



ID 16 **5259** - **3**

Specification **Data quality management requirements and guidelines**

Relationship with AI Act **Article 017, Article 009 (Risk management)**

Link <https://www.iso.org/standard/81092.html>

Scope This document specifies requirements and provides guidance for establishing, implementing, maintaining and continually improving the quality of data used in the areas of analytics and machine learning. This document does not define a detailed process, methods or metrics. Rather it defines the requirements and guidance for a quality management process along with a reference process and methods that can be tailored to meet the requirements in this document. The requirements and recommendations set out in this document are generic and are intended to be applicable to all organizations, regardless of type, size or nature.

Terms	Variant	Complementary	AI Act	
168 Data quality plan				16
165 Data quality management				16
169 Data quality culture				16
170 Management				16
172 Audit and assessment				16
171 Data quality management lifecycle				16
173 Horizontal aspects				16
101 Risk management			<b>Article 017, Article 009</b>	16
174 Data format				16
175 Managing of data quality dependencies				16
176 Management system integration				16

Note

ID 17 **5259** - **4**

Specification **Data quality process framework**

Relationship with AI Act **Article 017 (Data life cycle)**

Link <https://www.iso.org/obp/ui/en/#iso:std:iso-iec:5259:-4:ed-1.v1:en>

Scope This document establishes general common organizational approaches, regardless of the type, size or nature of the applying organization, to ensure data quality for training and evaluation in analytics and machine learning (ML). It includes guidance on the data quality process for:  
 — supervised ML with regard to the labelling of data used for training ML systems, including common organizational approaches for training data labelling;  
 — unsupervised ML;  
 — semi-supervised ML;  
 — reinforcement learning;  
 — analytics  
 This document is applicable to training and evaluation data that come from different sources, including data acquisition and data composition, data preparation, data labelling, evaluation and data use. This document does not define specific services, platforms or tools.

Terms	Variant	Complementary	AI Act	
177 Outsourcing				17
178 Cloud service				17
179 Segmentation				17
180 Data quality process principles				17
30 Data life cycle			<b>Article 017</b>	17
181 Data quality process validation				17
182 Data requirements				17
183 Data labelling				17
184 Data quality assessment				17
185 Data decommissioning				17

Note







ID 13 **24027** - **1**

Specification *Bias in AI systems and AI aided decision making*

Relationship with AI Act **Article 010, Article 017 (Design), Article 015, Article 017, Article 009 (Lifecycle)**

Link <https://www.iso.org/obp/ui/en/#iso:std:iso-iec:tr:24027:ed-1:v1:en>

Scope This document addresses bias in relation to AI systems, especially with regards to AI-aided decision-making. Measurement techniques and methods for assessing bias are described, with the aim to address and treat bias-related vulnerabilities. All AI system lifecycle phases are in scope, including but not limited to data collection, training, continual learning, design, testing, evaluation and use.

Terms	Variant	Complementary	AI Act	
51	Functional correctness			13
16	Characteristics of the data sets may be met at			13
14	Bias			13
106	Data bias			13
34	Design		<b>Article 010, Article 017</b>	13
49	Lifecycle		<b>Article 015, Article 017, Article 009</b>	13
107	Software testing			13
108	Social responsibility			13

Note

ID 21 **24029** - **1**

Specification *Assessment of the robustness of neural networks - Part 1 Overview*

Relationship with AI Act **Article 015 (Robustness), Article 010 (Training, validation, testing datasets), Article 003, Article 001 (Artificial intelligence)**

Link <https://www.iso.org/obp/ui/en/#iso:std:iso-iec:tr:24029:-1:ed-1:v1:en>

Scope This document TR provides background about existing methods to assess the robustness of neural networks.

Terms	Variant	Complementary	AI Act	
194	Artificial intelligence		<b>Article 003, Article 001</b>	21
195	Artificial neural network			21
196	Testing			21
18	Robustness		<b>Article 015</b>	21
74	Training, validation, testing datasets		<b>Article 010</b>	21

Note



**ID 27** **25010** - **25010**

**Specification** *SQuaRE - Product quality model*

**Relationship with AI Act** **Article 015 (Security), Article 001, Article 073 (Safety)**

**Link** <https://www.iso.org/obp/ui/en/#iso:std:iso-iec:25010:ed-2:v1:en>

**Scope** This document defines a product quality model, which is applicable to ICT (information and communication technology) products and software products. The product quality model is composed of nine characteristics (which are further subdivided into subcharacteristics) that relate to quality properties of the products. The characteristics and subcharacteristics provide a reference model for the quality of the products to be specified, measured and evaluated.  
 NOTE 1 In this document, a product refers to an ICT product that is part of an information system. ICT product components include subsystems, software, firmware, hardware, data, communication infrastructure, and other elements that are part of the ICT product. This model can be used for requirements specification and evaluation of the target products' quality throughout their lifecycle by several stakeholders, including developers, acquirers, quality assurance and control staff and independent evaluators.

Terms	Variant	Complementary	AI Act	
207	Functional suitability			27
208	Performance efficiency			27
98	Compatibility			27
210	Interaction capability			27
211	Reliability			27
66	Security		<b>Article 015</b>	27
99	Maintainability			27
213	Flexibility			27
214	Safety		<b>Article 001, Article 073</b>	27

**Note**

**ID 25** **25019** - **25019**

**Specification** *Quality-in-use model*

**Relationship with AI Act** **Article 017, Article 005 (Accessibility), Article 017 (Compliance), Article 017 (Post-market), Article 010 (Data quality), Article 004 (Experience)**

**Link** <https://www.iso.org/obp/ui/en/#iso:std:iso-iec:25019:ed-1:v1:en>

**Scope** This document defines a quality-in-use model composed of three characteristics (which are further subdivided into sub-characteristics) that can influence stakeholders when products or systems are used in a specified context of use. This model is applicable to the entire spectrum of information system and IT service system, including both computer systems in use and software products in use.  
 This document provides a set of quality characteristics for specifying, measuring, evaluating and improving quality-in-use.  
 In this document, because context of use is specified as prerequisite of quality-in-use, context of use is necessary to be re-specified to change prerequisite when a product or service intend to fulfill to context of use changes.

Terms	Variant	Complementary	AI Act	
100	Post-market		<b>Article 017</b>	25
112	Monitoring			25
113	Stakeholder			25
90	Evaluation			25
1	Accessibility		<b>Article 017, Article 005</b>	25
97	Usability			25
116	Data quality		<b>Article 010</b>	25
115	Customer			25
117	Information system			25
79	Organization			25
118	Quality-in-use			25
119	Risk			25
120	Society			25
121	Software quality			25
122	System			25
123	Target entity			25
125	Direct user			25
124	User			25
126	Beneficialness			25
128	Freedom from risk			25

**Note**



ID 2

25024

Specification **Measurement of data quality**

Relationship with AI Act **Article 017, Article 005 (Accessibility), Article 015 (Accuracy), Article 017 (Compliance), Article 010 (Consistency), Article 015 (Measurement and method), Article 010 (Quality criteria), Article 010 (Training, validation, testing datasets)**

Link <https://www.iso.org/obp/ui/en/#iso:std:iso-iec:25024:ed-1:v1:en>

Scope This International Standard defines data quality measures for quantitatively measuring the data quality in terms of characteristics defined in ISO/IEC 25012. This International Standard contains the following:

- a basic set of data quality measures for each characteristic;
- a basic set of target entities to which the quality measures are applied during the data-life-cycle;
- an explanation of how to apply data quality measures;
- a guidance for organizations defining their own measures for data quality requirements and evaluation. It includes, as informative annexes, a synoptic table of quality measure elements defined in this International standard (Annex A), a table of quality measures associated to each quality measure element and target entity (Annex B), considerations about specific quality measure elements (Annex C), a list of quality measures in alphabetic order (Annex D), and a table of quality measures grouped by characteristics and target entities (Annex E).

This International Standard does not define ranges of values of these quality measures to rate levels or grades because these values are defined for each system by its nature depending on the system context and users' needs.

This International Standard can be applied to any kind of data retained in a structured format within a computer system used for any kinds of applications. People managing data and services including data are the primary beneficiaries of the quality measures. This International Standard is intended to be used by people who need to produce and/or use data quality measures while pursuing their responsibilities.

- Acquirer (an individual or organization that acquires or procures data from a supplier);
- Evaluator (an individual or organization that performs an evaluation, which can, for example, be a testing laboratory, the quality department of an organization, a

Terms	Variant	Complementary	AI Act	
2 Accuracy	free of errors		Article 015	2
21 Compliance	complete		Article 017	2
1 Accessibility	access		Article 017, Article 005	2
50 Measurement and method			Article 015	2
23 Confidentiality	personal data			2
11 Balance				2
26 Credibility		complementary		2
25 Consistency		complementary	Article 010	2
27 Currentness		complementary		2
76 Validation		complementary		2
40 Eliminate or reduce biased output		complementary		2
57 Quality criteria		complementary	Article 010	2
74 Training, validation, testing datasets		complementary	Article 010	2
56 Precision		complementary		2
60 Relevance		complementary		2
50 Measurement and method			Article 015	2
10 Auditability				2
142 Non-repudiation				2
73 Traceability				2
20 Completeness				2

Note

ID 19

25059

Specification **Quality model for AI System**

Relationship with AI Act **Article 017, Article 005 (Accessibility), Article 017 (AI models), Article 003, Article 004 (AI systems), Article 010 (Annotation), Article 015 (Security)**

Link <https://www.iso.org/obp/ui/en/#iso:std:iso-iec:25059:ed-1:v1:en>

Scope This document outlines a quality model for AI systems and is an application-specific extension to the standards on SQUARE. The characteristics and sub-characteristics detailed in the model provide consistent terminology for specifying, measuring and evaluating AI system quality. The characteristics and sub-characteristics detailed in the model also provide a set of quality characteristics against which stated quality requirements can be compared for completeness.

Terms	Variant	Complementary	AI Act	
5 Annotation			Article 010	19
35 Quality model				19
4 AI systems			Article 003, Article 004	19
3 AI models			Article 017	19
1 Accessibility			Article 017, Article 005	19
95 Controllability				19
78 Functional adaptability				19
64 Terms related to AI				19
66 Security	Cybersecurity		Article 015	19
97 Usability	Interaction capability			19
98 Compatibility				19

Note



ID 14 **42001** -  

Specification **Management system**

Relationship with AI Act **Article 015 (Measurement and method), Article 010, Article 017 (Cleaning), Article 017 (Leadership), Article 017 (Planning), Article 017, Article 009 (Risk management)**

Link <https://www.iso.org/obp/ui/en/#iso:std:iso-iec:42001:ed-1:v1:en>

Scope This document specifies the requirements and provides guidance for establishing, implementing, maintaining and continually improving an AI (artificial intelligence) management system within the context of an organization.  
 This document is intended for use by an organization providing or using products or services that utilize AI systems. This document is intended to help the organization develop, provide or use AI systems responsibly in pursuing its objectives and meet applicable requirements, obligations related to interested parties and expectations from them.  
 This document is applicable to any organization, regardless of size, type and nature, that provides or uses products or services that utilize AI systems.

Terms	Variant	Complementary	AI Act	
80	Cleaning		Article 010, Article 017	14
87	Planning		Article 017	14
88	Support			14
89	Operation			14
90	Evaluation			14
91	Improvement			14
92	Acquisition			14
50	Measurement and method		Article 015	14
79	Organization			14
86	Leadership		Article 017	14
101	Risk management		Article 017, Article 009	14
105	Competence			14
152	Management system			14

Note