



# LABORATORY INFORMATION MANAGEMENT TRAINING

## Module 2 - Data Management

Supranational Reference Laboratory ,Uganda

# Module Objectives

At the end of this module, participants will be able to:

- ☁ Define data and the life cycle of data sets
- ☁ Describe laboratory data analysis and use at the different levels of need

# What is Data?

☁ Data represents unorganized and unprocessed facts.

Usually data is static in nature.

☁ Data is a prerequisite to information.

# What is Data?

- ☁ An attribute is a property or characteristic of an object also known as variable or field.
- ☁ A collection of attributes describe an object instance or record

**Attributes**

Trd	Isolated	SubType	Count	Repeat
1	Yes	H1N2	125K	No
2	No	H3N1	100K	No
3	No	H5N2	70K	No
4	Yes	N5N1	120K	No
5	No	H7N1	95K	Yes
6	No	H3N1	60K	No
7	Yes	H3N1	220K	No
8	No	H3N2	85K	Yes

**Objects**

# Forms of Data

## ☁ Facts

- Just data -raw results and statistics

## ☁ Information

- Data that is processed (compiled and analyzed)
- Monthly/quarterly reports, etc.

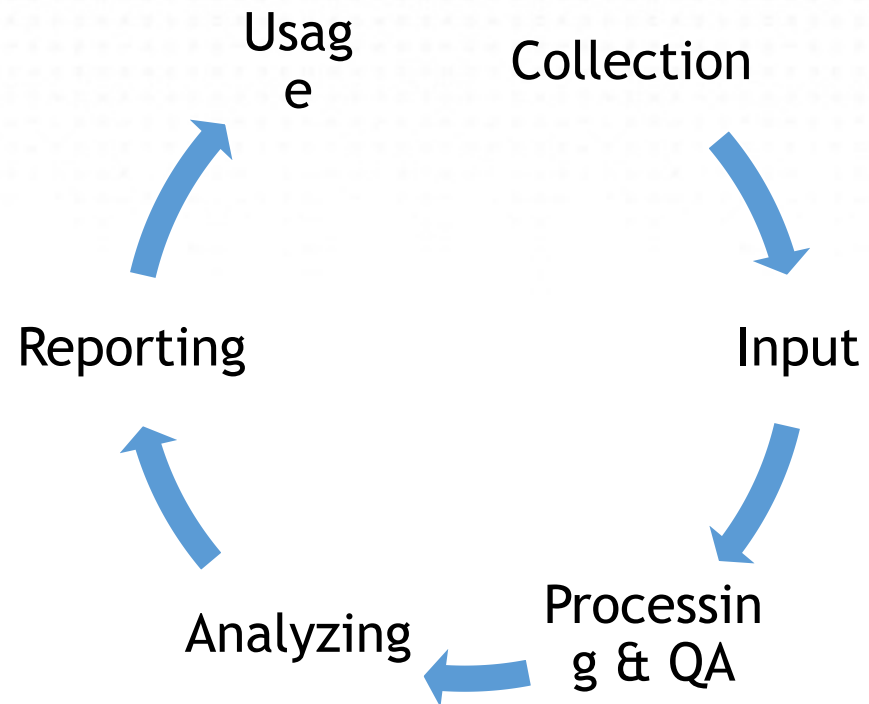
# Forms of Data..

## ☁ Knowledge

- Information that is interpreted/evaluated/formatted
- Helps explain a problem or situation
- Used to make decisions

☁ Accuracy and Consistency are key characteristics of all data

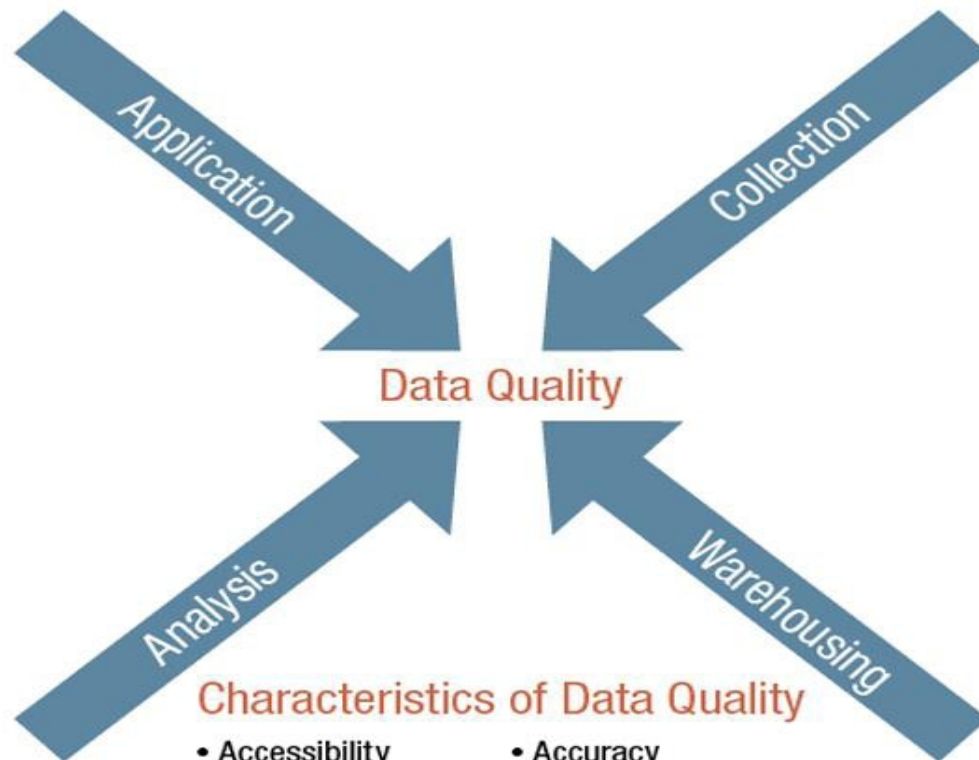
# Data Life Cycle





# Data Quality

The quality of data greatly affects its ongoing value



## Characteristics of Data Quality

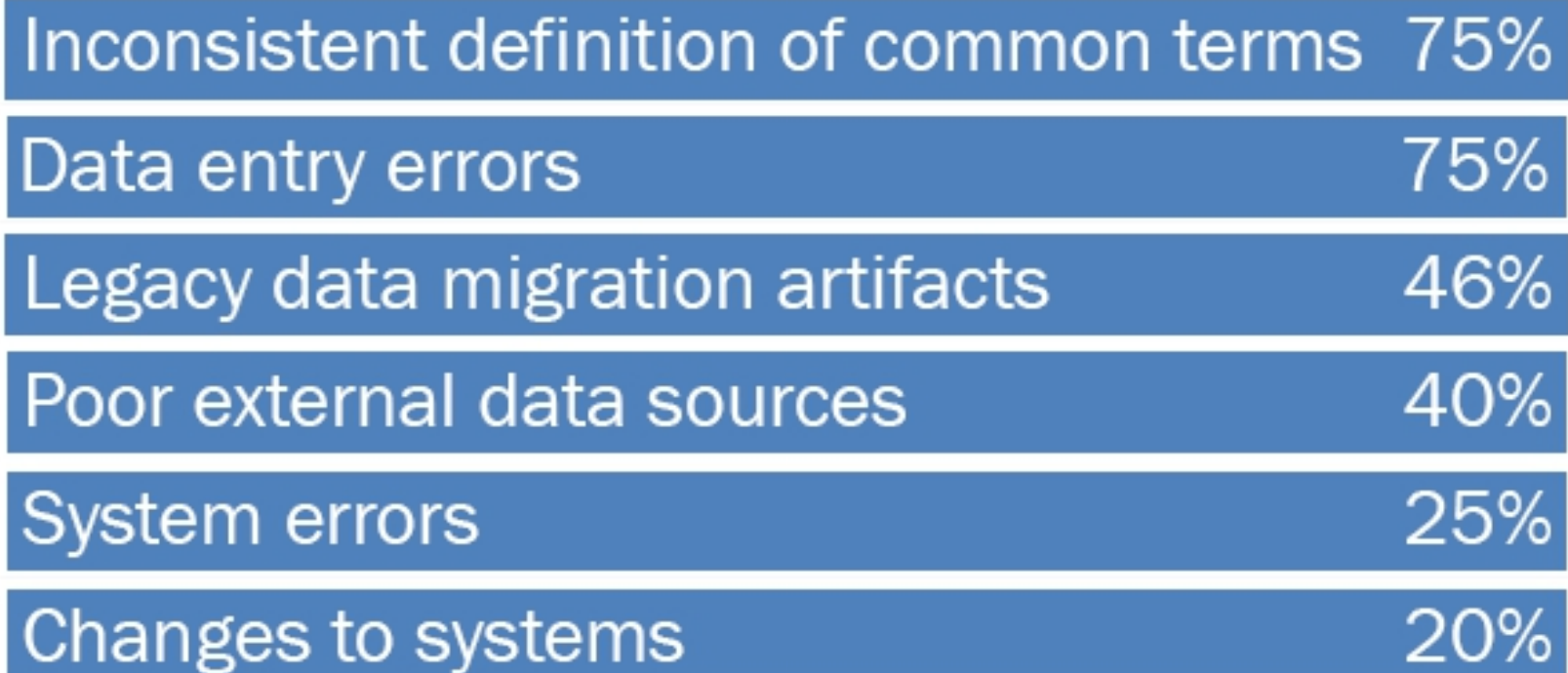
- Accessibility
- Consistency
- Currency
- Granularity
- Precision
- Accuracy
- Comprehensiveness
- Definition
- Relevancy
- Timeliness





# Sources of Poor Quality Data

“Which of the following most often contribute to poor data quality in your organization?”



Source: Philip Russom, *Liability and Leverage A Case for Data Quality*,

LIS/PP/002, Version 1.0, Effective date: 01-Jun-2019

DM Review Magazine, August 2006

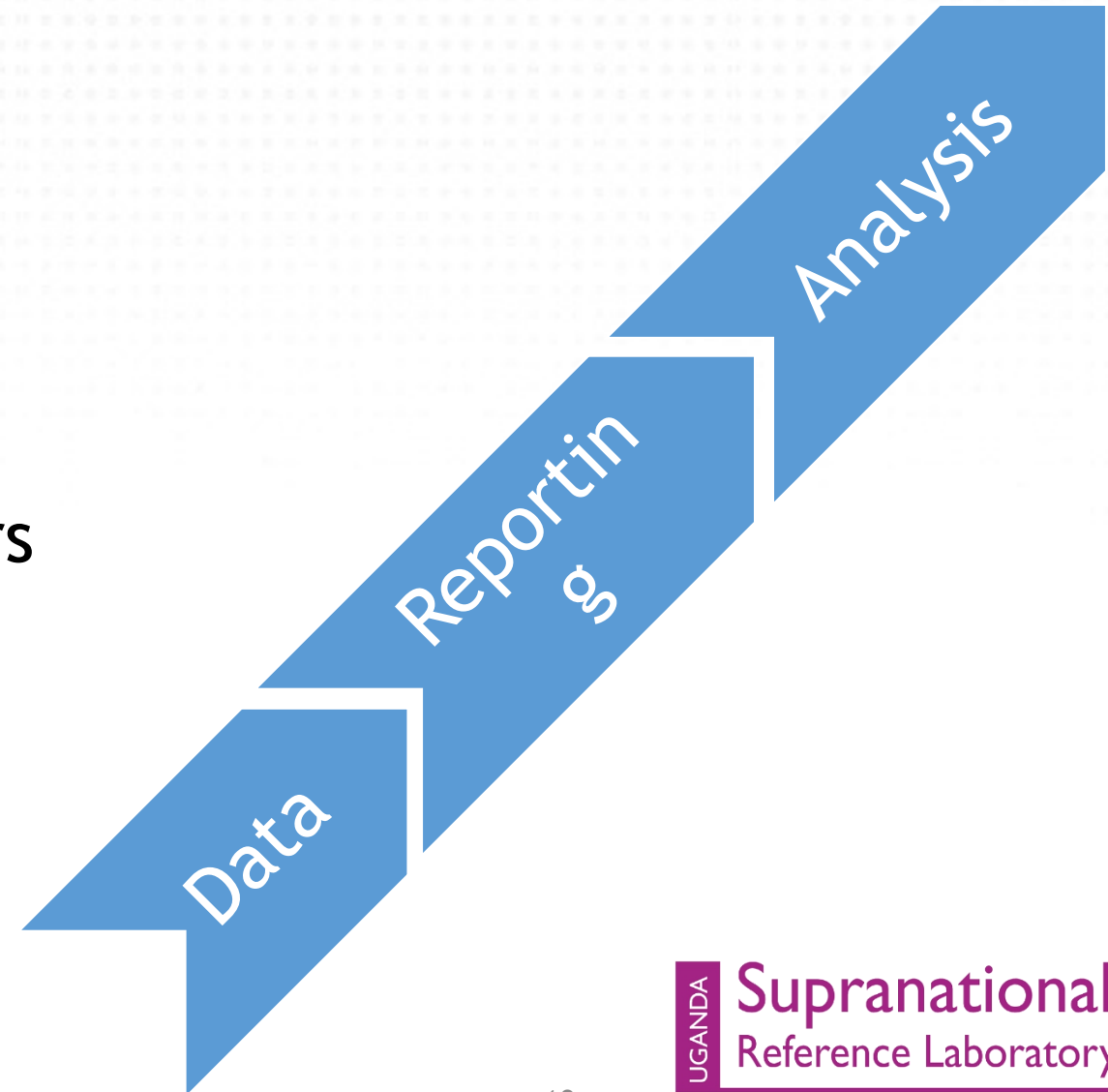
# Types of Data Use

## ☁ Reporting

- Analytical reports
- Key Performance Indicators

## ☁ Ad-hoc query

- “What happened?”



# Types of Data Use...

## ☁ Real-time-“What is happening now?”

- Events/Triggers

## ☁ Data Mining

- “What will happen?”
- “How/why did it happen?”

# Exercise

- What is data?
- What are the types of data use?
- What are forms of data?

# Acknowledgments

