SUPPORTING
EUROPEAN
AVIATION

EUROCONTROL Network Manager Implementation of FF-ICE

Donal Lalor
17th February 2026

CONSORTIUM COORDINATOR sesar DEPLOYMENT MANAGER
FOUNDING MEMBER sesar JOINT UNDERTAKING
NETWORK MANAGER

Agenda

- Introduction
- FF-ICE Services
- FF-ICE Message Exchange
- FF-ICE New Information
- Transition from ICAO 2012 to FF-ICE
- FF-ICE Implementation Overview
- Further Information

EUROCONTROL

Introduction

FPFDE* network strategic project established
FPFDE subgroup meets twice/year.
Members from ANSPs, operators, IATA, ATM systems etc..

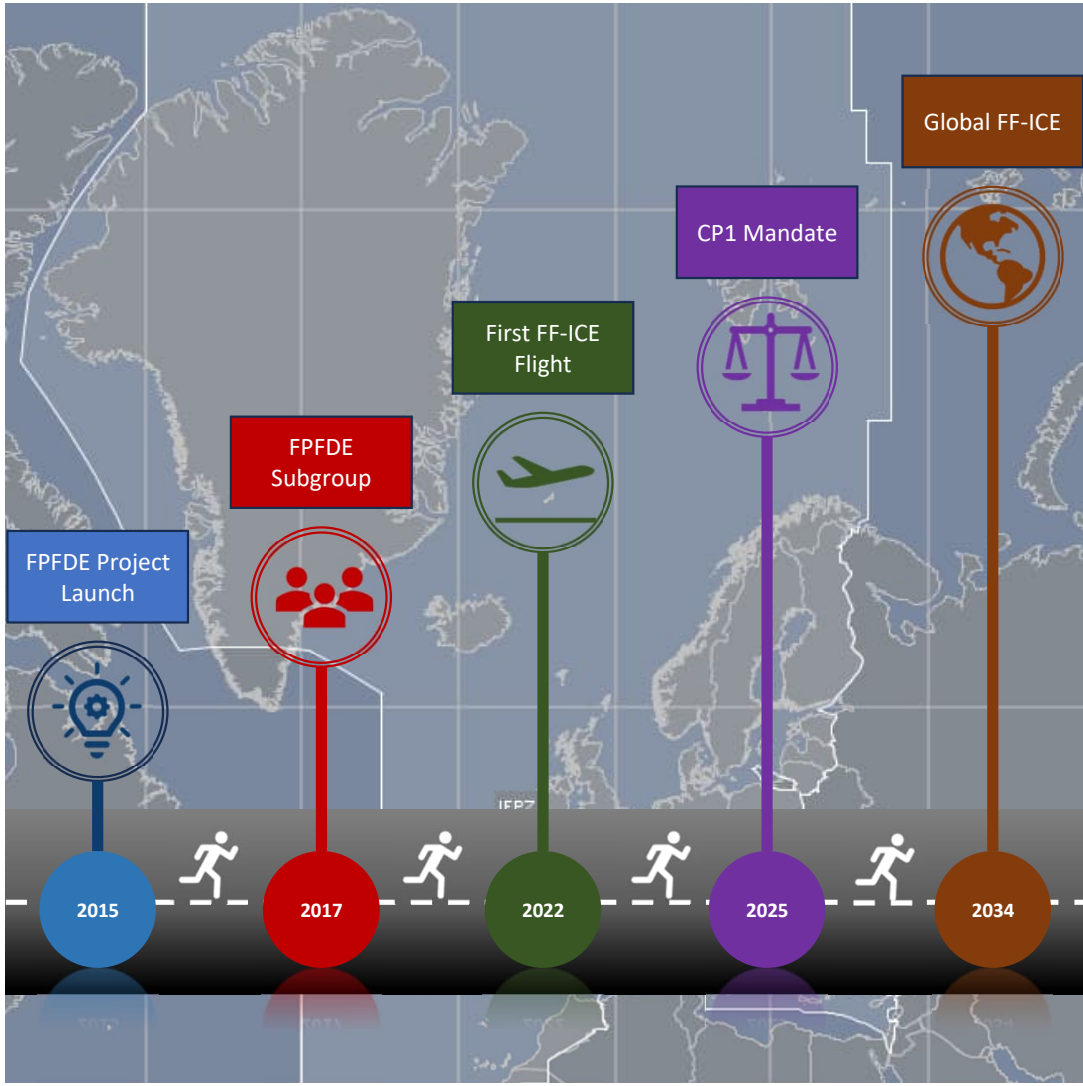
EUROCONTROL Network Manager (NM) FF-ICE services unit for the IFPZ. All services provided except planning service

Services provided via NM B2B services using request/reply and publish/subscribe communication models

Messages exchanged using the Flight Information Exchange Model (FIXM)

First flight using an FF-ICE flight plan: Lufthansa Munich to Hamburg 15th of December 2022

*Flight Plan & Flight Data Evolution



EUROCONTROL NM B2B Services

EUROCONTROL B2B Services

PRE-OPS Platform

- Conduct testing & assess readiness to move to OPS
- Requires NM B2B PRE-OPS certificate

OPS Platform

- Required to use services operationally
- Requires NM B2B OPS certificate, following testing & validation

EUROCONTROL

FF-ICE Services

Planning Service
- Operator share early flight intent
- Assist operator determine optimal route/trajectory

Not yet implemented by EUROCONTROL

Trial Service
- Evaluate eFPL before submission
- Evaluate alternative
- “What-if”investigations

Publication Service
- Obtain information relevant to operations and maintain awareness of changes

Services implemented by EUROCONTROL

Filing Service
- Flight plan submit
- Flight plan update
- Flight plan cancellation

Flight Data Request Service
- Request specific flight data
- Equiv. to RQP & RQS

Notification Service
- Notify flight events
- Arrival & Departure notifications

Services implemented by EUROCONTROL

EUROCONTROL

FF-ICE Message Exchange

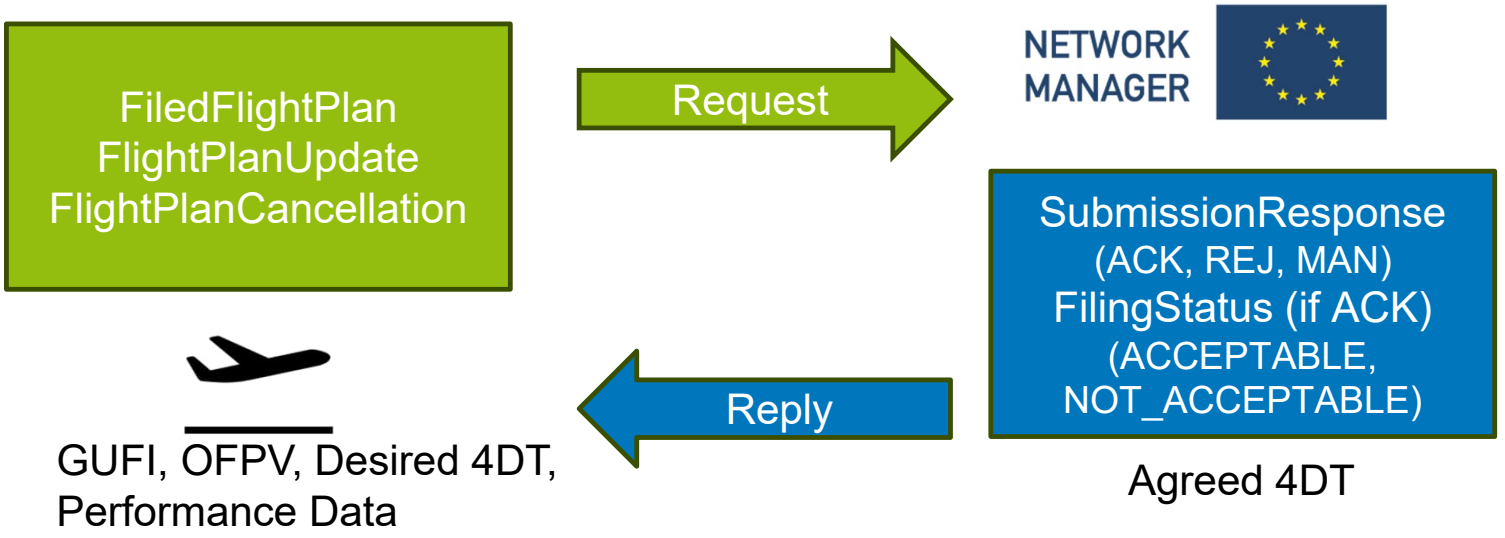
Standard FF-ICE Messages: PANS-ATM Table 17-1

Action	ICAO 2012 Flight Plan Message	FF-ICE Messages & Services
Submit a flight plan	FPL	Filed Flight Plan — Filing Service
Change a flight plan	CHG	Flight Plan Update — Filing Service
Delay a flight	DLA	Flight Plan Update — Filing Service
Cancel a flight	CNL	Flight Cancellation — Filing Service
Indicate departure/arrival	DEP/ARR	Flight Departure Flight Arrival — Notification Service
Request flight plan or supplementary info.	RQP/RQS	Flight Data Request — FDR Service

EUROCONTROL

FF-ICE Message Exchange-Filing Service

- Enables operator to submit, update or cancel eFPL in order to obtain ATS
- Request/reply NM B2B service



Submission Response: Data Validity
Filing Status: Operational Acceptability

EUROCONTROL

FF-ICE Message Exchange-Filing Service

- eFPLs evaluated as soon as received
- NM feedback does not include flow impact (not defined or supported in FIXM)
- Re-evaluation every 30 minutes from 12 hrs prior to EOBT up to EOBT.
- Operators receive filing status changes via Publish/Subscribe

Filing Status:
NOT_ACCEPTABLE
- Error(s) & warning(s)
- Negotiating trajectory*

*Proposed route if one can be found

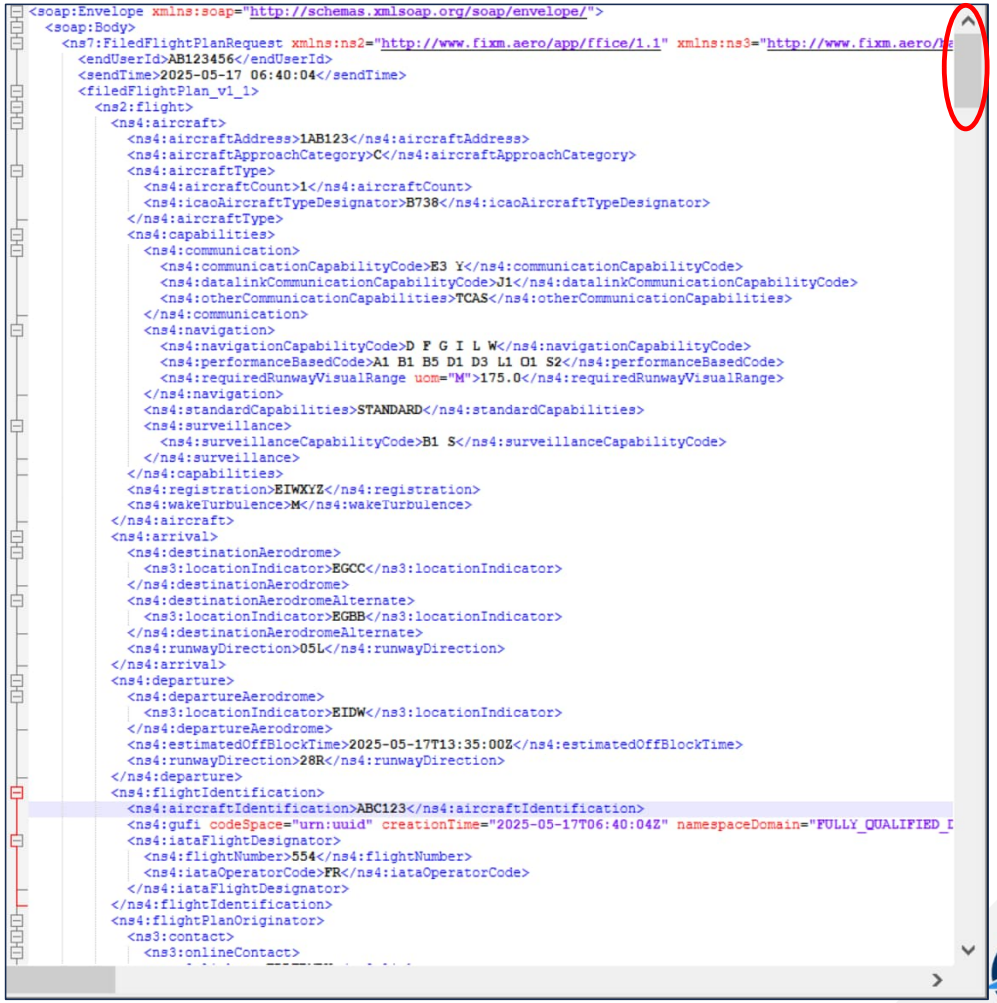
Filing Status: ACCEPTABLE
- Agreed trajectory

**Re-evaluation equivalent to revalidation for ICAO 2012 flight plans,
to determine if eFPL remains compliant with ATM restrictions and measures**

EUROCONTROL

FF-ICE New Information

```
(FPL-DLH9LCZ-IS
-A320/M-SDE2E3FGIJ1LORWXYZ/HB1
-EDDM0940
-N0445F370 ROTAX3S ROTAX L603 LATLO DCT OBEDI DCT NEMEK DCT VRANA
DCT PETAK/N0445F390 DCT PINDO UL607 XORKI
-LGAV0208 LGSA
-PBN/A1B1C1D1O1S1S2 COM/ULD DAT/VM DOF/230122 REG/DAIWKZ
EET/EDUU0011 LOVV0014 LJLA0026 LDZO0035 LQSB0039 LYBA0107 LAAA0116
LGGG0130 CODE/3C66EB RVR/75 OPR/DLH ORGN/EDDFDLHD DLH PER/C RMK/TCAS
AO4DT)
```



EUROCONTROL

FF-ICE New Information

GUFI- Globally Unique Flight Identifier

An unchangeable data element associated with a flight that allows all eligible members of the ATM community to unambiguously refer to information pertaining to the flight.

UUID V4 + Creation timestamp + Namespace

Generated by the operator or designated representative

Identifies individual flights

```
<ns4:gufi codeSpace="urn:uuid" creationTime="2026-02-16T09:40:53Z"
          namespaceDomain="FULLY_QUALIFIED_DOMAIN_NAME"
          namespaceIdentifier="example.com">
          a7583d7c-38c4-4587-9c56-a5d71846f38e</ns4:gufi>
```

- **Use the GUFI to associate received FF-ICE messages to the correct flight**
- **Include the same GUFI whenever updating or cancelling the associated flight plan**
- **If a flight plan is cancelled and a new flight plan is submitted, a new GUFI is required**

EUROCONTROL

FF-ICE New Information

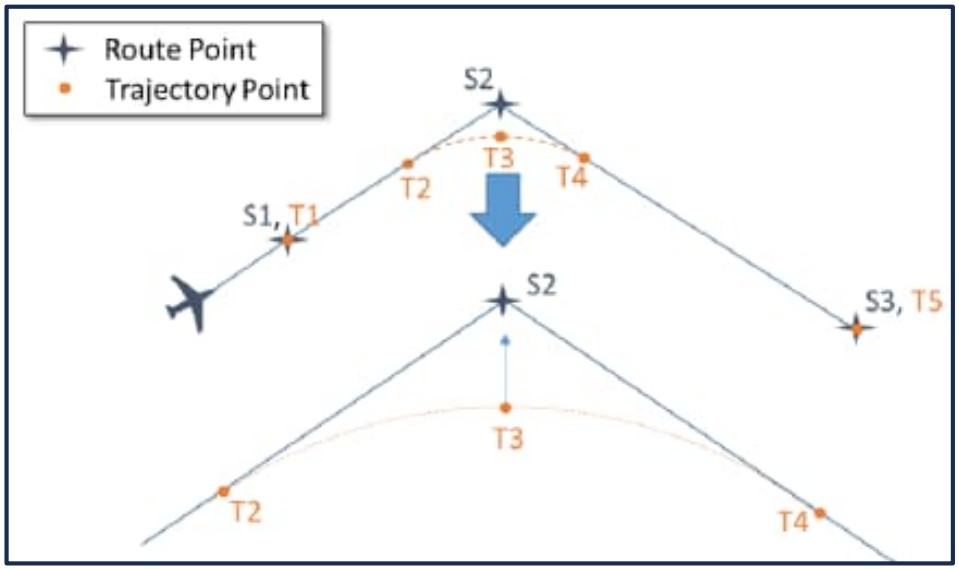
Operator Flight Plan Version

Flight Specific Performance Data

- Climb & descent speed schedule
- Climb & descent performance profiles

Take-off Mass

4D Trajectory



EUROCONTROL

FF-ICE New Information

Example ICAO 2012 Flight Plan Item 15 Route:

```
-N0456F300 AGENA DCT BODEQ DCT LUMAS DCT BOSUR DCT SECON DCT ODIXU
 DCT ADITA DCT RAPED DCT PIGOS DCT EKSID DCT NOSTA DCT EGHIN DCT
 LABIN/N0453F290 DCT KOTOR
```

ICAO 2012 flight plan route information for LUMAS
Versus
FF-ICE flight plan 4D trajectory information for LUMAS

```
<ns4:element>
    <ns4:alongRouteDistance uom="M">285184.0</ns4:alongRouteDistance>
    <ns4:elementStartPoint>
        <ns3:designatedPoint>
            <ns3:designator>LUMAS</ns3:designator>
        </ns3:designatedPoint>
    </ns4:elementStartPoint>
    <ns4:extension xsi:type="ns5:NmRouteTrajectoryElementExtensionType" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
        <ns5:weight uom="KG">57607.0</ns5:weight>
    </ns4:extension>
    <ns4:point4D>
        <ns4:level>
            <ns3:altitude uom="M">9144.0</ns3:altitude>
        </ns4:level>
        <ns4:metData>
            <ns4:temperature uom="C">-48.3</ns4:temperature>
            <ns4:windDirection uom="DEG">322.0</ns4:windDirection>
            <ns4:windSpeed uom="M_SEC">36.71</ns4:windSpeed>
        </ns4:metData>
        <ns4:position srsName="urn:ogc:def:crs:EPSG::4326">
            <ns3:pos>41.733333333333334 4.666666666666667</ns3:pos>
        </ns4:position>
        <ns4:time>
            <ns4:relativeTimeFromInitialPredictionPoint>P0Y0M0DT0H23M51S</ns4:relativeTimeFromInitialPredictionPoint>
        </ns4:time>
    </ns4:point4D>
    <ns4:routeDesignatorToNextElement>
        <ns4:otherRouteDesignator>DIRECT</ns4:otherRouteDesignator>
    </ns4:routeDesignatorToNextElement>
</ns4:element>
```

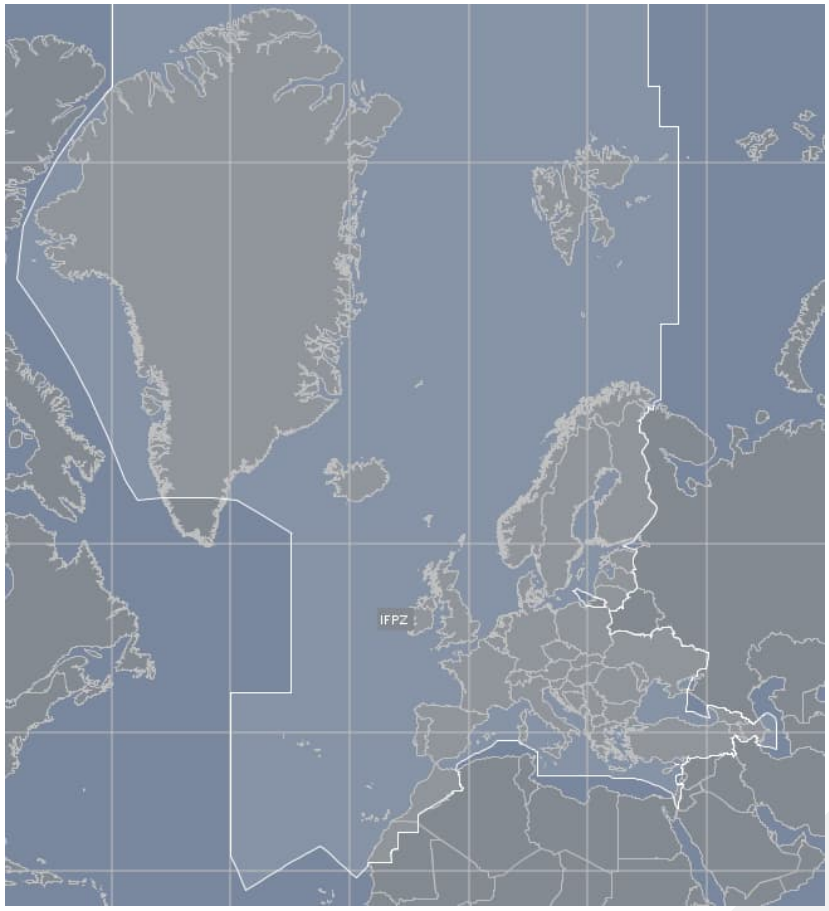
EUROCONTROL

Transition from ICAO 2012 to FF-ICE

European Commission CP1 regulation mandates the implementation of FF-ICE for GAT under IFR in EU Member States, Norway & Switzerland

IFPZ is larger than the mandated area
Not all operators mandated to implement FF-ICE
Different timeframes for implementation

FF-ICE and FPL 2012 will coexist for an extensive period and NM has implemented mixed mode operations to support both, using translation & conversion

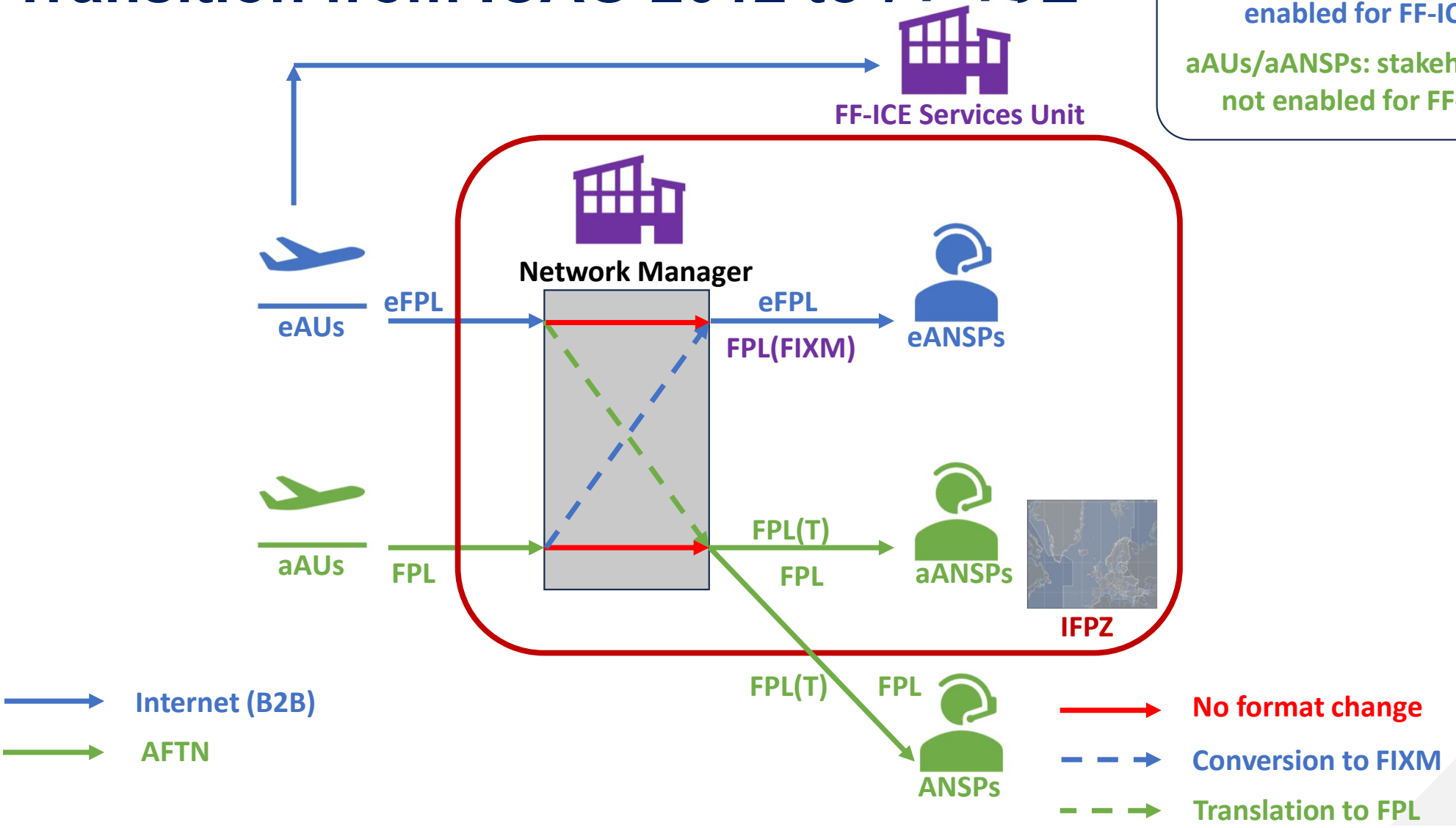


EUROCONTROL

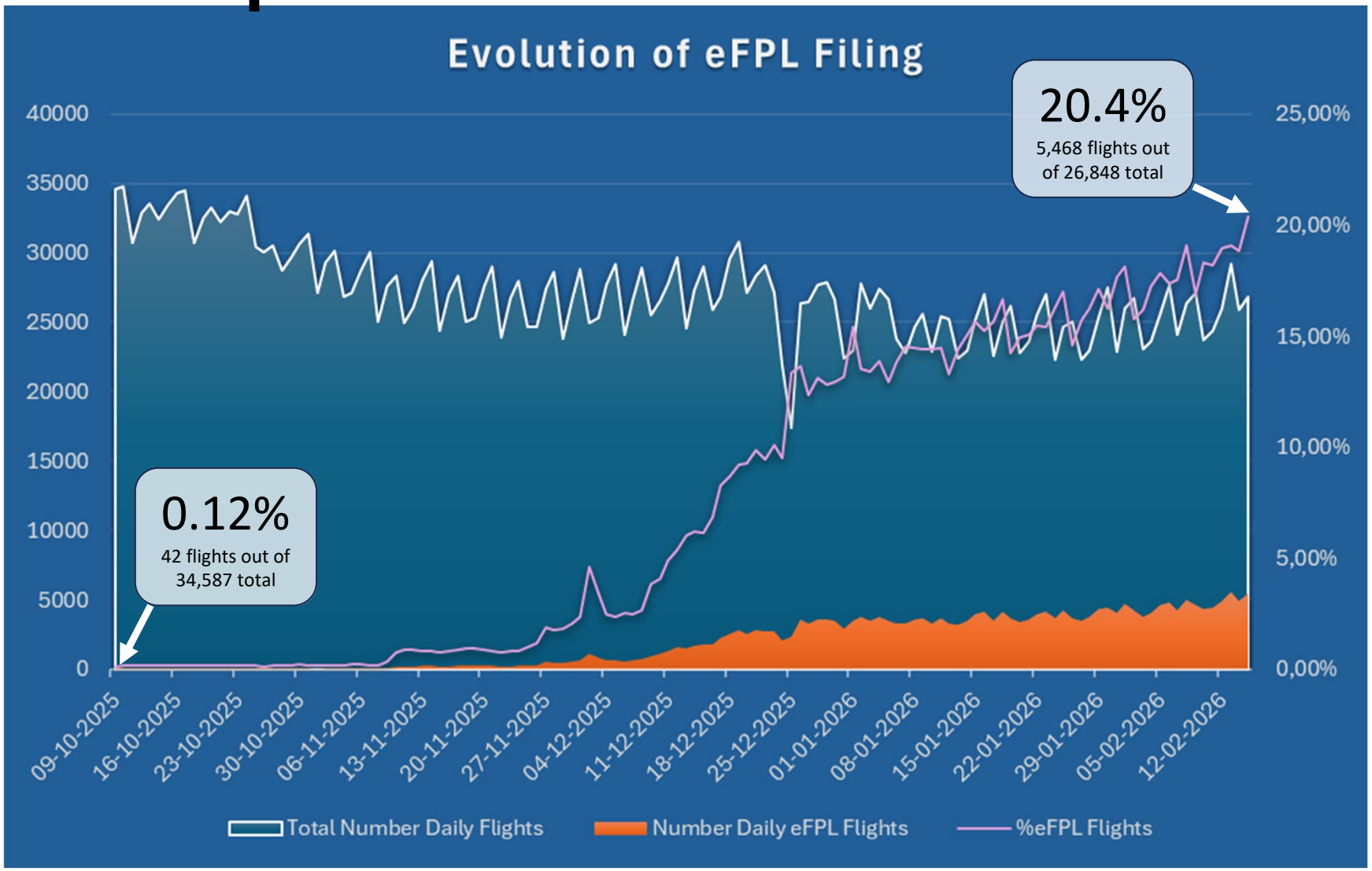
Transition from ICAO 2012 to FF-ICE

eAUs/eANSPs: stakeholders enabled for FF-ICE

aAUs/aANSPs: stakeholders not enabled for FF-ICE

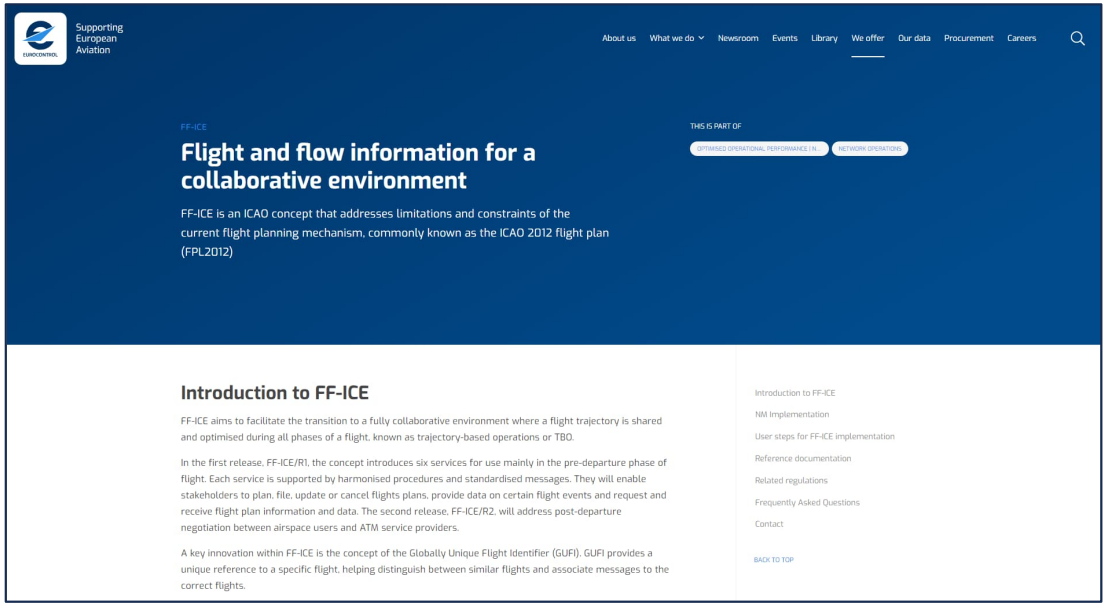


FF-ICE Implementation Overview



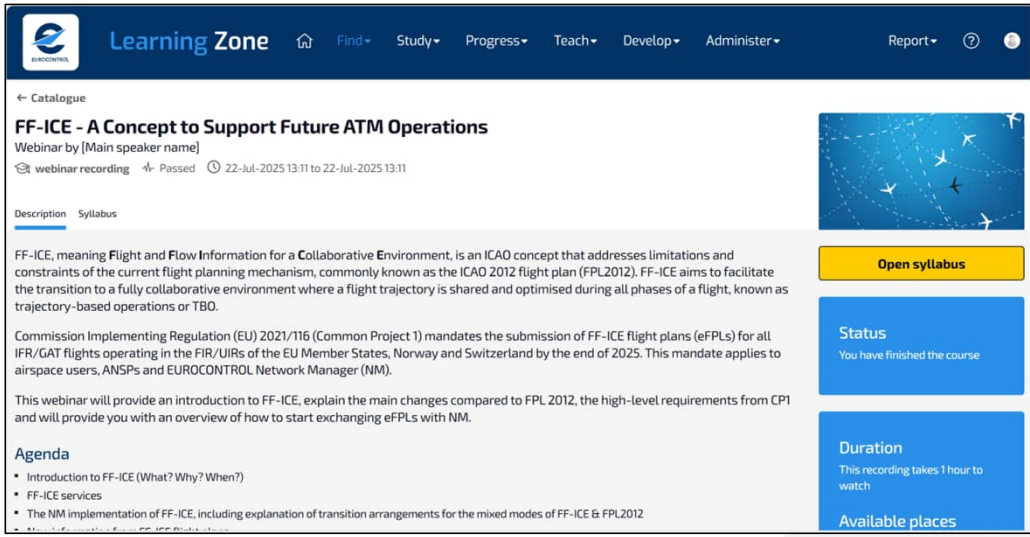
EUROCONTROL

FF-ICE Further Information



EUROCONTROL FF-ICE Webpage

- https://www.eurocontrol.int/ffice
- Introduction to FF-ICE
- Explanatory video
- EUROCONTROL implementation
- User steps for implementation
- Reference documentation
- FAQs



Contact: ffice@eurocontrol.int

SUPPORTING
EUROPEAN
AVIATION

Thank you!

ffice@eurocontrol.int
www.eurocontrol.int/ffice

CONSORTIUM COORDINATOR sesar DEPLOYMENT MANAGER
FOUNDING MEMBER sesar JOINT UNDERTAKING
NETWORK MANAGER