

Index to data origination related requirements in Regulation (EU) 73/2010 (ADQ IR), Regulation (EU) 2017/373 (ATM/ANS) and Regulation (EU) 139/2014 (ADR)

Regulation (EU) 73/2010 (ADQ IR)		Regulation (EU) 2017/373		Regulation (EU) 139/2014
		Part-ATM/ANS	Part-AIS	Part-ADR
General				
Art 2(2)	The Regulation applies to: 1. air navigation service providers (ANSPs) 2. aerodrome and heliport operators,	The requirements for data quality applicable to air navigation service providers (ANSPs) are specified in Annex III (Part-ATM/ANS)	In addition to the requirements in Part-ATM/ANS there are specific requirements for aeronautical information services (AIS) in Annex VI (Part-AIS)	The requirements for data quality applicable to aerodrome operators are specified by in Annex IV (Part-ADR)
	3. public or private entities providing services for the origination and survey data, procedure design services, electronic terrain and obstacle data	Parties other than ATM/ANS or AD are not regulated by 2017/373 or 139/2014. Regulation 2017/373 Article 3(5) requires States to ensure that data and aeronautical information originated by these parties meets the requirements specified in ATM/ANS.OR.A.085.		
Provision of aeronautical data and aeronautical information				
Art 4 Annex I Part A	A data set specification (UML model or feature catalogue) is the basis for data exchange.	The aeronautical data catalogue defined in Appendix 1 to Annex III of Regulation 2017/373 is the reference instead. The data catalogue covers only partly the feature catalogue requirements.		
Request for data origination				
Art 6 (6a)	The parties requesting data origination have to ensure that the data is originated in compliance with their instructions.	Requirements for formal arrangements cover the instructions for data origination. There are no separate requirements for a request for data origination.		
Art 6 (6b)	In addition to the requirements for formal arrangements the instructions for data origination have to include 1. a description of the data, 2. the entity to which the data are to be provided, 3. the date and time of the provision and 4. the data origination report format.	The instructions for data origination have to include 1. a description of the data, 2. the entity to which the data are to be provided, 3. the date and time of the provision,	-	AMC3 ADR.OPS.010: In case of contracted activities to external organisations for data origination, the data origination requirements for such organisations are the same as for ATM/ANS (ATM/ANS.OR.A.085)

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		4. the data origination report format plus: 5. the format of aeronautical data and 6. the requirement to identify any limitation on the use of the data.		
Survey and data origination				
▪ General				
Art 6 (4)	Data origination requirements are specified for surveyed data.	No specific survey requirements are specified. Data origination is expressed by its requirements to ensure the quality of the aeronautical data, leaving the methods to the surveyor.		
▪ Survey according to WGS-84				
Annex IV Part D 1	The surveying of data is carried out in accordance with the ICAO WGS-84 manual.	-	-	-
▪ Reference systems				
Annex IV Part D 2, 3	Surveyed data is referenced to WGS-84 and EGM-96.	The aeronautical data is referenced to WGS-84 and mean sea level (MSL) datum. The use of EGM-96 is recommended in AMC.		
▪ Maintenance of data				
Annex IV Part D 4	Surveyed aeronautical data is maintained through the lifetime	-	-	-
Annex IV Part D 5	Critical and essential data is monitored on a yearly basis and re-surveyed, if applicable.	The service provider shall monitor the data and notify the AIS provider of any changes necessary to ensure that the data is correct and complete	-	AMC The aerodrome operator should implement procedures to monitor data relevant to the aerodrome and notify the AIS of any changes...

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▪ Requirements for electronic survey data and techniques				
Annex IV Part D 6	Requirements for electronic survey data capture and digital storage techniques.	-	-	-
▪ Additional measures				
Annex IV Part D 7	Critical data is subjected to additional measures to identify survey errors.	-	-	-
▪ Validation and verification of aeronautical data				
Annex IV Part D 8	Aeronautical data is validated and verified before it is used to derive or calculate other data.	-	.	When using aeronautical data to obtain or calculate new aeronautical data, the initial data is verified and validated, except when provided by an authoritative source.
Data quality requirements				
Annex IV Part A 1	Data quality requirements are defined by ICAO standards.	Data quality requirements are defined in the aeronautical data catalogue (Appendix 1 .		
Annex IV Part A 5	Data quality requirements are defined as accuracy, resolution and integrity.	Data quality requirements are defined as accuracy, resolution, assurance (integrity), traceability, timeliness and format.		
Art 7(2)	Aeronautical data not meeting the data quality requirements are annotated.	-	Aeronautical data not meeting the data quality requirements are annotated or provided explicitly with the quality value (AIS.TR.240).	-
Metadata				
Annex I Part C	Metadata for the data set specifications consist of: the data originator of data,	Requirement to collect and transmit metadata	Requirement to collect metadata	No explicit requirement to collect metadata,

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	amendments made to the data, the persons or organisations that have interacted with the data, details of any validation and verification of the data, effective start date and time of data, geospatial data, numerical data, details of any conversion/transformation, and any limitations on the use of the data.	Minimum set of metadata (the identification of the organisations or entities that have interacted with data, the action performed, and the date and time the action was performed)	Minimum set of metadata (the identification of the organisations or entities that have interacted with data, the action performed, and the date and time the action was performed)	But: Minimum set of metadata (the identification of the organisations or entities that have interacted with data, the action performed, and the date and time the action was performed)
Art 9(2)	Traceability has to be maintained on each data item during its period of validity and for at least 5 years following the end of that period or until 5 years after the end of the period of validity for any data item calculated or derived from it, whichever is later.	Traceability must be ensured (as a data quality requirement). GM: Traceability is supported by maintaining the metadata	Traceability must be ensured (as a data quality requirement). AMC: Aeronautical data and associated metadata should be kept for a minimum period of 5 years beyond the validity period of the associated aeronautical information.	Traceability must be ensured (as a data quality requirement).
Validation and verification				
Annex IV Part B (e)	Evidence requirements that validation and verification processes are adequate for the assigned integrity level of the data item.	Validation and verification techniques have to ensure that the data meets the data quality requirements.		
Annex VI	Validation and verification techniques ensure against loss or alteration of data.	Validation and verification techniques ensure detection of data errors.		
Annex IV Part E 2	The manually entered aeronautical data need to be verified independently.	The manually entered aeronautical data need to be verified independently.		
Error reporting, measurement and corrective actions				
Art 6(8)	All parties involved are required to establish mechanisms for error reporting, feedback and rectification.	ANSP is required to establish mechanisms for error reporting,	AIS is required to establish mechanisms for error reporting,	Aerodrome operator is required to establish mechanisms for error

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Annex IV Part F		measurement and corrective action.	measurement and corrective action.	reporting, measurement and corrective action.