

Förordning (EU) 2017/373

REQUIREMENTS FOR AIRSPACE STRUCTURES
AND FLIGHT PROCEDURES CONTAINED THEREIN

373/2017 Artikel 10

- (4) In respect of ASD, Member States shall ensure that the design criteria laid down in Appendix 1 to Annex XI (Part-FPD) to this Regulation are met by [27 January 2022].
- (6) By way of derogation from paragraph 4, Member States may decide not to apply aspects of Appendix 1 to Annex XI (Part-FPD) to this Regulation, in whole or in part, until [25 January 2024].

373/2017 Artikel 10

- (5) In respect of FPDSPs, Article 6(k) shall apply from the date of issuance of the certificate, but not later than [27 January 2022].
- Artikel 6 (k) Service providers of procedure design shall be granted a certificate and be entitled to exercise the privileges granted within the scope of that certificate and comply and continue to comply with the requirements laid down in Annex III (OR), Subparts A, B and C, Annex XIII (PERS) and Annex XI (ASD), when those requirements will be adopted by the Commission;

GM1 Article 1 Subject matter and scope1

DESIGN OF FLIGHT PROCEDURES AND DESIGN OF AIRSPACE STRUCTURES

(c) Airspace design contains two aspects:

- (1) design of flight procedures; and
- (2) design of airspace structures ;

(e) The **certification** and oversight of the design of airspace structure is **left to the Member State discretion**, if it wishes so and this Regulation provides only the design criteria that need to be met as laid down in Appendixes 2 and 3 to Article 3.

Artikel 3(1) och 3(7)

Provision of ATM/ANS, FPD/ASD, and ATM network functions

- (1) Member States shall ensure that the appropriate ATM/ANS, **FPD/ASD**, and ATM network functions are provided in accordance with this Regulation in a manner that facilitates general air traffic, while taking into account safety considerations, traffic requirements and environmental impact
- (7) With regard to **ASD**, when ensuring the appropriate services and functions, as laid down in paragraph 1, the Member State shall ensure that the design criteria laid down in **Appendices 1 to Annex XI (Part-FPD)** to this Regulation are met.

Certifiering av FPD

- Common technical requirements for airspace structure design (ASD) as well as common requirements for the **certification of flight procedure design service providers** (FPDSPs) should be established to ensure that the airspace structures and flight procedures are properly designed, documented, maintained, periodically reviewed and validated before they can be deployed and used by aircraft.

GM2 Article 3(1) Provision of ATM/ANS, flight procedure design and airspace structure design , and ATM network functions

AIRSPACE STRUCTURE

- Airspace structure should mean a specific volume of airspace designed to ensure the safe and optimal operation of aircraft. Airspace structures may consist of:
 - (a) controlled airspace, namely control zones and control areas, including terminal control areas and airways;
 - (b) airspace restrictions, namely danger, restricted and prohibited areas;
 - (c) radio mandatory zones, transponder mandatory zones; and
 - (d) other airspaces specified by the competent authority when defining the airspace change process, such as e.g. flight information zones, temporary segregated areas, temporary reserved areas or free route airspace.

GM1 Article 3(7) Provision of ATM/ANS, flight procedure design and airspace structure design, and ATM network functions

GENERAL — DESIGN PROCESS OF AIRSPACE STRUCTURES AND FLIGHT PROCEDURES CONTAINED THEREIN

- a) An airspace change is a change to an airspace structure and/or the flight procedures contained within, if the flight procedure or change thereto makes necessary a change to the airspace structure.

GM1 Article 3(7) Provision of ATM/ANS, flight procedure design and airspace structure design, and ATM network functions

(b) The process for the airspace change should include the following elements:

- (1) Initiation for an airspace change, including briefing by an initiator
- (2) Data collection
- (3) Initial proposal development
- (4) Consultation with affected stakeholders
- (5) Design and documentation
- (6) Validation
- (7) State's approval
- (8) Implementation of the airspace change
- (9) Maintenance and periodic review

Derfinitioner

- (51a) ‘flight information zone’ means an airspace of defined dimension within which aerodrome flight information service and alerting service for aerodrome traffic are provided.
- (52a) ‘flight procedure design services’ means services for the design, documentation, validation, maintenance and periodic review of flight procedures necessary for the safety, regularity and efficiency of air navigation;

Definitioner

- (52b) ‘flight procedure designer’ means a qualified person who performs design, documentation, validation, continuous maintenance, and periodic review of flight procedures;
- (52c) ‘flight procedure’ means a set of predetermined flight manoeuvres intended to be followed by a pilot, published by electronic and/or printed means. Flight procedure is conducted either in accordance with instrument flight rules (IFR) or visual flight rules (VFR).

Annex XI

SUBPART A — ADDITIONAL ORGANISATION REQUIREMENTS FOR PROVIDERS OF FLIGHT PROCEDURE DESIGN SERVICES (FPD.OR)

FPD.OR.100 Flight procedure design (FPD) services

(a) A flight procedure design services provider shall perform any or all of the following activities:

- (1) design and documentation of flight procedures;
- (2) validation of flight procedures.

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SUBPART A — ADDITIONAL ORGANISATION REQUIREMENTS FOR PROVIDERS OF FLIGHT PROCEDURE DESIGN SERVICES (FPD.OR)

FPD.OR.100 Flight procedure design (FPD) services

- (a) The FPD provider shall use aeronautical data and aeronautical information that meet the requirements of accuracy, resolution, and integrity as specified in the aeronautical data catalogue in accordance with Appendix 1 to Annex III (Part-ATM/ANS.OR) to this Regulation.
- (b) If aeronautical data is not provided by an authoritative source or does not meet the applicable data quality requirements (DQRs), such aeronautical data may be originated by the FPD provider. In this context, such aeronautical data shall be validated by the FPD provider originating it.

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SUBPART A — ADDITIONAL ORGANISATION REQUIREMENTS FOR PROVIDERS OF FLIGHT PROCEDURE DESIGN SERVICES (FPD.OR)

FPD.OR.115 Technical and operational competence and capability

(a) FPD provider shall ensure that its flight procedure designers:

- (1) have successfully completed a training course that provides competency in flight procedure design;
- (2) are suitably experienced to successfully apply the theoretical knowledge; and
- (3) complete successfully continuation training.

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SUBPART A — ADDITIONAL ORGANISATION REQUIREMENTS FOR PROVIDERS OF FLIGHT PROCEDURE DESIGN SERVICES (FPD.OR)

FPD.OR.115 Technical and operational competence and capability

(b) When flight validation is performed, the FPD provider certified to provide flight validation shall ensure that it is undertaken by a competent pilot.

(c) The FPD provider shall maintain records of all the training completed by the employed flight procedure designers and make such records available on request:

- (1) to the flight procedure designers concerned; and
- (2) in agreement with the flight procedure designers, to the new employer when a flight procedure designer is employed by a new entity.

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SUBPART A — ADDITIONAL ORGANISATION REQUIREMENTS FOR PROVIDERS OF FLIGHT PROCEDURE DESIGN SERVICES (FPD.OR)

- **FPD.OR.120 Required interfaces**

An FPD provider shall ensure the necessary formal arrangements with:

- (a) aeronautical data sources;
- (b) other service providers;
- (c) aerodrome operators; and
- (d) aircraft operators.

Appendix 1

SECTION I - Specifications for flight information regions, control areas, control zones and flight information zones

(b) CONTROL AREAS

(2) A lower limit of a control area shall be established at a height above the ground or water of not less than 200 m (700 ft).

AMC1 B. CONTROL AREAS

The lower limit of a control area should be established at a greater height above the ground or water of not less than 200 m (700 ft), when practicable and desirable in order to allow freedom of action for VFR flights below the control area.

(d) FLIGHT INFORMATION ZONES

(2) If located within the horizontal limits of a control area, the flight information zone shall extend upwards from the surface of the earth to at least the lower limit of the control area.

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SUBPART A — ADDITIONAL ORGANISATION REQUIREMENTS FOR PROVIDERS OF FLIGHT PROCEDURE DESIGN SERVICES (FPD.OR)

- **GM1 FPD.OR.105(a) Management system**
- DATA ACQUISITION

The flight procedure design process starts with the verification of input data in coordination with affected stakeholders. The following aspects should be addressed:

- (a) aerodrome, navigation aids, obstacles and terrain coordinates, and elevation data based on trustworthy sources;
- (b) airspace data and associated requirements;
- (c) user requirements, i.e. airspace users and air traffic service provider;
- (d) airport infrastructure and equipment;
- (e) environmental considerations; and
- (f) any other information as potentially specified by the competent authority.

**SUBPART A — ADDITIONAL ORGANISATION REQUIREMENTS FOR PROVIDERS
OF FLIGHT PROCEDURE DESIGN SERVICES (FPD.OR)**

**AMC1 FPD.OR.115(a)(1) Technical and operational competence and
capability**

TRAINING COURSE

- The training course should provide the designer with:
 - (a) knowledge of technical rules for the design and the establishment of instrument flight procedures;
 - (b) knowledge of design criteria;
 - (c) knowledge of the Data Catalogue, including the applicable data quality requirements (DQRs); and
 - (d) ability to design flight procedures with the selected tools in accordance with the design criteria.

**SUBPART A — ADDITIONAL ORGANISATION REQUIREMENTS FOR PROVIDERS OF FLIGHT
PROCEDURE DESIGN SERVICES (FPD.OR)**

GM1 FPD.OR.115(a)(1) Technical and operational competence and capability

An initial training course should be based, as a minimum, on:

- (a) 2017/373 laying down common requirements for service providers and the oversight in air traffic management/air navigation services and other air traffic management network functions;
- (b) 923/2012 laying down the common rules of the air and operational provisions regarding services and procedures in air navigation;
- (c) design criteria as defined in FPD.TR.100;
- (d) ICAO Annex 11 ‘Air Traffic Services’;
- (e) ICAO Annex 4 ‘Aeronautical Charts’;
- (f) ICAO Doc 9613 ‘Performance-based Navigation (PBN) Manual’;
- (g) ICAO Doc 9906 ‘Quality Assurance Manual for Flight Procedure Design’; and
- (h) tools used in the design, which may be acquired as part of the on-the-job training.

**SUBPART A — ADDITIONAL ORGANISATION REQUIREMENTS FOR PROVIDERS
OF FLIGHT PROCEDURE DESIGN SERVICES (FPD.OR)**

**GM2 FPD.OR.115(a)(1) Technical and operational competence and
capability**

TRAINING COURSE

The flight procedure design service provider's personnel involved in the flight procedure charting and/or coding should have successfully completed a training course that provides a basic level of competency in charting and/or coding.

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SUBPART A — ADDITIONAL ORGANISATION REQUIREMENTS FOR PROVIDERS OF FLIGHT PROCEDURE DESIGN SERVICES (FPD.OR)

AMC1 FPD.OR.115(a)(2) Technical and operational competence and capability

FLIGHT PROCEDURE DESIGNER EXPERIENCE

The flight procedure designer shows suitable experience to demonstrate practical application of theoretical knowledge. This should be achieved by showing either:

- (a) Proof of recent flight procedure design work, which should include details of specific designs that have been completed and over what period of time; or
- (b) Proof of sufficient on-the-job training. In doing so, the procedure designer should have undergone a minimum of time on-the-job PANS-OPS design training with a flight procedure design service provider until demonstrating adequate competency in the practical application of design criteria.

**SUBPART A — ADDITIONAL ORGANISATION REQUIREMENTS FOR PROVIDERS
OF FLIGHT PROCEDURE DESIGN SERVICES (FPD.OR)**

**GM1 to AMC1 FPD.OR.115(a)(1)(ii) (b) Technical and operational
competence and capability**

FLIGHT PROCEDURE DESIGNER EXPERIENCE

The on-the-job training is recommended to be minimum 2 years, which period may be substantially reduced in cases where the designer has experience in flight procedures.

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SUBPART A — ADDITIONAL ORGANISATION REQUIREMENTS FOR PROVIDERS OF FLIGHT PROCEDURE DESIGN SERVICES (FPD.OR)

GM1 FPD.OR.115(a)(3) Technical and operational competence and capability

CONTINUATION TRAINING

Continuation training aims at addressing changes in the applicable design criteria and regulations.

GM1 FPD.OR.115(b) Technical and operational competence and capability

COMPETENT PILOT

ICAO Doc 9906 Volume 6 'Flight Validation Pilot Training and Evaluation (Development of a Flight Validation Pilot Training Programme) provides guidance for the establishment of flight procedure validation pilot training.

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SUBPART A — ADDITIONAL ORGANISATION REQUIREMENTS FOR PROVIDERS OF FLIGHT PROCEDURE DESIGN SERVICES (FPD.OR)

GM1 FPD.OR.120 Required interfaces

FORMAL ARRANGEMENTS

- (a) Formal arrangements could be, but not limited, in a form of Service-level agreement (SLA), contract or memorandum of understanding (MoU) that should specify the scope of aeronautical data and aeronautical information to be received/provided.
- (b) The flight procedure design services provider should demonstrate that formal arrangements with aeronautical data sources are implemented. In this context, procedures should be established to communicate instances of erroneous, inconsistent or missing data.
- (c) The FPDSP's procedures should confirm that effective controls are in place to ensure that an unsafe product is not released and that such concerns are communicated to other service providers, aerodrome operators and/or aircraft operators.
- (d) The FPDSP should demonstrate that a formal arrangements with to other service providers, aerodrome operators and/or aircraft operators is in place to confirm that end user's requests are clearly defined and subject to review.

Annex II

REQUIREMENTS FOR COMPETENT AUTHORITIES — OVERSIGHT OF SERVICES AND OTHER ATM NETWORK FUNCTIONS

Services/Functions	Type of Service/Function	Scope of Service/Function	Limitations (*)
Flight procedure design (FPD)	Design and documentation of flight procedures (***)	n/a	
	Validation of flight procedures	Ground validation	
		Flight validation	
Conditions (**)			

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