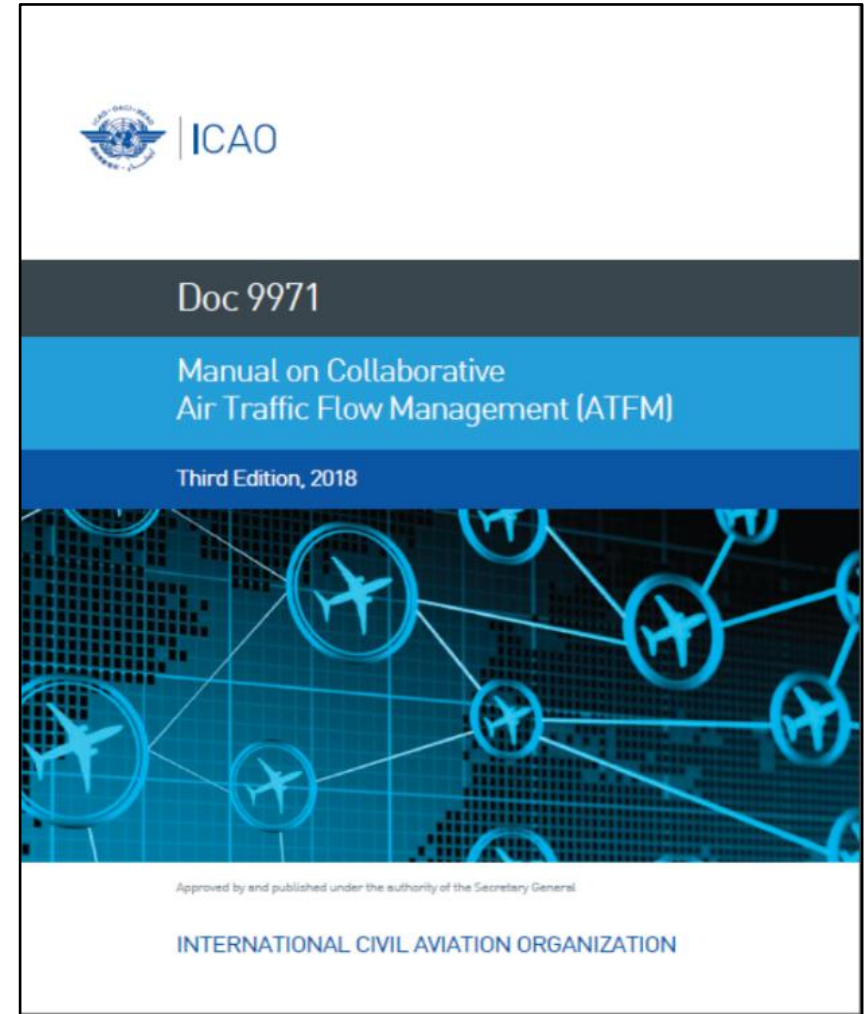
Doc 9971 was published in 2012 (3rd Edition in 2018)

Part 1 – Collaborative Decision Making (CDM)

Part 2 – Air Traffic Flow Management (ATFM)

Part 3 – Airport CDM (A-CDM)

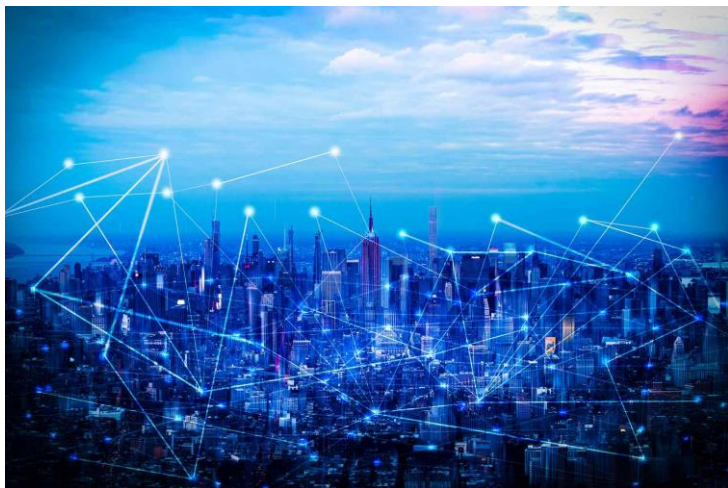
New Part 4: Operational Handbook





Long Term Objective is to achieve the
ATFM NETWORK OF THE NETWORKS
For Global Collaboration

ATFM cross-border
Intra-regional and regional ATFM
Inter-regional ATFM



CDM is part of ATFM so there is no need to say C/ATFM



Consider the below in your planning at national and regional levels:

1. Traffic recovery and growth
2. Impact of aviation on the environment
3. Work more on the Optimization of Airspace and ATM procedures
4. Take advantage of available ICAO procedures
5. Start by building ATFM national capabilities
6. Mixed Mode Operation (FF-ICE or FPL)
7. Cross-border collaboration

ATFM should support the orderly flow of traffic, ensuring **Efficiency**.

Hence, ATFM measures should be imposed as a last resort to regulate traffic.

Work collaboratively in establishing ATFM. BE READY

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Thank You