ID 15 **5259 - 1**

Specification *Overview, terminology and examplse*

Relationship with **Ai Act** Article 015, Article 010, Article 017, Article 010, Article 009

Link https://www.iso.org/search.html?PROD_isoorg_en%5Bquery%5D=5259-1

Scope This document provides the means for understanding and associating the individual documents of the ISO/IEC 5259 series and is the foundation for conceptual understanding of data quality for analytics and machine learning. It also discusses associated technologies and examples (e.g. use cases and usage scenarios).

	Terms	*Variant*	*Complementary*	*AI Act*	
30	Data life cycle			Article 017	15
29	Data collection processes			Article 015, Article 010	15
162	Data user				15
116	Data quality			Article 010	15
163	Data quality model				15
153	Measurement			Article 009	15
164	Analitics				15
165	Data quality management				15
166	Data governance				15
167	Data provenance				15

Note

ID 3 **5259 - 2**

Specification *Data quality measures*

Relationship with **Ai Act** Article 017, Article 015, Article 015, Article 010, Article 017, Article 017, Article 017, Article 017, Article 010, Article 015, Article 015, Article 010, Article 010, Article 010

Link https://www.iso.org/standard/81860.html

Scope This document specifies a data quality model, data quality measures and guidance on reporting data quality in the context of analytics and machine learning (ML).
This document is applicable to all types of organizations who want to achieve their data quality objectives.

	Terms	*Variant*	*Complementary*	*AI Act*	
21	Compliance	complete		Article 017	3
1	Accessibility	access		Article 017	3
22	Data holder	identifiability		Article 017	3
25	Consistency			Article 010	3
11	Balance				3
20	Completeness				3
63	Resilience regarding errors, faults,	dataset			3
13	Bias detection and correction	dataset		Article 015, Article 010, Article 017	3
26	Credibility		complementary		3
75	Understandability		complementary		3
27	Currentness		complementary		3
76	Validation		complementary		3
39	Efficiency		complementary		3
57	Quality criteria		complementary	Article 010	3
74	Training, validation, testing datasets		complementary	Article 010	3
56	Precision		complementary		3
60	Relevance		complementary		3
12	Benchmark and measurement methodologies		complementary		3
69	Synthetic or anonymised data		complementary		3
37	Documentation of the access, to avoid misuse		complementary		3

Note

ID 16 **5259 - 3**

Specification: *Data quality management*

Relationship with Ai Act: Article 017, Article 009

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			Article 017, Article 009	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

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			Article 017	17
181 Data quality process validation				17
182 Data requirements				17
183 Data labelling				17
184 Data quality assessment				17
185 Data decommisionig				17

Note

ID 18 **5259 - 5**

Specification: *Data quality governance framework*

Relationship with Ai Act: **Article 010**

Link: https://www.iso.org/obp/ui/en/#iso:std:iso-iec:5259:-5:dis:ed-1:v1:en

Scope: This document provides a data quality governance framework for analytics and machine learning (ML) to enable governing bodies of organizations to direct and oversee the implementation and operation of data quality measures, management, and related processes with adequate controls throughout the data life cycle (DLC) model according to ISO/IEC 5259-1.This document can be applied to any analytics and ML. This document does not define specific management requirements or process requirements according to ISO/IEC 5259-3 and ISO/IEC 5259-4 respectively.

	Terms	Variant	Complementary	AI Act	
166	Data governance				18
111	Governance			**Article 010**	18
146	Governance of information security				18
186	Data quality risk management				18
187	Responsability of governing body				18
188	Establish enabling environment for data				18

Note

ID 20 **5338 -**

Specification: *AI System life cycle process*

Relationship with Ai Act: **Article 003, Article 015, Article 017, Article 009**

Link: https://www.iso.org/obp/ui/en/#iso:std:iso-iec:5338:ed-1:v1:en

Scope: This document defines a set of processes and associated concepts for describing the life cycle of AI systems based on machine learning and heuristic systems. It is based on ISO/IEC/IEEE 15288 and ISO/IEC/IEEE 12207 with modifications and additions of AI-specific processes from ISO/IEC 22989 and ISO/IEC 23053.
This document provides processes that support the definition, control, management, execution and improvement of the AI system in its life cycle stages. These processes can also be used within an organization or a project when developing or acquiring AI systems.
When an element of an AI system is traditional software or a traditional system, the software life cycle processes in ISO/IEC/IEEE 12207 and the system life cycle processes in ISO/IEC/IEEE 15288 can be used to implement that element.

	Terms	Variant	Complementary	AI Act	
189	Knowledge acquisition				20
49	Lifecycle			**Article 015, Article 017, Article 009**	20
122	System				20
4	AI systems			**Article 003**	20
190	Human resource management process				20
191	Quality management process				20
192	Knowledge management process				20
49	Lifecycle			**Article 015, Article 017, Article 009**	20
193	Maintenance process				20

Note

ID 11 **8183** -

Specification: *Data life cycle*

Relationship with Ai Act: **Article 017, Article 010**

Link: https://www.iso.org/obp/ui/en/#iso:std:iso-iec:8183:ed-1:v1:en

Scope: This document defines the stages and identifies associated actions for data processing throughout the artificial intelligence (AI) system life cycle, including acquisition, creation, development, deployment, maintenance and decommissioning. This document does not define specific services, platforms or tools. This document is applicable to all organizations, regardless of type, size or nature, that use data in the development and use of AI systems.

	Terms	Variant	Complementary	AI Act	
31	Data processed are secured, protected,				11
93	Preparation				11
30	Data life cycle			**Article 017**	11
94	Decommissioning				11
88	Support				11
109	Busness requirements				11
110	Verification and validation				11
111	Governance			**Article 010**	11

Note

ID 26 **22989** -

Specification: *Artificial intelligence concepts and terminology*

Relationship with Ai Act: **Article 015, Article 003, Article 015**

Link: https://www.iso.org/obp/ui/en/#iso:std:iso-iec:22989:ed-1:v1:en

Scope: This document establishes terminology for AI and describes concepts in the field of AI. This document can be used in the development of other standards and in support of communications among diverse, interested parties or stakeholders.
This document is applicable to all types of organizations (e.g. commercial enterprises, government agencies, not-for-profit organizations).

	Terms	Variant	Complementary	AI Act	
194	Artificial intelligence			**Article 003**	26
64	Terms related to AI				26
206	Terms related to computer vision				26
201	Terms related to data				26
202	Terms related to machnine learning				26
205	Terms related to natural language processing				26
203	Terms related to neural networks				26
204	Terms related to trustworthiness				26
28	Data quality reporting			**Article 015**	26
215	Cybersecurity			**Article 015**	26

Note

ID 24 **23894** -

Specification: *Guidance on risk management*

Relationship with Ai Act: **Article 017, Article 009**

Link: https://www.iso.org/obp/ui/en/#iso:std:iso-iec:23894:ed-1:v1:en

Scope: This document provides guidance on how organizations that develop, produce, deploy or use products, systems and services that utilize artificial intelligence (AI) can manage risk specifically related to AI. The guidance also aims to assist organizations to integrate risk management into their AI-related activities and functions. It moreover describes processes for the effective implementation and integration of AI risk management.
The application of this guidance can be customized to any organization and its context.

	Terms	Variant	Complementary	AI Act	
101	Risk management			**Article 017, Article 009**	24

Note

ID 13 **24027** -

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

Relationship with Ai Act: **Article 010, Article 017, Article 015, Article 017, Article 009**

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			**Article 010, Article 017**	13
49	Lifecycle			**Article 015, Article 017, Article 009**	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, Article 010, Article 003

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

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

	Terms	*Variant*	*Complementary*	*AI Act*	
194	Artificial intelligence			Article 003	21
195	Artificial neural network				21
196	Testing				21
18	Robusteness			Article 015	21
74	Training, validation, testing datasets			Article 010	21

Note

ID 22 **24029 - 2**

Specification *Assessment of the robustness of neural networks - Part 2 Methodology for the use of*

Relationship with **Ai Act** Article 015

Link https://www.iso.org/obp/ui/en/#iso:std:iso-iec:24029:-2:ed-1:v1:en

Scope This document provides methodology for the use of formal methods to assess robustness properties of neural networks. The document focuses on how to select, apply and manage formal methods to prove robustness properties.

	Terms	*Variant*	*Complementary*	*AI Act*	
197	Domain				22
198	Bounded domain				22
199	Architecture				22
200	Time series				22
18	Robusteness			Article 015	22

Note

ID 23 **24029 - 3**

Specification: *AWI Assessment of the robustness of neural networks - Part 3 Methodology for the use of*

Relationship with **Ai Act**:

Link: https://www.iso.org/standard/86901.html

Scope: This document provides methodology for the use of statistical methods to assess robustness properties of neural networks. The document focuses on how to select, apply and manage statistical methods to assess robustness properties.

Terms	Variant	Complementary	AI Act

Note:

ID 27 **25010 -**

Specification: *SQuaRE - Product quality model*

Relationship with **Ai Act**: **Article 015**

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			Article 015	27
99 Maintainability				27
213 Flexibility				27
214 Safety				27

Note:

ID 25 **25019** -

Specification: *Quality-in-use model*

Relationship with Ai Act: **Article 017, Article 017, Article 017, Article 010**

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 fulfil to context of use changes.

	Terms	Variant	Complementary	AI Act	
100	Post-market			**Article 017**	25
112	Monitoring				25
113	Stakeholder				25
90	Evaluation				25
1	Accessibility			**Article 017**	25
97	Usability				25
116	Data quality			**Article 010**	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 015, Article 017, Article 010, Article 015, Article 010, Article 010**

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 entitiy (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

	Terms	Variant	Complementary	AI Act	
2	Accuracy	free of errors		**Article 015**	2
21	Compliance	complete		**Article 017**	2
1	Accessibility	access		**Article 017**	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 017, Article 003, Article 010, Article 015**

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**	19
3	AI models			**Article 017**	19
1	Accessibility			**Article 017**	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 28 **27000** -

Specification: *Information security management system - Overview and vocabulary*

Relationship with Ai Act: **Article 015, Article 017, Article 009, Article 009, Article 008, Article 009, Article 009, Article 009**

Link: https://www.iso.org/obp/ui/en/#iso:std:iso-iec:27000:ed-5:v1:en

Scope: This document provides the overview of information security management systems (ISMS). It also provides terms and definitions commonly used in the ISMS family of standards. This document is applicable to all types and sizes of organization (e.g. commercial enterprises, government agencies, not-for-profit organizations).
The terms and definitions provided in this document
— cover commonly used terms and definitions in the ISMS family of standards;
— do not cover all terms and definitions applied within the ISMS family of standards; and
— do not limit the ISMS family of standards in defining new terms for use.

	Terms	Variant	Complementary	AI Act	
137	Access control				28
138	Attack				28
139	Authentication				28
140	Authenticity				28
10	Auditability				28
105	Competence				28
23	Confidentiality				28
143	Consequence				28
144	Conformity				28
143	Consequence				28
145	Documented information			**Article 009**	28
146	Governance of information security				28
148	Governing body				28
91	Improvement				28
117	Information system				28
79	Organization				28
150	Internal context				28
151	Level of risk				28
152	Management system				28
153	Measurement			**Article 009**	28

Note

New

STANDARD

Standard | Number | AI Act | Mapping | Terminology

UNINFO UNI

Technical Committee 533 AI

aiopenmind Hosting and developing

ID 14 **42001** -

Specification *Management system*

Relationship with **Ai Act** **Article 015, Article 010, Article 017, Article 017, Article 017, Article 017, Article 009**

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