



# Factsheet Data Issues

## Content

Introduction.....	2
Definition.....	2
Synonyms .....	2
Procedure to manage Data Issues.....	2
Characteristics and requirements .....	3
Relationships .....	3
Content.....	4
Data Issue escalation path.....	4
Story .....	4
References.....	4
Authors.....	4



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Version 1.3  
Date 25 July 2021

## Introduction

This factsheet describes knowledge about Data Issues in a nutshell. Data Issues are highlighted in this factsheet from different angles in a structured way.

## Definition

A Data Issue is a non-fulfilment of a requirement regarding data quality.

A Correction is an action to eliminate a Data Issue.

A Corrective Action is an action to eliminate *the cause* of a Data Issue.

A Preventive Action is an action to the eliminate *the cause of a potential* Data Issue.

Note: Generally, a data issue concerns an incorrect data value, but it can be applied to any other data quality dimensions, e.g., completeness and timeliness.

## Synonyms

Data anomalies

Data error

Data quality incident

Defect

Error

Nonconformity

## Procedure to manage Data Issues

Phase	Activity
Plan	<ul style="list-style-type: none"><li>• To detect or identify Data Issues</li><li>• To determine if similar Data Issues exist</li><li>• To register Data Issues</li><li>• To count the number of Data Issues</li><li>• To categorize or classify Data Issues</li><li>• To diagnose Data Issues ('root cause analysis')</li><li>• To formulate options for remediation of Data Issues.</li><li>• To assess the business impact of Data Issues ('severity')</li><li>• To prioritize Data Issues based on business impact (by data owners and data stewards)</li><li>• To eventually escalate Data Issues. See figure.</li></ul>
Do	<ul style="list-style-type: none"><li>• To eliminate or resolve a Data Issue ('correction', 'remediation', 'scrubbing' or 'cleansing')</li><li>• To eliminate the cause of a Data Issue to prevent recurring ('corrective action')</li><li>• To eliminate the cause of a potential Data Issue ('preventive action')</li><li>• To deal with the consequences of the Data Issue, e.g., to report Data Issues to data consumers</li><li>• To document actions taken.</li></ul>
Check	<ul style="list-style-type: none"><li>• To monitor the status of Data Issues and their resolutions.</li><li>• To review the effectiveness of corrective and preventive action.</li></ul>
Act	<ul style="list-style-type: none"><li>• To adapt corrective and preventive action.</li></ul>

## Characteristics and requirements

Characteristic	Requirement
Severity	Data Issues are resolved in order of severity.

## Relationships

- Preventing Data Issues is one of the principles of a Data Quality Program.
- Data issues can, e.g., be caused by Data Entry Processes or be caused by an incomplete Data Migration
- Data Issue Management is a subject in a Data Quality Service Level Agreement.
- Data Issues can be identified by **Data Profiling** or by applying a **Data Quality Rule**.
- Data Issues are often identified and resolved by Data Stewards.
- Data Issues can be resolved by **Data Cleansing**.
- Data Issues are resolved by Corrections.
- The cause of Data Issues is prevented by Corrective Actions.
- The possible cause of Data Issues is prevented by Preventive Actions.
- The root cause of a Data Issue can be investigated by **Data Lineage**.
- The status of a Data Issues can be tracked in an Incident Tracking System.
- Data Issues can be prevented by **Data Quality Rules**.

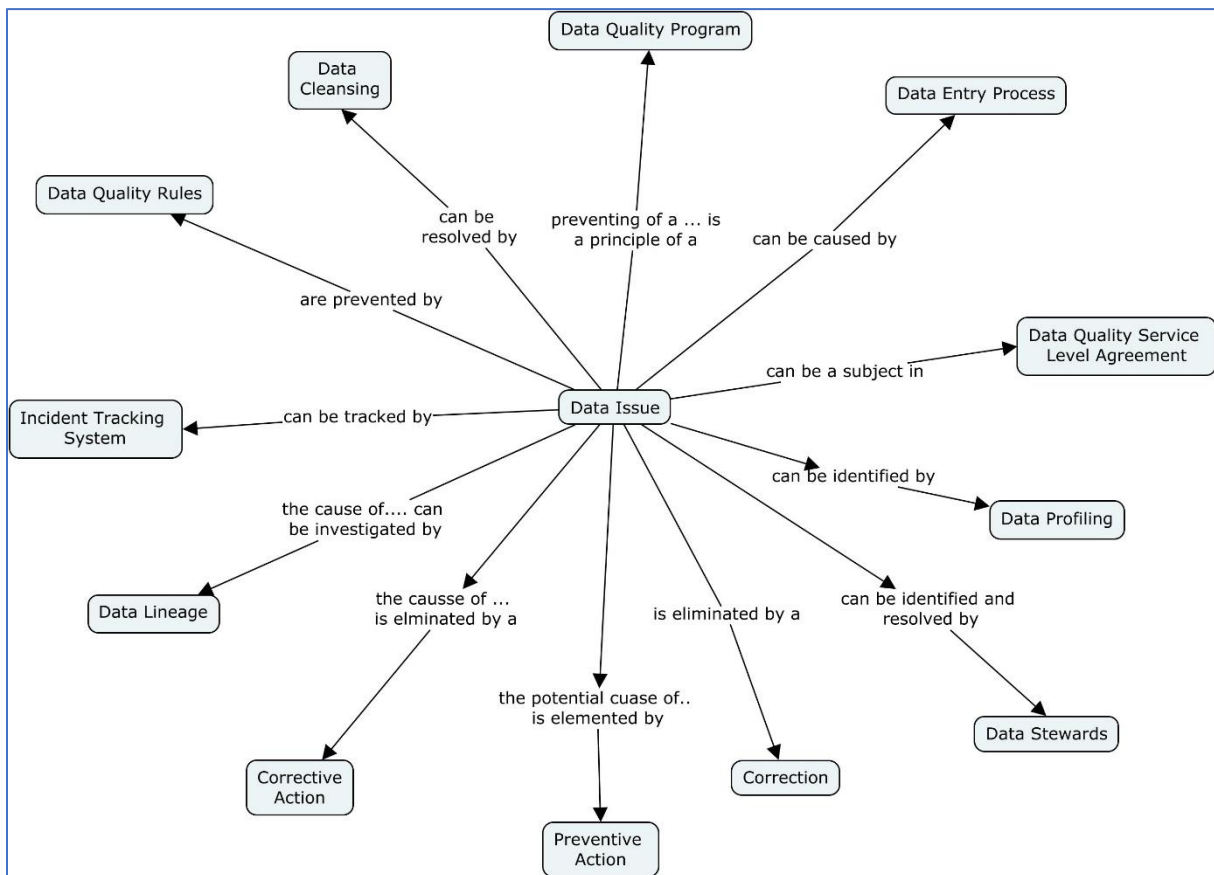


Figure 1: Relationships of Data Issues with other concepts.

## Content

Attributes of a Data Issue are:

- Description of a Data Issue
- Classification of a Data Issue
- Impact, severity/urgency
- Assignment of the Data Issue to a person who will resolve the Data Issue
- What is changed, why and how in the resolution of a Data Issue
- Resolution time/Duration

## Data Issue escalation path

The figure shows a possible escalation path of data issues.

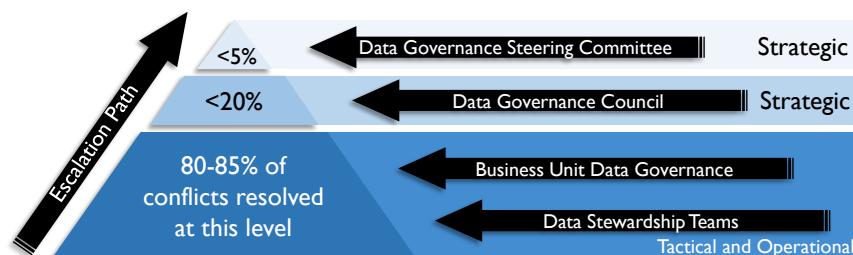


Figure 2: Data Issue escalation path.

## Story

A customer of the TradeAll trade company complained that he had been delivered an incorrect item. The sales department reported this incident in the Incident Tracking System, which was assigned to the Data Steward. The Data Steward then went to see how this could have happened. He found that the item number did not match the item description and suspected that this was due to a data entry error. Based on the item number, the products were taken from the warehouse.

He corrected the item number (Correction), but to prevent this kind of error, he took the measure that the entry of items was checked by a second person to prevent more incidents (Corrective Action). He also made sure to check for duplicate item numbers in the database (Corrective Action).. The customer was apologised for the error and the correct article was delivered as soon as possible.

## References

DAMA (2017). DAMA-DMBOK. *Data Management Body of Knowledge*. 2<sup>nd</sup> Edition. [Technics Publications Llc](#). August 2017. Chapter 13 Data Quality, section 2.7.3 Develop Operational Procedures for Managing Data Issues.

DAMA Dictionary of Data Management. 2<sup>nd</sup> Edition 2011. Technics Publications, LLC, New Jersey.

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## Authors

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