Conformed Dimensions of Data Quality

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List of Conformed Dimensions of Data Quality

The following is the current version of the Conformed Dimensions of Data Quality (r3.3) and their underlying concepts. Each Dimension has one or more underlying concepts. The definitions of each of those are available here.

Conformed Dimension	Conformed Dimension Definition	Underlying Concepts	Non Standard Terminology for Dimension
Completeness	Completeness measures the degree of population of data values in a data set.	Record Population, Attribute Population, Truncation, Existence	Fill Rate, Coverage, Usability, Scope
Accuracy	Accuracy measures the degree to which data factually represents its associated real-world object, event, concept or alternatively matches the agreed upon source(s).	Agree with Real-world, Match to Agreed Source	Consistency
Consistency	Consistency measures whether or not data is equivalent across systems or location of storage.	Equivalence of Redundant or Distributed Data, Format Consistency	Integrity, Concurrence, Coherence
Validity	Validity measures whether a value conforms to a preset standard.	Values in Specified Range, Values Conform to Business Rule, Domain of Predefined Values, Values Conform to Data Type, Values Conform to Format	Accuracy, Integrity, Reasonableness, Compliance
Timeliness	Timeliness is a measure of time between when data is expected versus made available.	Time Expectation for Availability, Manual Float	Currency, Lag Time, Latency, Information Float

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List of Underlying Concepts

The following is the current version of the underlying concepts for each of the Conformed Dimensions of Data Quality (r3.3). The definition of each of the dimensions is available here.

Conformed Dimension	Underlying Concepts	Definition of Underlying Concept
Completeness	Record Population	This measures whether a row is present in a data set (table).
	Attribute Population	This measures whether a value is present (not null) for an attribute (column).
	Truncation	This measures whether the value contains all characters of the correct value.
	Existence	Existence identifies whether a real-life fact has been captured as data.
Accuracy	Agree with Real-world	Degree that data factually represents its associated real-world object, event, or concept.
	Match to Agreed Source	Measure of agreement between data and the source of that data. This is used when the data represent intangible objects or transactions that can't be observed visually.
Consistency	Equivalence of Redundant or Distributed Data	The measure of similarity with other sources of data that represent the same concept.

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	Format Consistency	This measures the conformity of format of the same data in different places.
	Logical Consistency	Logical consistency measures whether two attributes of related data are conceptually in agreement, even though they may not record the same characteristic of a fact.
Validity	Values in Specified Range	Values must be between some lower number and some higher number.
	Values Conform to Business Rule	Validity measures whether values adhere to some declarative formula.
	Domain of Predefined Values	This is a set of permitted values.
	Values Conform to Data Type	Validity measures whether values have a specific characteristic (e.g. Integer, Character, Boolean). Data types restrict what values can exist, the operations that can be use on it, and the way that the data is stored.
	Values Conform to Format	Validity measures whether the data are arranged or composed in a predefined way.
Timeliness	Time Expectation for Availability	The measure of time between when data is expected versus made available.
	Manual Float	Manual float is a measure of the time from when an observation is made to the point it is recorded in electronic format.
Currency	Current with World it Models	Data is current if it reflects the present state of the concept it models.
Integrity	Referential Integrity	Referential integrity measures whether if when a value (foreign key) is used it must reference an existing key (primary key) in the parent

		table.
	Uniqueness	Uniqueness measures whether each fact is uniquely represented.
	Cardinality	Cardinality describes the relationship between one table to another, such as one-to-one, one-to-many, or many-to-many.
Accessibility	Ease of Obtaining Data	This measures how easy it is to obtain data.
	Access Control	Access control includes the identification of a person that wants to access data, authentication of their identity, review and approval to access required data, and lastly auditing the access of that data.
	Retention	Retention refers to the period of time that data is kept before being removed from a database through purge or archive processing.
Precision	Precision of Data Value	The measure of preciseness of numeric data using decimal places, rounding and truncation.
	Granularity	The detail or summary of data defines the granularity measured by the number of attributes used to represent a single concept.
Lineage	Source Documentation	Source documentation provides data provenance which describes the origin of the data.
	Segment Documentation	Segment documentation provides how data is transformed and transported from one location to another.
	Target Documentation	Documentation about the target explains where the data moved to and how it is stored.