

Data Quality: An assessment of data’s fitness to serve its purpose in a given context. Key Data Quality components are Accuracy, Completeness, Reliability, Relevance Timeliness, Consistency.

Data Quality and Integrity

Focus	Responsibility	Organisation	GMA
Accuracy	Accurate data is provided so that it represents its associated real-world object, event, or concept (i.e., closeness to its real value).	✓	
Completeness	Data is as complete as possible e.g., 100 per cent complete means there are no data gaps. There should be no omissions without explanation.	✓	
Consistency	Data is defined, collected, grouped, and stored in a consistent way across systems and storage locations.	✓	
Integrity	Data is collected, recorded, and stored so that it is a) a direct observation, at the time it was executed; accurate and free from errors.	✓	✓
Timeliness	Data is available as soon as possible and as required to support information needs. Timeliness is a measure of time between when data is expected versus made available and is also related to currency.	✓	✓
Validity	Data is validated where required. That is, data conforms to a pre-set standard e.g., whole numbers, date, or list option.		✓
Currency	Data currency is based on the needs of the user and its intended purpose e.g., within a set time-period relevant to reporting. Currency measures how quickly data reflects the real-world concept that it represents.		✓
Accessibility	Data is easy to acquire when needed. Accessibility also depends on how long data is retained, and how access is controlled.		✓
Precision	Data is provided at the right level of detail or granularity for that attribute. This depends on what is being measured and how it is measured (i.e., closeness of repeated measurements).	✓	✓
Lineage (audit trail)	Data is provided/managed with documentation about where it came from, how it was transformed, and where it went.	✓	✓

Representation	Data is represented for ease of understanding by consistency of presentation, appropriate media choice, and availability of documentation (metadata).		✓
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Data Management Practices

Focus	Description	Organisation	GMA
Data Entry Training	Start with training your employees on how to enter and maintain data and delegate them with the responsibility of preserving the data quality. It will make sure everyone in your team is putting effort towards maintaining data integrity.	✓	✓
Validating Input and Data	This is important, especially if your data is being supplied by an unknown source like an end-user, another application, or third-party sources. You need to verify and validate the data inputs to ensure they are accurate. Apart from this, you also need to validate data from time to time so that you can be assured that data processes have not been corrupted.	✓	✓
Removing Duplicate Data	Duplicate data is one of the biggest reasons behind the breach of data integrity as it often causes ambiguity and leads to malicious errors. So, identifying and removing duplicate data on time is important.	✓	✓
Backing Up Data	A systematic and frequent data back-up process is essential for service continuity and retrieval in the case of an unexpected data loss or hardware failure event.	✓	
Using Access Controls	Implement a least privilege model and give access to only those users who need it so that there is high-level control and data integrity can be preserved.		✓
Keeping an Audit Trail	Whenever there is a data breach, it is important to track its source. That is why keeping an audit trail is crucial to preserve data integrity. An audit trail will provide the organisation with breadcrumbs that will highlight the source of the problem so that you can resolve it on time.		✓

Establishing Collaboration in the Organisation	<p>Another way to maintain data integrity in your organisation is to keep all the members of your organisation on the same page. They should know who is creating, modifying, and transferring the data and when.</p> <p>That is why you should ensure collaboration in your organisation. All members should be able to collaborate and work together.</p>	<p>✓</p>	<p>✓</p>
Developing Process Maps for Critical Data	<p>For preserving the data integrity, you also need to have control over how and where the data is being used and who is using it. It will keep a check on your organisation's data and prevent its misuse.</p> <p>That is why it is essential to develop process maps for critical data so that your organisation has greater control over its use. It will also help you implement proper security measures and regulatory compliances.</p>	<p></p>	<p>✓</p>
Promoting a Culture of Integrity	<p>Data integrity is not just about taking some precautionary measures but also about establishing a culture of transparency, honesty, and integrity.</p> <p>Your team members need to be honest about their work and take ownership of their data. They also need to report instances in which other members break the rules and fail to fulfill their responsibilities.</p>	<p>✓</p>	<p>✓</p>
Paying Attention to Cybersecurity	<p>Cybersecurity will play a critical role in preserving data integrity in your organisation. It will ensure no one can access essential data without your permission, and chances of a data breach can be prevented.</p> <p>So, ensuring cybersecurity in your organisation should be your top priority. You must draw strict policies, use advanced security tools, and take necessary security measures.</p>	<p>✓</p>	<p>✓</p>