

Supporting
European
Aviation



eEAD Support to ARO & FF-ICE

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EUROCONTROL NMD/INF/IAC

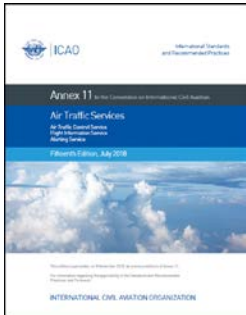
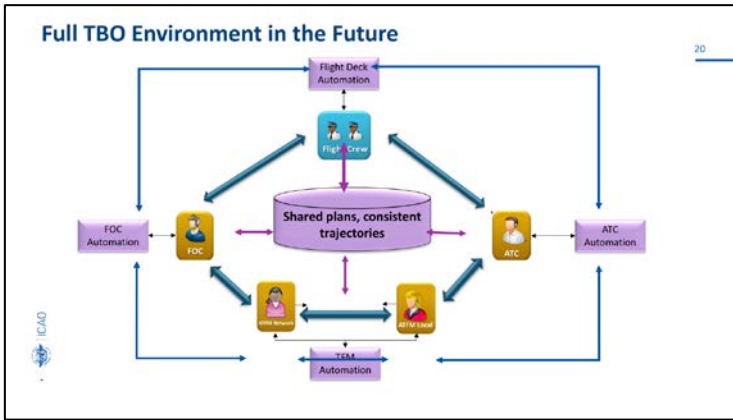
25 June 2026



NETWORK
MANAGER



.....and ARO.....?



Annex 11 requires States to establish a ATS Reporting Office when certain conditions apply



Provisions for ARO under discussion

- ICAO: role in FF-ICE R1, R2,..... and in TBO in general
- Europe: State decision to enable their ARO for FF-ICE R1 Flight Plan filing (eFPL)



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EAD

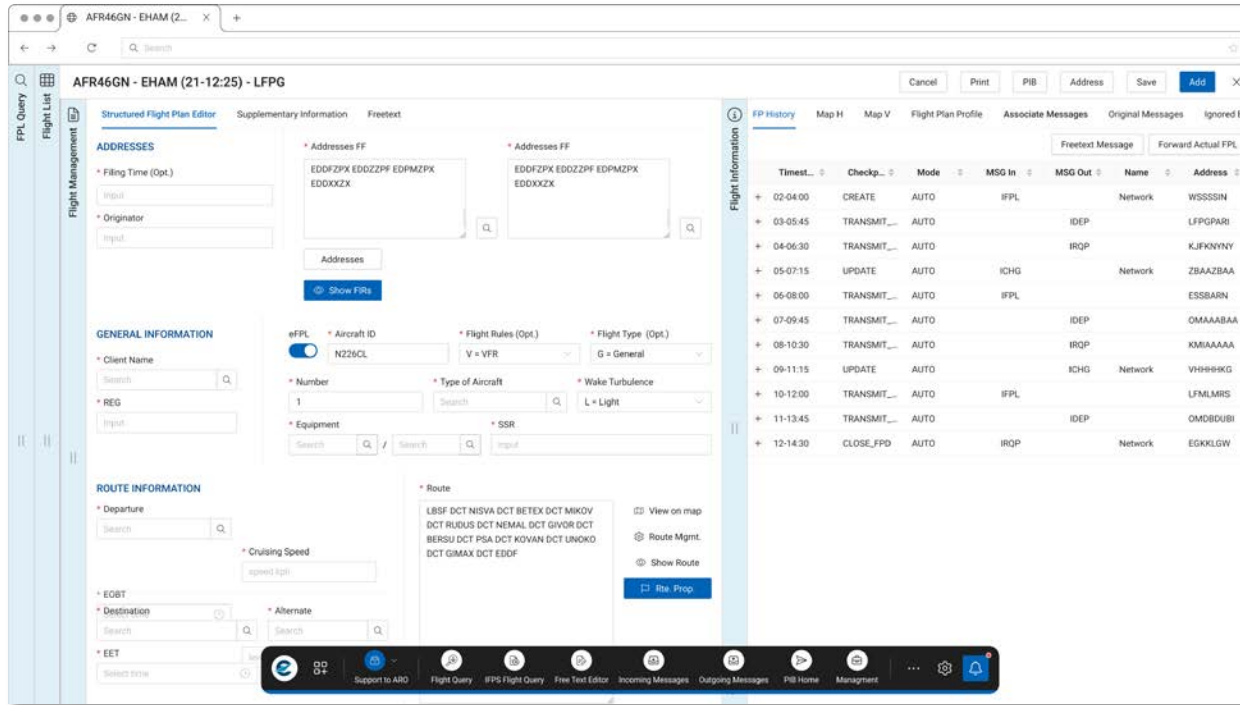
European AIS Database

EAD requested to provide eFPL capabilities

- > 30 ANSPs use EAD for ARO
 - < 6% of all European flights

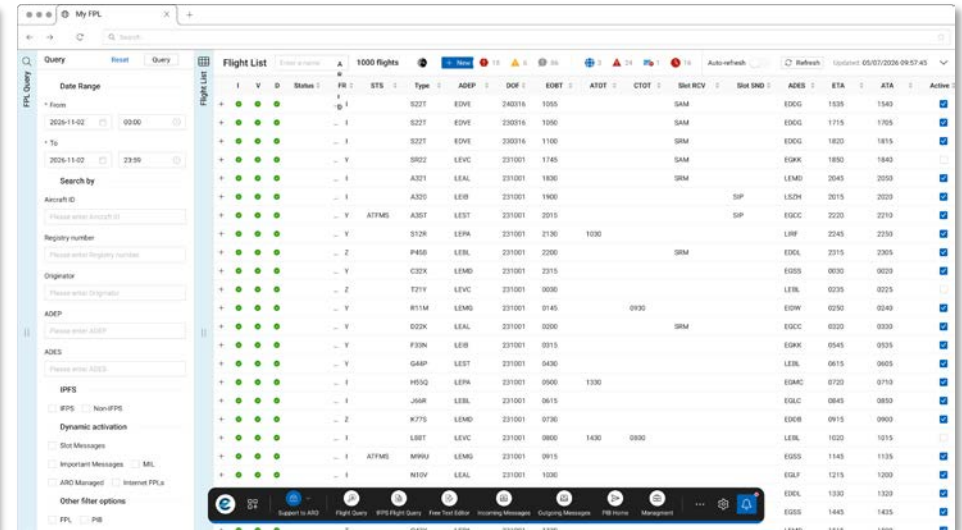
Support to ARO - through new eEAD

- Under development
- Planned to be available for existing users from December 2026 onwards



The screenshot shows the 'Structured Flight Plan Editor' for flight AFR46GN - EHAM (21-12-25) - LFPG. The interface is divided into several sections:

- ADDRESSES:** Fields for Filing Time (Opt.), Originator, and two sets of Addresses FF (EDDFZPX EDZZPF EDPMPZX EDXXXXX).
- GENERAL INFORMATION:** Fields for Client Name, REG, eFPL (toggle), Aircraft ID (N225CL), Flight Rules (Opt.) (V = VFR), Flight Type (Opt.) (G = General), Number (1), Type of Aircraft, Wake Turbulence (L = Light), Equipment, SSR, and Route.
- ROUTE INFORMATION:** Fields for Departure, Cruising Speed, EGBT, Destination, and EET.
- Flight Information:** A table showing flight history with columns: Time, Check, Mode, MSG In, MSG Out, Name, and Address. The table contains 12 rows of flight data.

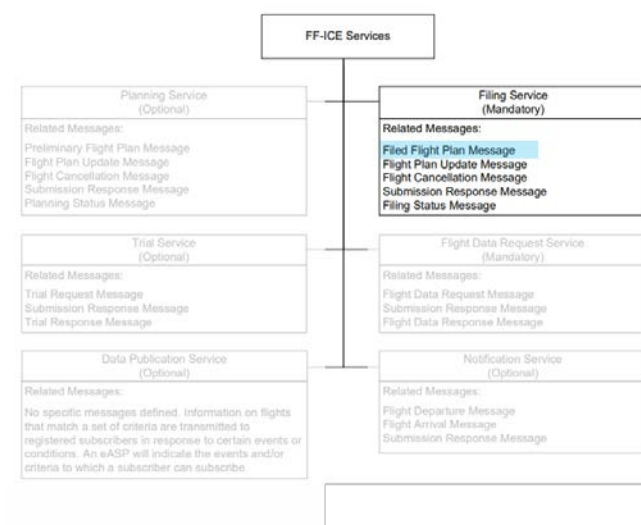


The screenshot shows the 'My FPL' interface with a 'Flight List' table. The table has columns: I, V, D, Status, PB, STS, Type, ADEP, DOF, EORT, ATOT, CTOT, Sht RCV, Sht SMD, ADES, ETA, ATA, and Active. The table contains 12 rows of flight data.

I	V	D	Status	PB	STS	Type	ADEP	DOF	EORT	ATOT	CTOT	Sht RCV	Sht SMD	ADES	ETA	ATA	Active
+							S22T	EDVE	240016	1000		SAM		EDCG	1838	1840	
+							S22T	EDVE	230016	1000		SAM		EDCG	1715	1705	
+							S22T	EDVE	230016	1100		SAM		EDCG	1820	1815	
+							S22T	LEVC	231001	1745		SAM		EGKK	1850	1840	
+							A221	LEAL	231001	1830		SAM		LEMD	2045	2050	
+							A320	LEIB	231001	1900		SIP		LSZH	2015	2020	
+							A350	LEST	231001	2015		SIP		EGOC	2020	2210	
+							S12K	LEPA	231001	2130	1000			LHR	2245	2250	
+							P450	LEBL	231001	2200		SAM		EGOL	2315	2305	
+							C25X	LEMD	231001	2315				EGOS	0030	0020	
+							Z21V	LEVC	231001	0000				LEBL	0235	0225	
+							R11M	LEMD	231001	0145	0100			EDWH	0250	0240	
+							D22K	LEAL	231001	0000		SAM		EGOC	0320	0330	
+							F33K	LEIB	231001	0015				EGKK	0545	0535	
+							G44P	LEST	231001	0430				LEBL	0615	0605	
+							H55Q	LEPA	231001	0500	1300			EGMC	0720	0710	
+							J55R	LEBL	231001	0615				EGUC	0845	0830	
+							K775	LEMD	231001	0730				EGOB	0915	0900	
+							L88T	LEVC	231001	0800	1400	0800		LEBL	1020	1015	
+							ATYMS	MPNU	231001	0915				EGOS	1145	1135	
+							N61V	LEAL	231001	1000				EGOL	1215	1200	
+														EGOL	1330	1320	
+														EGOS	1445	1435	
+														LEMD	1515	1505	

FPL2012 → FF-ICE (eFPL)

- Paradigm shift
 - Affecting working methods
 - ‘FPL accepted/rejected’ logic to “eFPL negotiation” logic.
 - Negotiating route/trajectory between FF-ICE Service unit and Airspace User
 -
- Core differences between FPL2012 and eFPL content
 - Globally Unique Flight Identifier (GUFID)
 - Route/Trajectory
 - Aircraft Performance



APPENDIX C – FF-ICE Messages

C-4 Filed Flight Plan

Table 12 Filed Flight Plan

Data Category	Data Item	Requirement	Reference	Guidance
Message Information	List of Recipients	Mandatory (Note 1)	B-2.28	Identify each Relevant eASP for the flight.
	Message Originator	Mandatory (Note 1)	B-2.28	Identify who sent the message.
Flight Identification	GUFID	Mandatory	B-2.29	
Flight Status	Aircraft Identification	Mandatory	B-2.6	
	Operator Flight Plan Version	Mandatory	B-2.14	An initial submission should be identified as version 1 except when a PFP was submitted before. A subsequent submission intending to replace the previous flight plan should indicate a version one greater than the previously submitted plan or update.
Flight Characteristics	Flight Rules	Mandatory	B-2.7	
	Type of Flight	Optional	B-2.19	
	Special Handling	Optional	B-2.20	Allow multiple expressions of special handling.
	Flight Plan Originator	Optional	B-2.13 B-2.12	
Desired Route/Trajectory Group	Desired Route/Trajectory Group	Mandatory	B-3	
	Aircraft Take-off Mass	Optional	B-3.1.3	
	Requested Cruising Speed	Mandatory	B-3.1.4	
	Requested Cruising Level	Mandatory	B-3.1.5	
	Total Estimated Elapsed Time	Optional	B-3.1.6	Total EET can be provided here, or as a time attached to a Trajectory Point at the end of the route.
	General Flight Constraint	Optional	B-3.1.7a B-3.1.7b B-3.2.2	
	Along Route Distance	Optional	B-3.2.2	
	Route/Traj. Element	Mandatory	B-3.2.5	Required on each element that is part of the route definition; otherwise optional.

Zoom-in on the new eFPL content => **GUFI**

Globally Unique Flight Identifier



3.7.2 Determination of “A Flight”

3.7.2.1 For the purpose of GUFI allocation “a flight” is considered to be the operation of an aircraft with a specified aircraft identification, at a specified departure aerodrome, at a specified date and time, from first submission of the flight plan (Preliminary or Filed) until in-blocks at an arrival aerodrome.

GUFI = UUID v4 + Creation timestamp + Namespace

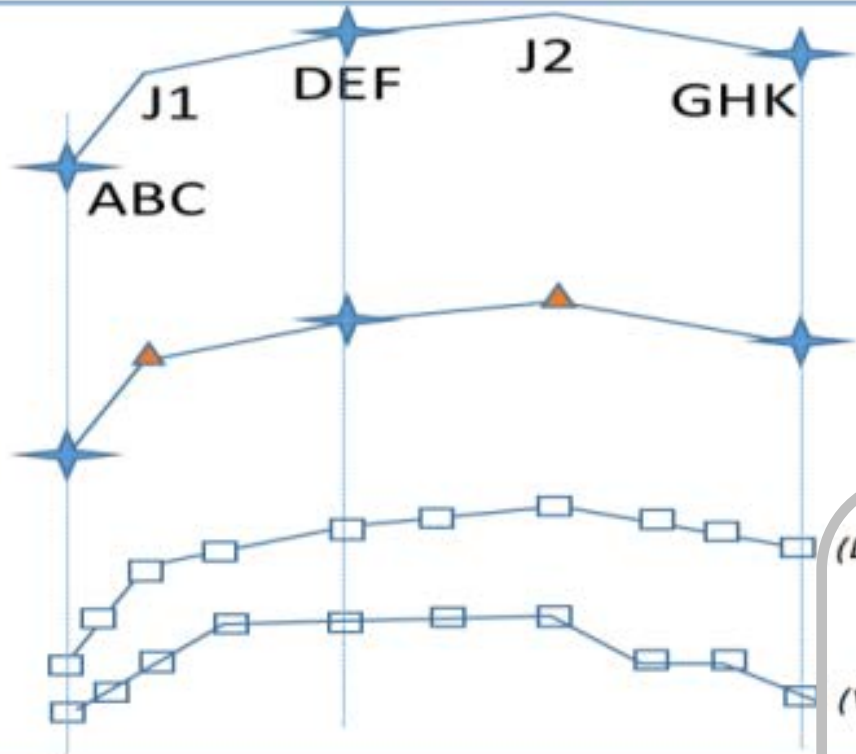
3.7.4 GUFI Procedure

3.7.4.1 The operator, or its designated representative, is required to generate and allocate a GUFI to its FF-ICE flight plan. It is important that only one GUFI is allocated to a flight and this can only be assured by ensuring that the GUFI is allocated at source by the operator, or its representative, upon creation of the flight plan.

3.7.4.2 The operator should ensure that all flight data submitted for a flight is submitted using the same GUFI. This applies to both the Preliminary and Filed versions of the flight plan.

Zoom-in on the new eFPL content => Route/Trajectory

More Information, higher fidelity



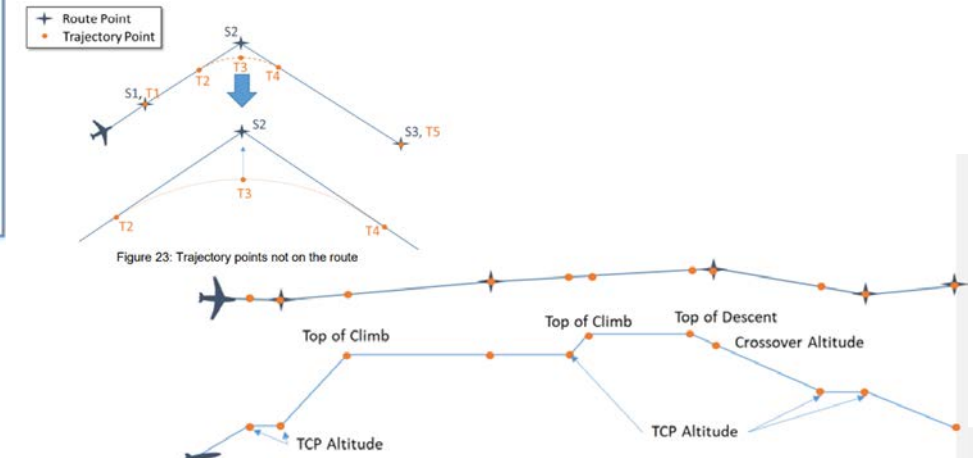
Route

Same mandatory information as an FPL, but **modified in format and structure**.

Expanded Route

Contains **each significant point** traversed along each ATS route.

(Lateral path)
Trajectory
(Vertical profile)



Zoom-in on the new eFPL content => Route/Trajectory

The Route/Trajectory is distinguished by the type of route provided, and the type of trajectory information provided.

The Route may be either:

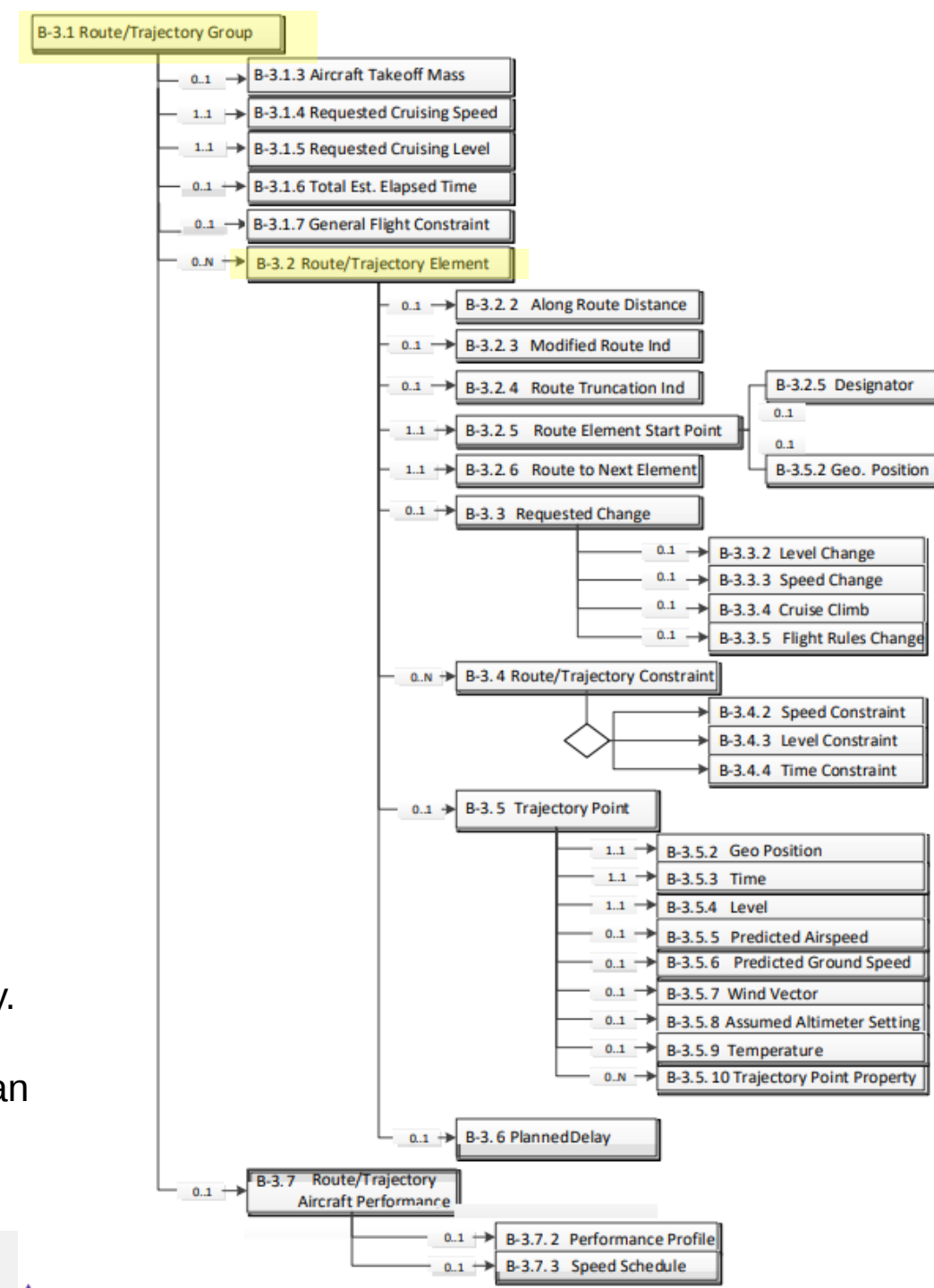
- 1) a **Route** or
- 2) an **Expanded Route**

Additional trajectory points included may be either:

- A) **None**
- B) **Selected trajectory points**
- C) **A complete trajectory**

From an ICAO perspective, five options exist for exchanging a Route/Trajectory (Package 1A, Package 1B, Package 2A, Package 2B, Package 2C), all specifying a certain level of detail of the route/trajectory.

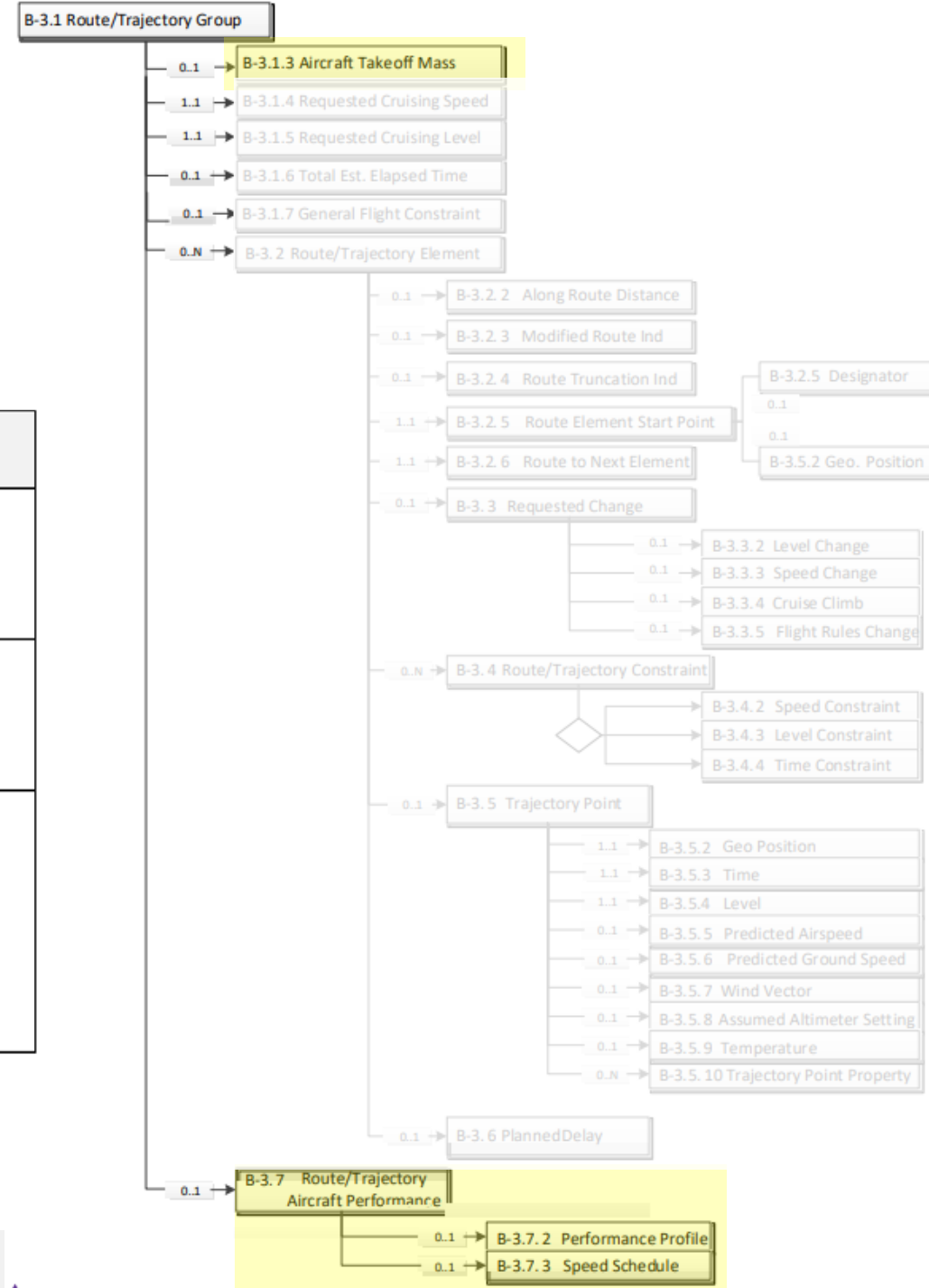
Whatever its level of detail, the route/trajectory is always expressed as an **ordered sequence of route/trajectory elements**.



Zoom-in on the new eFPL content => Aircraft Performance Data

Table 2 Route/Trajectory Specific Performance Data

Name	Description	Uses
Climb and descent speed schedule	Anticipated target IAS and Mach Number schedule in climb and descent	Used by the eASP to improve trajectory prediction in climb and descent
Take-off mass	The estimated aircraft take-off mass	Used by the eASP to improve trajectory prediction in climb and descent
Performance climb and descent profile	A zero-wind, International Standard Atmosphere (ISA), unconstrained climb and descent profile reflective of the flight capabilities and desired parameters	Used by the eASP to improve trajectory prediction in climb and descent



Zoom-in on the new eFPL content => Aircraft Performance Data

B-3.7.7 Speed Schedule

B-3.7.8 A climb and descent speed schedule may be provided as input for more accurate trajectory construction. Each speed schedule is comprised of a target Indicated Airspeed and, if applicable, Mach Number representing speed targets for the flight in transition assuming no flight-specific constraints.

B-3.7.2 Performance Profile

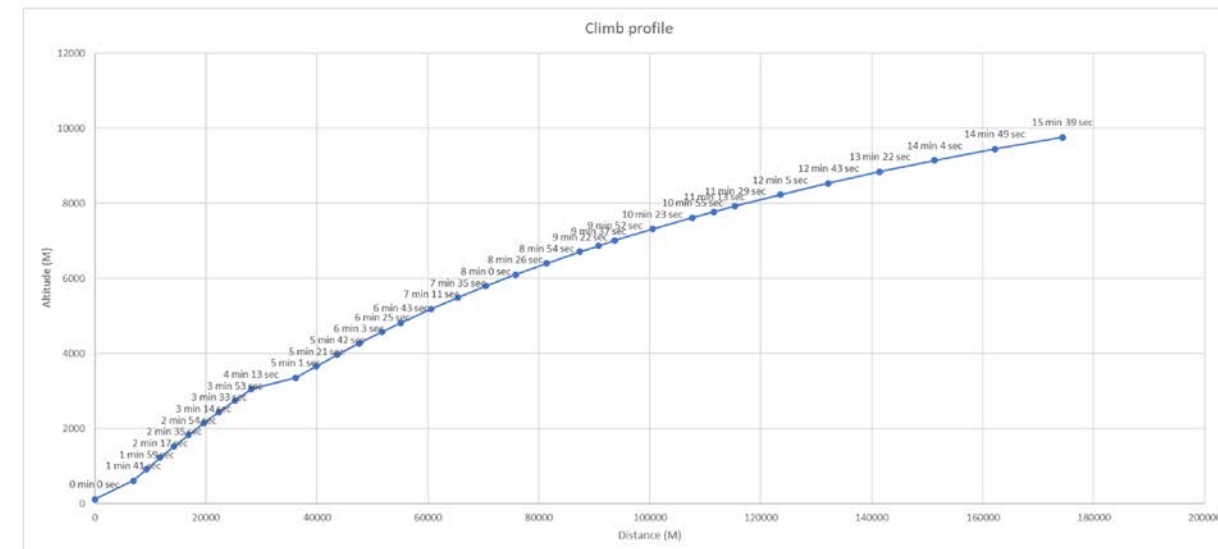
B-3.7.3 Aircraft performance data can be provided in the form of a zero-wind, standard atmosphere profile reflective of the flight capabilities and desired parameters. Separate profiles should be provided for climb and descent. The profile should not include any flight-specific constraints such as altitude or speed restrictions applicable to the route of flight. Constraints that are always applicable (e.g., a 250 knot constraint applicable to all flights below 10,000 feet), and gradients required for obstacle clearance along the route of flight should be incorporated into the profile.

B-3.7.4 A performance profile is expressed as a sequence of profile points each containing: distance, time duration, flight level or altitude, and optionally the true airspeed.

B-3.7.5 Climb profiles begin at take-off with distance and time expressed relative to the point associated with take-off, nominally the "Wheels Off" point. Climb profiles end at the maximum operational cruise altitude for the specific route/trajectory.

B-3.7.6 Descent profiles begin at a top-of-descent at the maximum operational cruise altitude for the specific route/trajectory. Time and distance are expressed relative to the top-of-descent. Descent profiles end at touchdown.

Example of Climb Profile



https://docs.fixm.aero/#/general-guidance/performance_profile

eEAD Support to ARO considerations

Supporting the generation of the new eFPL content

Support the generation of a GUFI (UUID v4 + metadata) and its allocation to a flight
Support the generation & management of an operator flight plan version
Support the generation of an expanded route



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Supported through eEAD
Support to ARO

European AIS Database



- **Incorporating new working methods**
- **Trajectory Information & Performance Data**
 - **Pilots/operators providing input to ARO?**
 - **Basic support through eEAD?**
 - 'Simple' route input
 - Take-off weight input
 - Link to theoretical aircraft performance model - B(ase) of A(ircraft) DA(ta)

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