Data Analytics

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Data

What is it?

Data are facts and statistics collected together for analysis.

Data preparation and clean-up are crucial for Data Analytics, and in Visualization of Data.

80% of time spent analysing data is spent on the process of cleaning and preparing data.

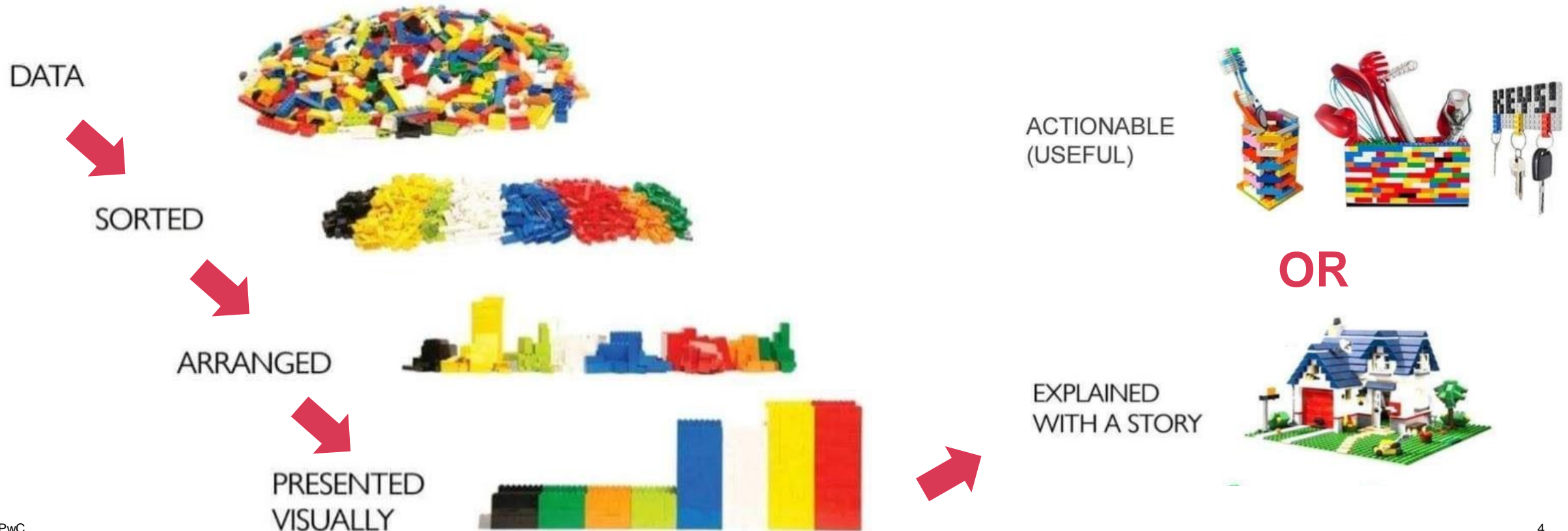Clean, tidy data allows for easy use and manipulation of data, and promotes both fast and high-quality access.

0.33 Zettabytes* every day

* 1 Zettabyte = 1 trillion Terabytes 💾

Data Analytics

Data Analytics is the **collecting** , **organising** and **examining** of large volumes of data with the aim of **discovering useful insights**, **suggesting conclusions**, and **supporting decision-making**.

DATA

SORTED

ARRANGED

PRESENTED VISUALLY

ACTIONABLE (USEFUL)

OR

EXPLAINED WITH A STORY

Data Analytics types

Data analytics helps businesses optimise marketing campaigns, boost revenue, improve security and deliver operational efficiency.

Data analytics **tools and techniques** are now widely accessible and vital for businesses of all sizes.

Adaptive and autonomous analytics

How to adapt to change?

Prescriptive analytics

What should be done?

Predictive analytics

What will happen?

Traditional Data Analytics capabilities can provide **standalone value through visualizing data insights**, **identifying anomalies**, and **predicting trends**

Diagnostic analytics

Descriptive analytics

Why did it happen?

What happened?

Impact and Business Value

Insight into the past

Foresight into the future

Data Analyst - Career Paths

Key Responsibilities
Data cleaning and processing
Exploratory data analysis
Creating visualizations and reports
Generating actionable insights

Skills
SQL and data querying
Analytical and statistical skills
Data visualization tools (e.g., Excel, BI tools)
Basic programming (e.g., Python, R)

Educational Background
Bachelor's degree in relevant field
(e.g., Mathematics, Computer Science,
Engineering, Economics, Physics*)

Type of Data
Typically structured data

Primary Focus
Interpreting and visualizing data
for decision-making

Output
Reports, dashboards,
actionable insights