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**Data quality —**  
**Part 2:**  
**Vocabulary**

*Qualité des données —*  
*Partie 2: Vocabulaire*

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 184, *Automation systems and integration*, Subcommittee SC 4, *Industrial data*.

This second edition cancels and replaces the first edition (ISO 8000-2:2012), which has been technically revised, with the addition and modification of some terms and definitions.

ISO 8000 is organized as a series of parts, each published separately. The structure of ISO 8000 is described in ISO/TS 8000-1.

Each part of ISO 8000 is a member of one of the following series: general data quality, master data quality and product data quality. This document is a member of the general data quality series but applicable to all of the three data quality series.

A list of all parts in the ISO 8000 series can be found on the ISO website.

## Introduction

The ability to create, collect, store, maintain, transfer, process and present data to support business processes in a timely and cost effective manner requires both an understanding of the characteristics of the data that determine its quality, and an ability to measure, manage and report on data quality.

ISO 8000 defines characteristics that can be tested by any organization in the data supply chain to objectively determine conformance of the data to ISO 8000.

ISO 8000 provides frameworks for improving data quality for specific kinds of data. The frameworks can be used independently or in conjunction with quality management systems.

ISO 8000 covers industrial data quality characteristics throughout the product life cycle from conception to disposal. ISO 8000 addresses specific kinds of data including, but not limited to, master data, transaction data and product data.

This document establishes the vocabulary for the ISO 8000 series of parts.

[Annex A](#) contains an identifier that unambiguously identifies this document in an open information system.

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# Data quality —

## Part 2: Vocabulary

### 1 Scope

This document defines terms relating to data quality used in the ISO 8000 series of parts.

### 2 Normative references

There are no normative references in this document.

### 3 Terms and definitions

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <http://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

#### 3.1 Terms relating to applications

##### 3.1.1

##### **application**

group of one or more *processes* (3.3.3) creating or using *product data* (3.11.5)

[SOURCE: ISO 10303-1:1994, 3.2.2]

##### 3.1.2

##### **application protocol**

##### **AP**

part of ISO 10303 that specifies an application interpreted model satisfying the scope and *information* (3.2.7) *requirements* (3.3.4) for a specific *application* (3.1.1)

Note 1 to entry: This definition differs from the definition used in open system interconnection (OSI) standards. However, since this document is not intended to be used directly with OSI communications, no confusion should arise.

[SOURCE: ISO 10303-1:1994, 3.2.7, modified — The words “this International Standard” have been replaced by “this document” in the Note to entry.]

##### 3.1.3

##### **application reference model**

##### **ARM**

*information* (3.2.7) model that describes the *information requirements* (3.3.4) and constraints of a specific *application* (3.1.1) context

[SOURCE: ISO 10303-1:1994, 3.2.8]

## 3.2 Terms relating to data and information

### 3.2.1

#### **data**

reinterpretable representation of *information* (3.2.7) in a formalized manner suitable for communication, interpretation, or processing

[SOURCE: ISO/IEC 2382:2015, 2121272, modified — Notes to entry have been removed.]

### 3.2.2

#### **data exchange**

storing, accessing, transferring and archiving of *data* (3.2.1)

[SOURCE: ISO 10303-1:1994, 3.2.15]

### 3.2.3

#### **data message**

message used to exchange *data* (3.2.1) between organizations

EXAMPLE 1 Web Services call: data to be exchanged consisting of Extensible Markup Language (XML) elements in a Simple Object Access Protocol (SOAP) envelope.

EXAMPLE 2 E-mail message: data to be exchanged consisting of an XML file attached to the e-mail.

EXAMPLE 3 Java remote method invocation call: data to be exchanged consisting of Java objects serialized according to the Java Remote Method Invocation (RMI) specification.

EXAMPLE 4 Open Database Connectivity (ODBC) call: data to be exchanged consisting of an update statement encoded according to the ODBC specification.

EXAMPLE 5 File or data to be exchanged contained on a compact diskette delivered to an organization by a person: data to be exchanged consisting of a spreadsheet.

### 3.2.4

#### **data set**

logically meaningful grouping of *data* (3.2.1) ISO 8000-2:2017

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EXAMPLE 1 Computer-aided design (CAD) files.

EXAMPLE 2 Electronic data interchange (EDI) transactions.

### 3.2.5

#### **data specification**

rules for describing items belonging to a particular class using entries from a *data dictionary* (3.7.1)

[SOURCE: ISO 22745-2:2010, B.2.18, modified — Examples have been removed.]

### 3.2.6

#### **entity**

concrete or abstract thing in the domain under consideration

[SOURCE: ISO 19439:2006, 3.29, modified — The word “any” has been removed at the start of the definition.]

### 3.2.7

#### **information**

knowledge concerning objects, such as facts, events, things, *processes* (3.3.3), or ideas, including concepts, that within a certain context has a particular meaning

[SOURCE: ISO/IEC 2382:2015, 2121271, modified — Field of application and notes to entry have been removed.]



**3.2.8****metadata**

*data* (3.2.1) defining and describing other data

[SOURCE: ISO/IEC 11179-1:2015, 3.2.16, modified — The words “that defines and describes” have been replaced by “defining and describing”.]

**3.2.9****organization identifier**

reference that can be resolved unambiguously to the legal name, location and the administrator of the organization

**3.3 Terms relating to quality****3.3.1****quality**

degree to which a set of inherent characteristics of an object fulfils *requirements* (3.3.4)

Note 1 to entry: The term “quality” can be used with adjectives such as poor, good or excellent.

Note 2 to entry: “Inherent”, as opposed to “assigned”, means existing in the object.

[SOURCE: ISO 9000:2015, 3.6.2]

**3.3.2****quality management system**

part of a management system with regard to *quality* (3.3.1)

[SOURCE: ISO 9000:2015, 3.5.4]

**3.3.3****process**

set of interrelated or interacting activities that use inputs to deliver an intended result

[SOURCE: ISO 9000:2015, 3.4.1, modified – Notes to entry have been removed.]

**3.3.4****requirement**

need or expectation that is stated, generally implied or obligatory

[SOURCE: ISO 9000:2015, 3.6.4, modified – Notes to entry have been removed.]

**3.4 Terms relating to data quality****3.4.1****accepted reference value**

value that serves as an agreed-upon reference for comparison

Note 1 to entry: The accepted reference value is derived as:

- a) a theoretical or established value, based on scientific principles;
- b) an assigned or certified value, based on experimental work of some national or international organization;
- c) a consensus or certified value, based on collaborative experimental work under the auspices of a scientific or technical group;
- d) the expectation, i.e. the mean of a specified set of *measurements* (3.9.2), when a), b) and c) are not available.

[SOURCE: ISO 3534-2:2006, 3.2.7]

### 3.4.2

#### **authoritative data source**

owner of a *process* (3.3.3) that creates *data* (3.2.1)

EXAMPLE The Department of Transportation of the Commonwealth of Pennsylvania, USA, is the authoritative data source for Pennsylvania motor vehicle registration records.

### 3.4.3

#### **data accuracy**

closeness of agreement between a *property value* (3.6.2) and the *true value* (3.4.11)

Note 1 to entry: In practice, the *accepted reference value* (3.4.1) is substituted for the true value.

### 3.4.4

#### **data accuracy record**

record of the *information* (3.2.7) provided about the *accuracy* (3.11.1) of a piece of *data* (3.2.1)

Note 1 to entry: A data accuracy record can include representations and warranties of the data's accuracy.

### 3.4.5

#### **data completeness**

*quality* (3.3.1) of having all *data* (3.2.1) that existed in the possession of the sender at time the *data message* (3.2.3) was created

### 3.4.6

#### **data completeness record**

record of the *information* (3.2.7) provided about the completeness of a piece of *data* (3.2.1)

Note 1 to entry: A data completeness record can include representations and warranties of the data's completeness.

### 3.4.7

#### **data error**

non-fulfilment of a *data* (3.2.1) *requirement* (3.3.4)

Note 1 to entry: In this term, "error" is synonymous with *nonconformity* (3.14.8).

### 3.4.8

#### **data quality**

degree to which a set of inherent characteristics of *data* (3.2.1) fulfils *requirements* (3.3.4)

Note 1 to entry: See also *quality* (3.3.1).

### 3.4.9

#### **data quality management**

coordinated activities to direct and control an organization with regard to *data quality* (3.4.8)

### 3.4.10

#### **data provenance record**

record of the ultimate derivation and passage of a piece of *data* (3.2.1) through its various owners or custodians

Note 1 to entry: A data provenance record can include *information* (3.2.7) about creation, update, transcription, abstraction, *validation* (3.4.12), and transferring ownership of data.

### 3.4.11

#### **true value**

value that characterizes a characteristic perfectly defined in the conditions that exist when the characteristic is considered

Note 1 to entry: The true value is a theoretical concept and, in general, cannot be known exactly.

[SOURCE: ISO 3534-2:2006, 3.2.5, modified.]