







19-23 Oct. 2025 **VEETINGS** Abu Dhabi, UAE









ATM SG/11 Meeting & CNS SG/14

Flight and Flow Information for a Collaborative Environment (FF-ICE) Workshop

REGULATORY REQUIREMENTS, TEMPLATE, ASBU ENABLERS, DEPENDENCIES AND RELATIONS





MIDANPIRG/22 Report





Qatar proposed regional regulatory framework related to FF-ICE to support States in developing harmonized national requirements for implementation of FF-ICE, in line with ICAO provisions.

Operational aspects of FF-ICE are currently being addressed by ASM WG under ATM SG. Meeting agreed that a dedicated multidisciplinary FF-ICE implementation TF, composed of members from AIM, ATM, and CNS SGs, might be established.

Meeting tasked AIM, ATM & CNS SGs to include FF-ICE to their work programme and conduct joint FF-ICE meeting/workshop during ATM SG/11 & CNS SG/14 meetings.

Joint FF-ICE meeting should **recommend** to **MIDANPIRG/23** the **best way forward** for **planning** & **implementing FF-ICE** in the Region, considering plans & experiences presented by APAC & EUR.

Meeting tasked AIM SG with prioritizing SWIM implementation as an enabler for FF-ICE and other services.

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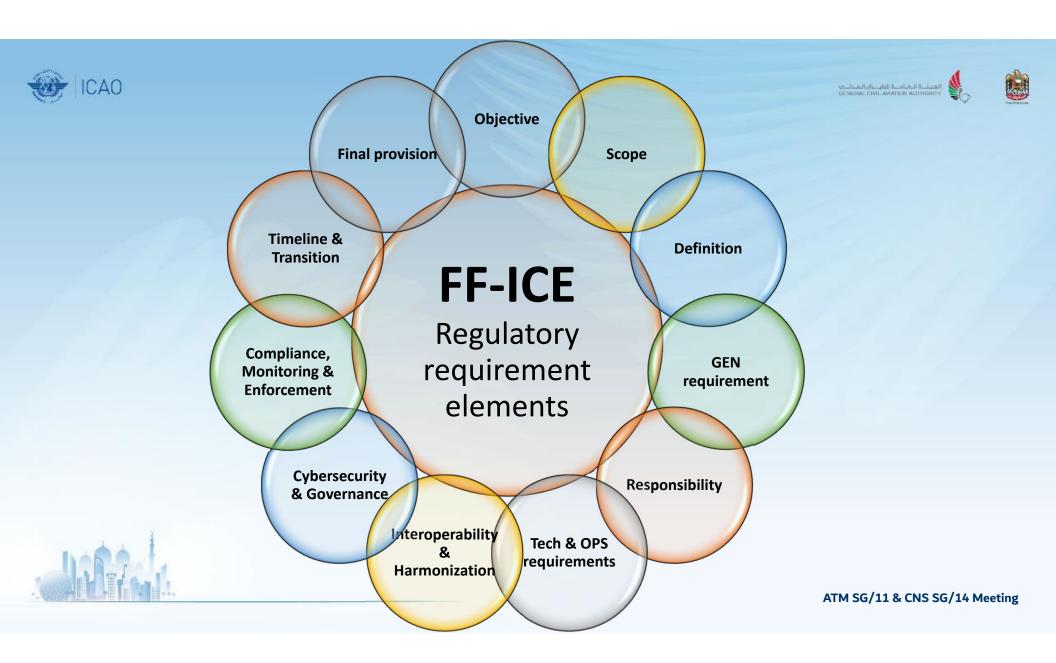


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REGULATORY REQUIREMENTS GUIDANCE & TEMPLATE

Proposed by Qatar











Objective

Purpose

- Collaborative flight planning
- TBO
- ATFM
- ATM efficiency & performance

Alignment

- FF-ICE (Doc 9965); and
- ICAO SARPs in Annexes.

Collaborative Environment

 ATM community members including ANSPs, aircraft operators, airport operators, and other stakeholders

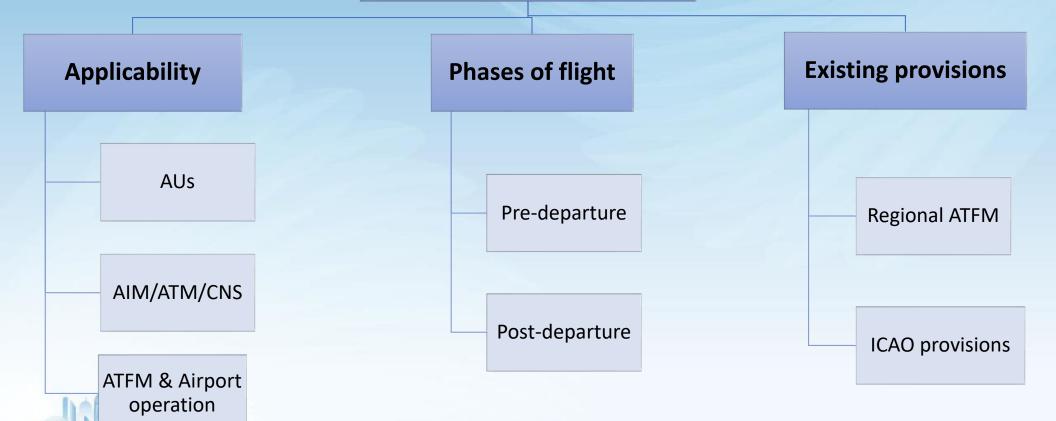








Scope



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Definitions





- Flight and Flow Information for a Collaborative Environment (FF-ICE)
- FF-ICE Services
- Flight Information Exchange Model (FIXM)
- System Wide Information Management (SWIM)
- Global Unique Flight Identifier (GUFI)
- Competent Authority
- Air Navigation Service Provider (ANSP)
- Airspace User / Aircraft Operator



General Requirements





- Global Interoperability
- Conformance to ICAO Related SARPS and FF-ICE Concept and Procedures
- Performance-Based Approach (PBA)
- Infrastructure and Environment
- Regional Coordination





Responsibilities





State Oversight

- Regulatory Oversight
- Approval and Certification
- International Representation
- Continuous Improvement

ANSP

- Implementation of FF-ICE Services
- Data Quality and Standards Compliance
- Interoperability and Interface Management
- Training and Procedures
- Continued Service Provision

AUs

- Submission of Flight Information
- Use of Unique Identifiers
- Compliance with Procedures
- Equipment and Capability
- Continued Adherence and Feedback

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Technical and Operational Requirements

- Data Format and Exchange Standards
- SWIM Interfaces
- Unique Flight Identification
- Data Elements and Extensions
- Time Synchronization and Reference
- Trajectory and Performance Data Use
- Legacy System Integration
- Validation and Testing



Conformance

Interoperability

Operational

Certification

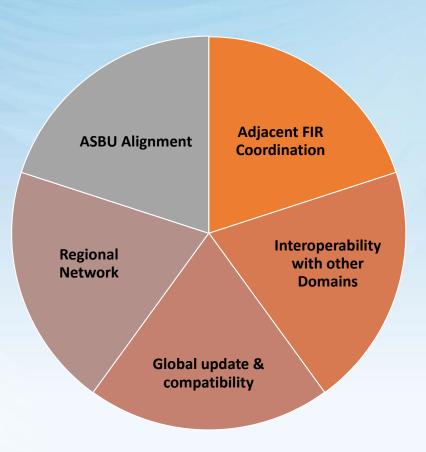






Interoperability & Regional/Global Harmonization

- ASBU Alignment
- Adjacent FIR Coordination
- Use of Regional Networks
- Interoperability with Other Domains
- Global Updates and Compatibility









Cybersecurity and Data Governance

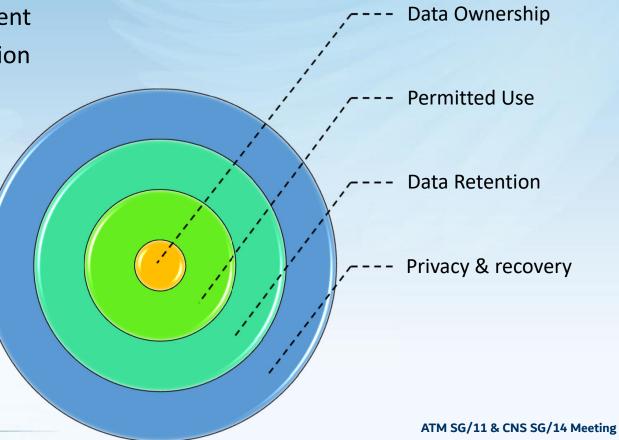
Information Security Management

Access Control and Authentication

Encryption and Data Protection

Data Governance and Privacy

- Resilience and Recovery
- Audit and Monitoring









Compliance, Monitoring and Enforcement

- Compliance Monitoring
- Incident Reporting
- Enforcement Actions ANSP
- Enforcement Actions AUs
- Performance Reviews



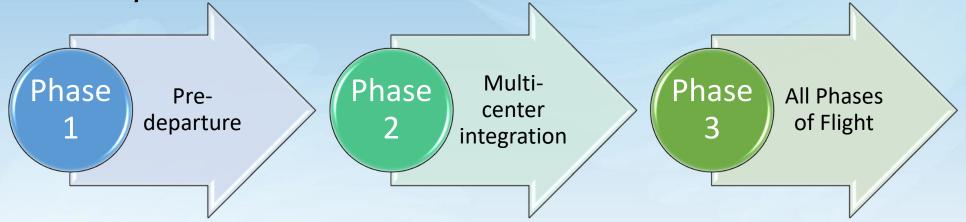






Implementation Timeline & Transitional Provisions

Phased Implementation Plan



- Transition Period and Dual Operations
- Temporary Exemptions
- Progress Monitoring and Reporting
- **Revision** of Dates
- Legacy System Decommissioning

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FF-ICE SERVICES DESCRIPTION









FF-ICE service definition:

- A set of services established for the purposes of:
 - facilitating exchange of FF-ICE, accurate assessment of demands, appropriate resource planning; and
 - optimizing flight planning and execution.









PANS ATM, Chapter 17, 17.1.1

The FF-ICE services may include any of the following:

- Planning service: the evaluation of a preliminary flight plan (PFP) with respect to flight plan acceptability and, where practicable, the indication of applicable restrictions and resultant constraints on the flight;
- Filing service: the evaluation of a filed flight plan (eFPL) for the provision of air traffic services and indication of flight plan acceptability;
- Trial service: the evaluation of a trial request with respect to flight plan acceptability and, where practicable, the indication of applicable restrictions and resultant constraints on the flight;

Note.— The trial service offers an **opportunity** for an **operator** or designated representative to submit "what-if" scenarios and to receive **feedback** from an **FF-ICE** services unit, prior to submitting a **PFP**, **eFPL** or **flight** plan update.

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- Flight data request service: the provision of data regarding a specific flight such as the latest version of a filed flight plan or search and rescue data upon request by an eligible recipient;
- Notification service: the provision of data regarding a certain flight event such as departure and arrival to required recipients; and
- Publication service: the publication of flight and flow data for access by authorized subscribers.



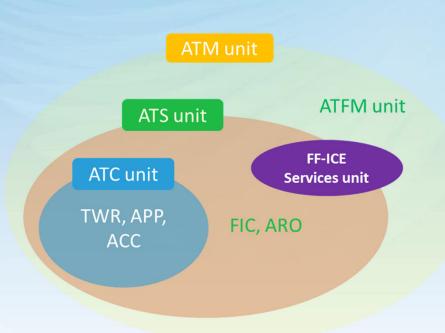






FF-ICE services unit definition:

A unit designated by the appropriate ATS authority for the provision of FF-ICE services.











Flight plan definition (New):

Specified information relative to an **intended flight** or **portion** of a flight of an aircraft.

Note: The term **flight plan** may be **prefixed** by the words **"preliminary"**, **"filed"**, **"current"** or **"operational"** to **indicate** the **context** and different **stages** of a flight.









Filed flight plan (FPL or eFPL) definition:

The latest flight plan as submitted by the pilot, an operator or a designated representative for use by ATS units.

Note: The **eFPL** allows for the **exchange** of **additional** information not contained within the **FPL**.









FF-ICE Operational Concept

FF-ICE is not new FPL format, or same concept as FIXM, SWIM, TBO just used by ANSP for pre-departure planning it is the long-term solution enable transitioning to a fully collaborative environment where flight trajectory is shared and optimized during all phase of flight.

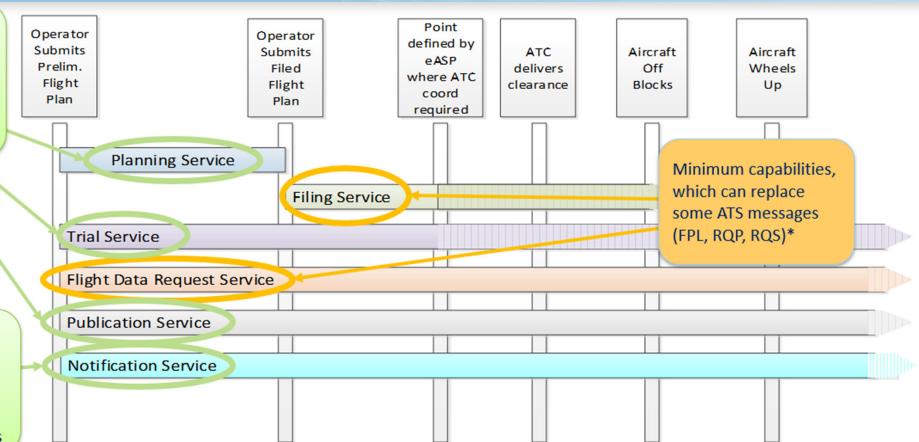
In fact, FF-ICE is new mechanism for data exchange and interaction with stakeholders to facilitate coordination and negotiation based on correct information.







Optional services that facilitate coordination and negotiation



service which can replace Arrival (ARR) and Departure (DEP) messages

Optional

* FPL (Filed Flight Plan), RQP (Request Flight Plan), RQS (Request Supplementary Flight Plan)



FF-ICE Enabler, Dependencies & Relations





ASBU Blocks

Block 0

Block 2

Block 3

Block 4

Thread

FICE

Element

BO/1 AIDC

B2/1 Planning service

B2/2 Filing service

B2/3 Trial service

B2/4 Flight Data Request service

B2/5 Notification service

B2/6 Publication service

B2/7 FIS for HAO

B2/8 FIS for LAO

B2/9 In flight replanning

B3/1 FIS for enhance **TBO**

B4/1 Integrate d FIS for end-toend planning

B4/2 Real-time participation of operators

Enablers

- FIXM Version 4.2.0
- Capability to proces
FFICE data exchange
- SMS
- Procedures for FF-ICE
Flight Data Request
Service
- Capability to provide
and use FF-ICE Flight
Data Request Service
- Training
- National regulatory
framework amendment
for the provision and
use of FF-ICE Flight Data
Request Service

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Dependencies Relations

SWIM-B2/3 - SWIM
registry
SWIM-B2/1 Information service
provision
SWIM-B2/2 Information service
consumption
FICE-B2/2 - Filing Service
SWIM-B2/4 - Air/Ground
SWIM for non-safety
critical information

SWIM-B2/1 - Information service provision SWIM-B2/2 - Information

FICE-B2/2 - Filing Service SWIM-B2/1 - Information service provision SWIM-B2/2 - Information service consumption SWIM-B2/3 - SWIM registry SWIM-B2/4 - Air/Ground SWIM for non-safety critical information

registry SWIM-B2/1 provision SWIM-B2/2 consumption DAIM-B2/3 -Aeronautical information to support higher airspace operation registry SWIM-B2/1 provision SWIM-B2/2 formation servi consumption DAIM-B2/4 -Aeronautical information uirements tailo to UTM

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THANK YOU

