**7 Characteristics Of Data Quality**

1. Consistency

**Data has no contradictions in your databases.** This means that if two values are examined from separate data sets, they will match or align. For example, the budget amount for a specific department needs to be consistent across the organization so as not to exceed its total budget. In many cases, you may be looking to established data rules to verify consistency.

**Examples of consistency metrics:**

* Range
* Variance
* Standard deviation

2. Accuracy

**Data is error-free and exact.**Accuracy is when a measured value matches the actual (true) value and it contains no mistakes, such as outdated information, redundancies, and typos. Your goal is to continually increase the accuracy of your data, even as your datasets grow in size.

**Examples of accuracy metrics:**

* Error ratio
* Deviation

3. Completeness

**Data records are “full” and contain enough information to draw conclusions.**Tracking this data quality metric involves finding any fields that contain missing or incomplete values. All data entries must be complete in order to compose a high quality data set.

**Examples of completeness metrics:**

* Percentage of data records that contain all needed information

4. Auditability

**Data is accessible and changes are traceable.** Can you drill down into your data and see a history of updates? Determining quality with regard to this metric means tracking the percentage of fields where you cannot determine what and when edits were made, and by whom.

**Examples of auditability metrics:**

* Percentage of gaps in the data set
* Percentage of altered data
* Percentage of disassociated data
* Percentage of untraceable data

5. Validity

**Data points exist in the same and correct format everywhere they appear. This can also be called data integrity.**Having a high rate of validity means that all data aligns with your established formatting rules—such as rounding percentages to the nearest whole number or formatting dates as mm/dd/yyyy. You can track validity by comparing the number of format errors for a data item to the number of times that data appears in total across your databases.

**Examples of validity metrics:**

* Percentage of data records where all values are in the required format

6. Uniqueness

**Data will be recorded no more than once.**This doesn’t mean you can’t use the same data point in multiple ways—such as a quarterly revenue number appearing in both a sales and leadership report—but more that there aren’t erroneous duplicates. For example, the same initiative can’t be listed twice under a goal. Tracking this metric helps organizations identify and avoid double data entry.

**Examples of uniqueness metrics:**

* Number or percentage of repeated values

7. Timeliness

**Data is available and accurate.**It’s important to collect data in a timely manner in order to effectively track changes. If you’re expecting a project to immediately impact a measure, track the measure on a monthly basis, versus annually. You also shouldn’t have to revise data several months later. Although, this can admittedly be tricky in certain situations, such as with medical outcomes from patients trying new treatments or medicine.

**Examples of timeliness metrics:**

* Time variance

Conclusion

Keep in mind that improving the quality of your data is a continual process rather than a one-time job. All your data quality metrics should improve over time, but it won’t happen instantly. Your goal is to keep quality trending upward, without faltering.