

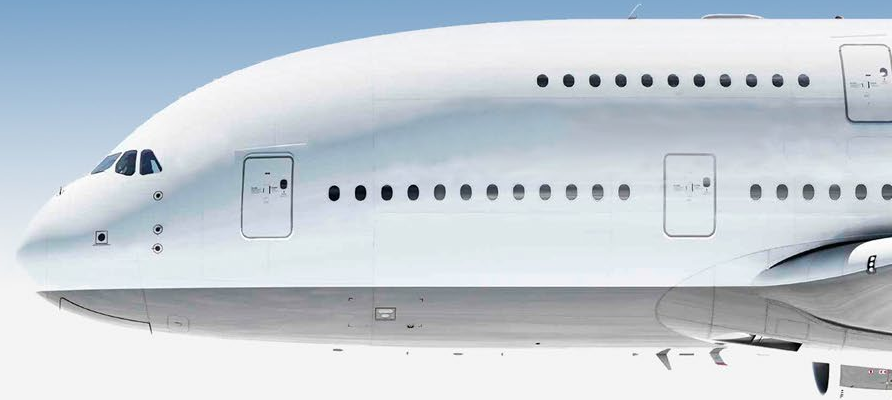


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# ONGOING WORK OF ICAO ON “FICE”

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Technical Officer,  
Airspace Management and Optimization



On-line Workshop on the Mitigation of Flight Plan Errors in the NAM/CAR Regions  
Online, 15 to 17 June 2021



- **FICE in the 6<sup>th</sup> Edition of GANP**
- **AIDC Guidance**
- **FF-ICE provisions**



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# FICE IN GANP/ASBU



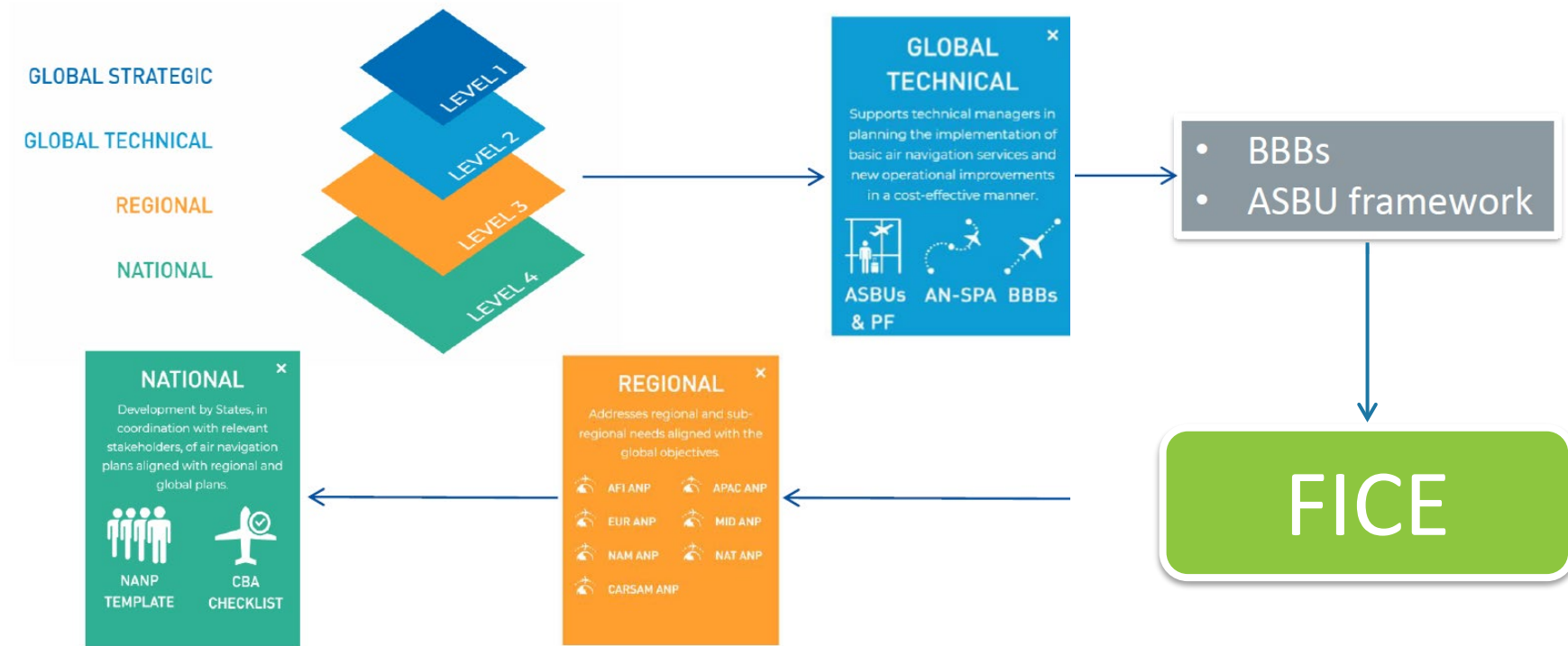


## WELCOME TO THE GLOBAL AIR NAVIGATION PLAN PORTAL

The GANP Portal is a web portal where all aviation stakeholders will be able to find the most relevant information related to the GANP



<https://www4.icao.int/ganpportal/>





Operational			
ACAS	Airborne Collision Avoidance System (ACAS)	Operational	
ACDM	Airport Collaborative Decision Making	Operational	
Information			
AMET	Meteorological information	Information	
DAIM	Digital Aeronautical Information Mangement	Information	
FICE	Flight and Flow Information for a Collaborative Environment (FF-ICE)	Information	
CNS technology and services			
ASUR	Surveillance systems	Technology	
COMI	Communication infrastructure	Technology	
COMS	ATS Communication service	Technology	
NAVS	Navigation systems	Technology	



FICE		
FICE-B0/1	Automated basic inter facility data exchange (AIDC)	Information   
FICE-B2/1	Planning Service	Information   
FICE-B2/2	Filing Service	Information   
FICE-B2/3	Trial Service	Information   
FICE-B2/4	Flight Data Request Service	Information   
FICE-B2/5	Notification Service	Information   
FICE-B2/6	Publication Service	Information   
FICE-B2/7	Flight information management service for higher airspace operations	Information   
FICE-B2/8	Flight information management service for low-altitude operations	Information   
FICE-B2/9	Flight information management support for inflight re-planning	Information   
FICE-B3/1	Flight information management services for enhanced trajectory operations	Information   
FICE-B4/1	Integrated flight information management system for end-to-end global flight planning	Information   
FICE-B4/2	Real-Time Participation of operators in flight information	Information   



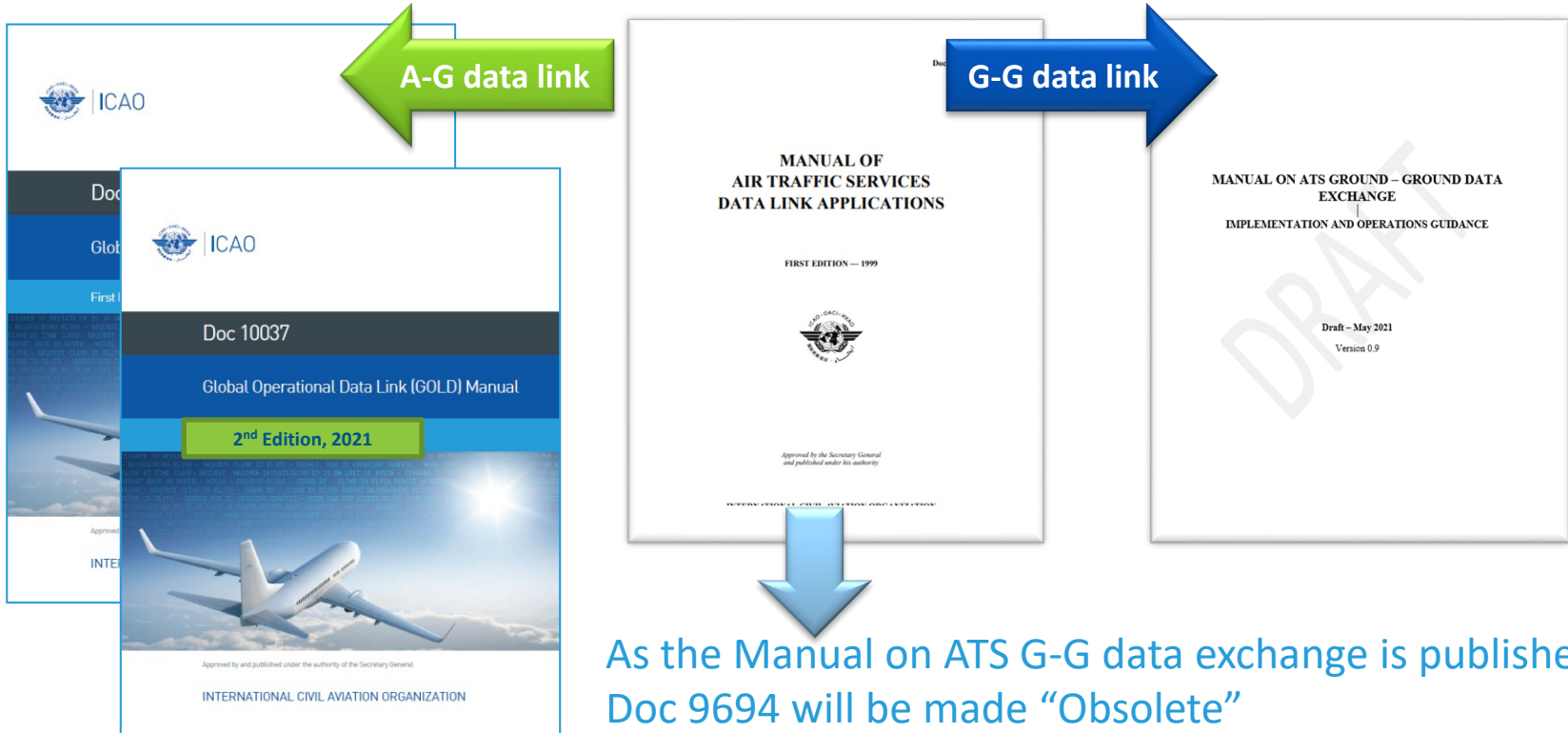
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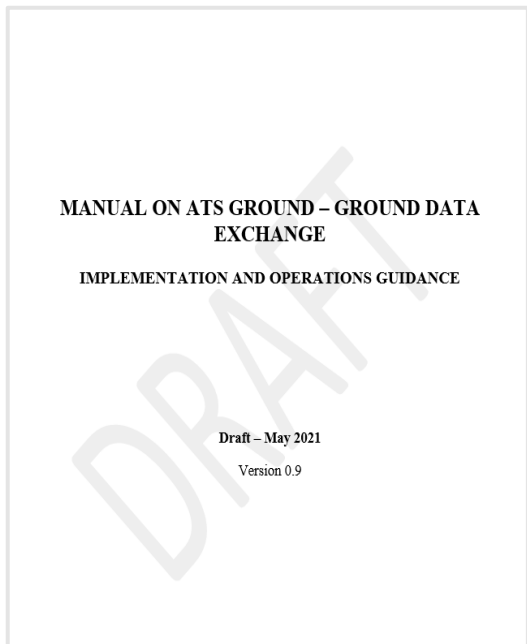
# UPDATE OF AIDC GUIDANCE







## 1<sup>st</sup> Edition, 2022/2023



- **General guidance**
  - Flight data processing system
  - Automated interface and applications
  - AIDC Messages
- **Harmonization framework for AIDC implementation**
- **AIDC performance monitoring and validation**
- **AIDC training and Implementation**
  - Appendix A Sample LoA
  - Appendix B Sample AIDC Interoperability Test

**In addition, AIDC provisions in the PANS-ATM are being reviewed** to identify areas for amendment necessary for the globally harmonized implementation of AIDC



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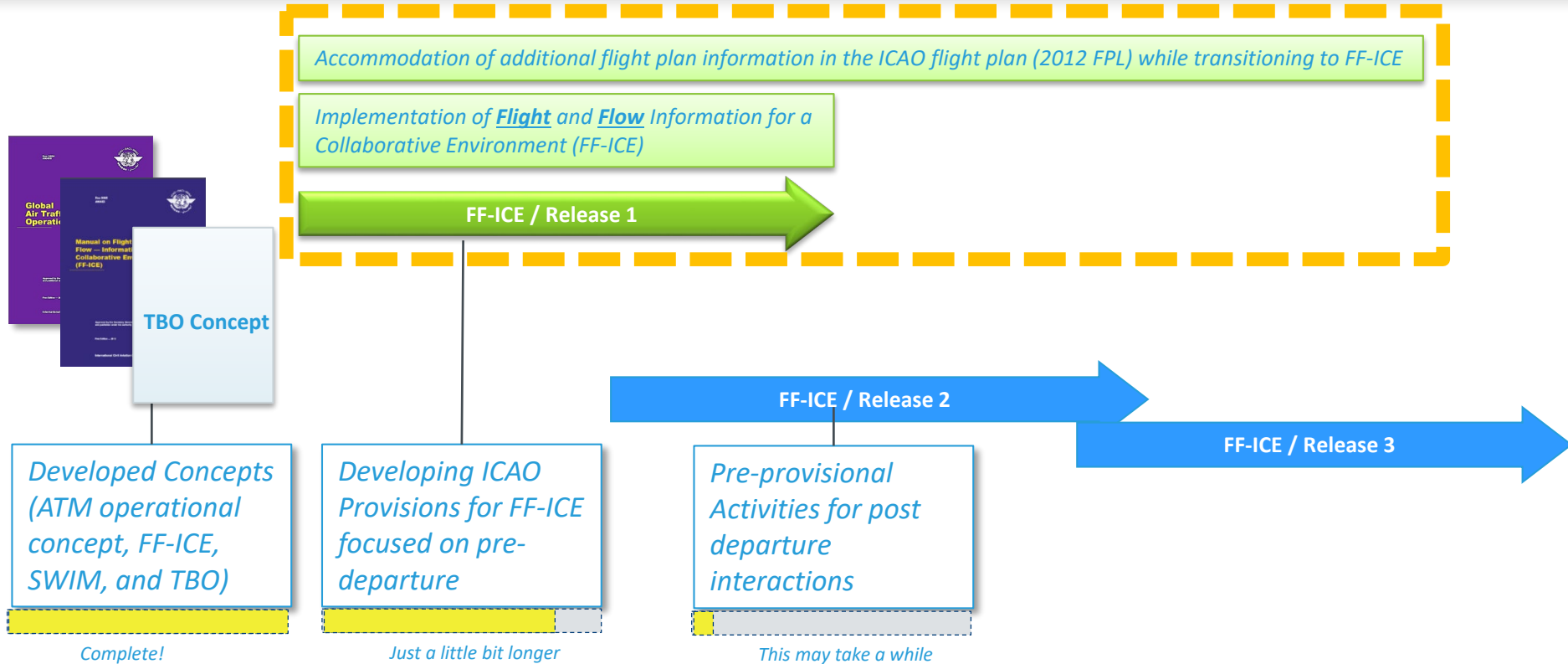
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# ICAO PROVISIONS CONCERNING FF-ICE





# Phased approach





**F**light and **F**low – **I**nformation for a **C**ollaborative **E**nvironment

**Information** necessary for planning, coordination, and notification of flights **exchanged** in a **standardized format** **between members of the ATM community**, including those involved in flight operations and aerodrome operations



**Address limitations and constraints of the current flight planning mechanism**

**Short Term**

**Long Term**

**Enable transitioning to a fully collaborative environment where a flight trajectory is shared and optimized during all phases of a flight**



➤ **Inconsistent or duplicate flight plans** held by various stakeholders (operator, aircraft, departure aerodrome, downstream ATS units)

➤ Intention of flight can only be **supplied a short time before flight** to ATM and **no feedback from ATM** on the supplied flight intent

➤ **Inflexible and inefficient means** to accommodate changing information needs at global, regional, and state levels





# FF-ICE Changes

➤ **Inconsistent or duplicate flight plans** held by various stakeholders (operator, aircraft, departure aerodrome, downstream ATS units)



➤ **New mechanisms to exchange information** are higher-performing, uniquely identify flights, and clarify initial distribution

➤ Intention of flight can only be **supplied a short time before flight** to ATM and **no feedback from ATM** on the supplied flight intent



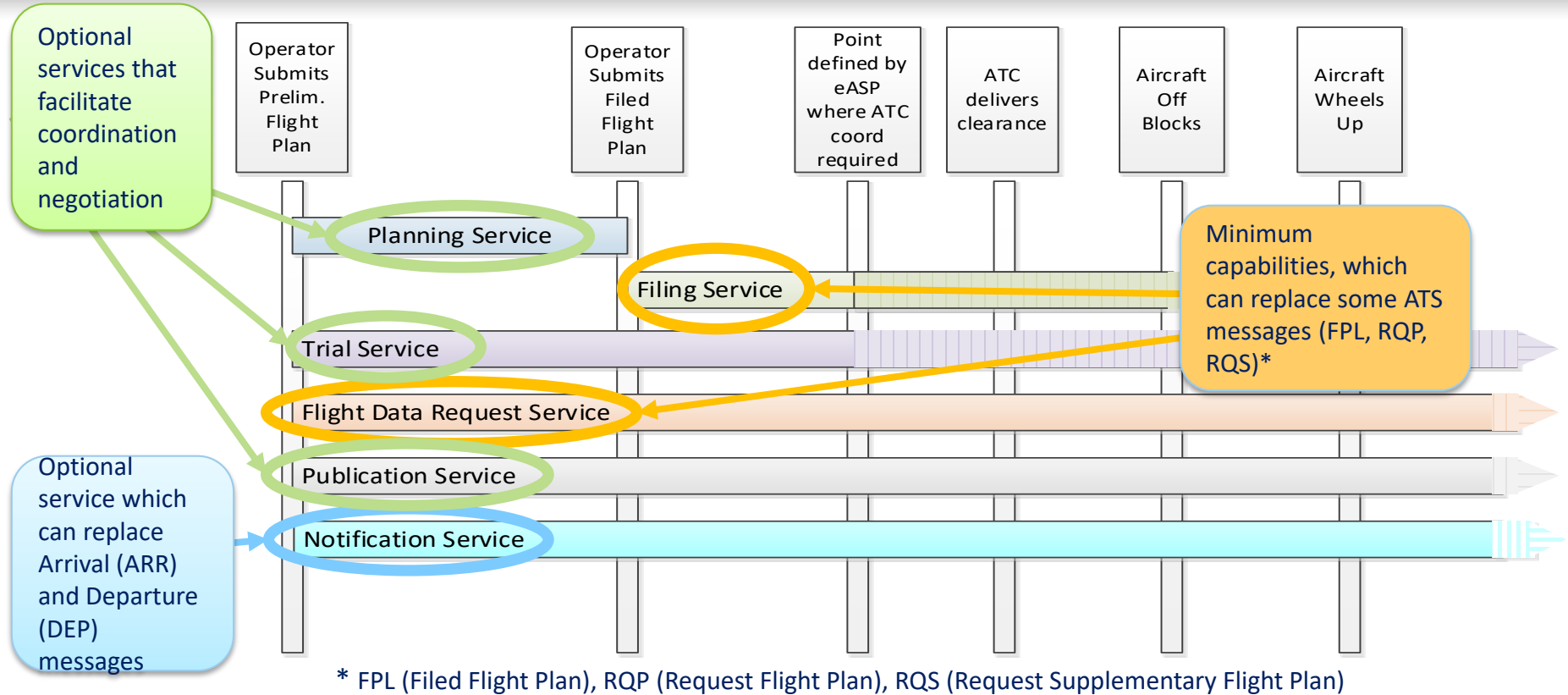
➤ **New interactions between stakeholders** facilitate coordination and negotiation

➤ **Inflexible and inefficient means** to accommodate changing information needs at global, regional, and state levels



➤ **New data exchanges** ensure all stakeholders work from the correct information, allows indication of advanced capabilities, and is extensible to address emerging needs

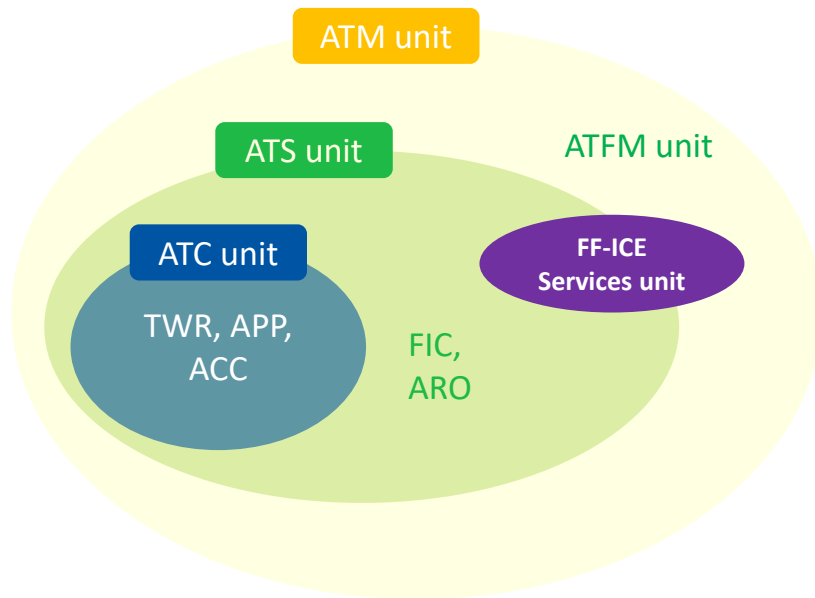






## Among all provisions concerning “flight plan” or “flight planning”





- A required term for FF-ICE provisions is more in the sense of a “unit” providing “service”, as designated by an appropriate ATS authority
- “FF-ICE services unit” is used in a way that does not require amendments to any other established terms (ATS, ARO, ATM, etc.)

*Note : According to Annex 2, 11 and PANS-ATM, the term “service” is used as an abstract noun to designate functions, or service rendered, and the term “unit” is used to designate a collective body performing a service.*



## Objectives & Principles

- Allow provision and use of **FF-ICE services on a voluntary basis**, but in a **standardized manner**
- **No additional requirements** to those not implementing FF-ICE services
- Primarily focus on **interactions prior to departure**, but **allow for successive increments** of provisions to address the evolution of FF-ICE
- As **comprehensive yet future-proof provisions** as possible in order to cater for ongoing developments of FF-ICE



## Annex 2

- Submission, contents, completion, changes, and closing of flight plans

⇒ **Amendment** to provisions concerning to whom flight plan is submitted

## Annex 10 Vol II

- Messages to be handled by AFTN

⇒ **None**

## PANS-AIM

- Contents of AIP ENR 1.10 flight planning and ENR 1.11 addressing

⇒ **Amendment** to require publication of FF-ICE services availability and associated procedures, if applicable

## PANS-ATM

- Submission of a flight plan
- Acceptance of a flight plan
- ICAO model flight plan form
- Instructions for the completion of the flight plan form
- Instructions for the transmission of FPL message
- ATS messages and associated procedures

⇒ **Amendment** to procedures to support the mixed-mode operation of FPL2012 and FF-ICE

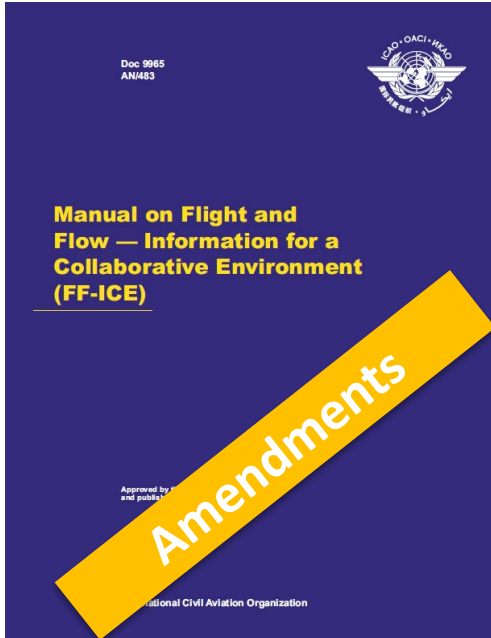
⇒ **New provisions** to describe

- objectives and types of FF-ICE services
- administrative and organizational requirements for the implementation of FF-ICE services
- procedures and messages applicable to each FF-ICE service
- high-level technical and interoperability requirements

Supported by the concept and implementation guidance in Doc 9965 FF-ICE Manual & Implementation Strategy

Supported by ICAO FF-ICE Website

Supported by the FIXM implementation Guidance



## ➤ Volume I Concept (Updated)

## ➤ Volume II Implementation Guidance (New)

- Implementation considerations
- Air traffic flow and capacity management
- Information management and technology
- Mixed-mode and transition
- State publications, training,
- GUFU and flight plan association
- Recommended means & procedures and for each FF-ICE service
- Route and trajectory as well as other new data items
- Information and data exchange model
- Content of FF-ICE messages
- Logic rules, association checks, GUFU constructions, translation guidance



- ✓ How to accommodate additional information needs ?
- ✓ Will FPL2012 be sun-setting eventually, if so when ?

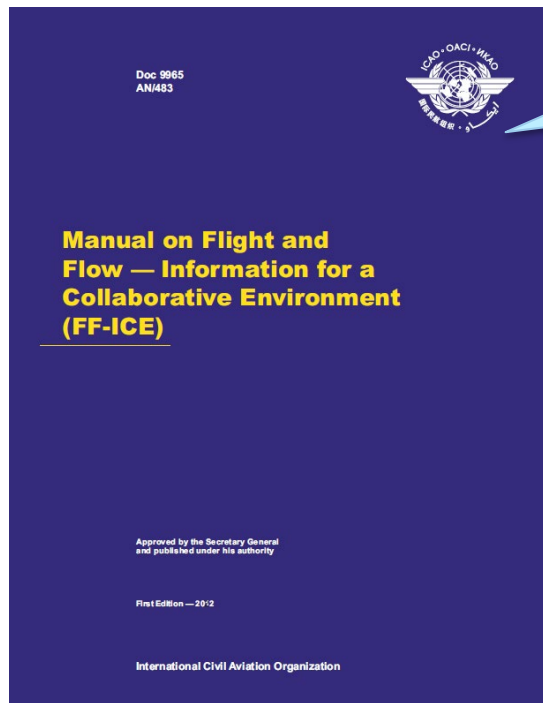








# Where to Document ?



Add a note pointing to a dedicated ICAO FF-ICE website  
<https://www.icao.int/airnavigation/FFICE/Pages/default.aspx>.”



## Major improvement on the existing FF-ICE website

- To host information and guidance on transition to FF-ICE services
- To document evolving needs for flight information, and a recommended use of flight plan codes for flight plan item 18



## Sun-setting FPL2012



Global  
(With a target date of mandate)

Regional  
Local/national



# Summary & Conclusions

## FICE

FICE-B0/1	Automated basic inter facility data exchange (AIDC)	Information	📄 ⏪ ⏩
FICE-B2/1	Planning Service	Information	📄 ⏪ ⏩
FICE-B2/2	Filing Service	Information	📄 ⏪ ⏩
FICE-B2/3	Trial Service	Information	📄 ⏪ ⏩
FICE-B2/4	Flight Data Request Service	Information	📄 ⏪ ⏩
FICE-B2/5	Notification Service	Information	📄 ⏪ ⏩
FICE-B2/6	Publication Service	Information	📄 ⏪ ⏩
FICE-B2/7	Flight information management service for higher airspace operations	Information	📄 ⏪ ⏩
FICE-B2/8	Flight information management service for low-altitude operations	Information	📄 ⏪ ⏩
FICE-B2/9	Flight information management support for inflight re-planning	Information	📄 ⏪ ⏩
FICE-B3/1	Flight information management services for enhanced trajectory operations	Information	📄 ⏪ ⏩
FICE-B4/1	Integrated flight information management system for end-to-end global flight planning	Information	📄 ⏪ ⏩
FICE-B4/2	Real-Time Participation of operators in flight information	Information	📄 ⏪ ⏩

a) Doc 9694 *Manual on ATS Data Link Applications* will be superseded by a new ICAO Manual to be published in 2022/2023

b) Proposed amendments to relevant Annexes, PANS and guidance are under development and subject to State consultation in 2022

c) A notional sunset date for FPL2012 is being considered together with a transition strategy

### NACC Member States are invited to :

- consider the benefits of implementing FF-ICE services
- commence discussions to transition to implementing minimum capabilities of FF-ICE





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THANK YOU