Digital Analytics, Dashboard and Data Visualisation in CSR

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Building a better working world

The changing spectrum of CSR in India

Gifts, grants and donations:

In the 14th and 15th century the concepts of supporting the poor and giving back to the society was initiated. People believed that it was their responsibility to serve the under privileged.

Ethical giving:

Model of Philanthropy, charity and ethical behaviour of Corporates towards society.

"Humans are only trustees of resources" and they are entitled to take care of the resources. [Tata Trust]

Liberal initiatives:

The need for businesses to self sustain is driven by the purpose to provide better quality products and services. Additionally the concept of charities emerged.

< 1930   **1930-1950**   **1950-1970**   **1970-1990**

Multidimensional and matrix approach:

Setting specific and detailed guidelines for CSR operations were defined. Transparency, partnerships, goals and missions were key adhered concepts. 2% regulations and reporting requirements.

State lead initiatives:

The inception of the Indian government gave rise to mixed economy and socialist pattern. Hence legal abiding rules and state policies drove corporate initiatives.

2019 >   **2013-2018**   **1990- 2013**

Strategic and vision based:

Investing in development of well researched and technical CSR approaches through third party organization. Evaluating project though audits and assurances. Setting stringent reporting formats and investing in communication tools for knowledge sharing.

Stakeholder driven:

A consequence of rapid industrialization required corporates to fulfil their social goals. Companies are working towards "triple bottom line" through several initiatives.
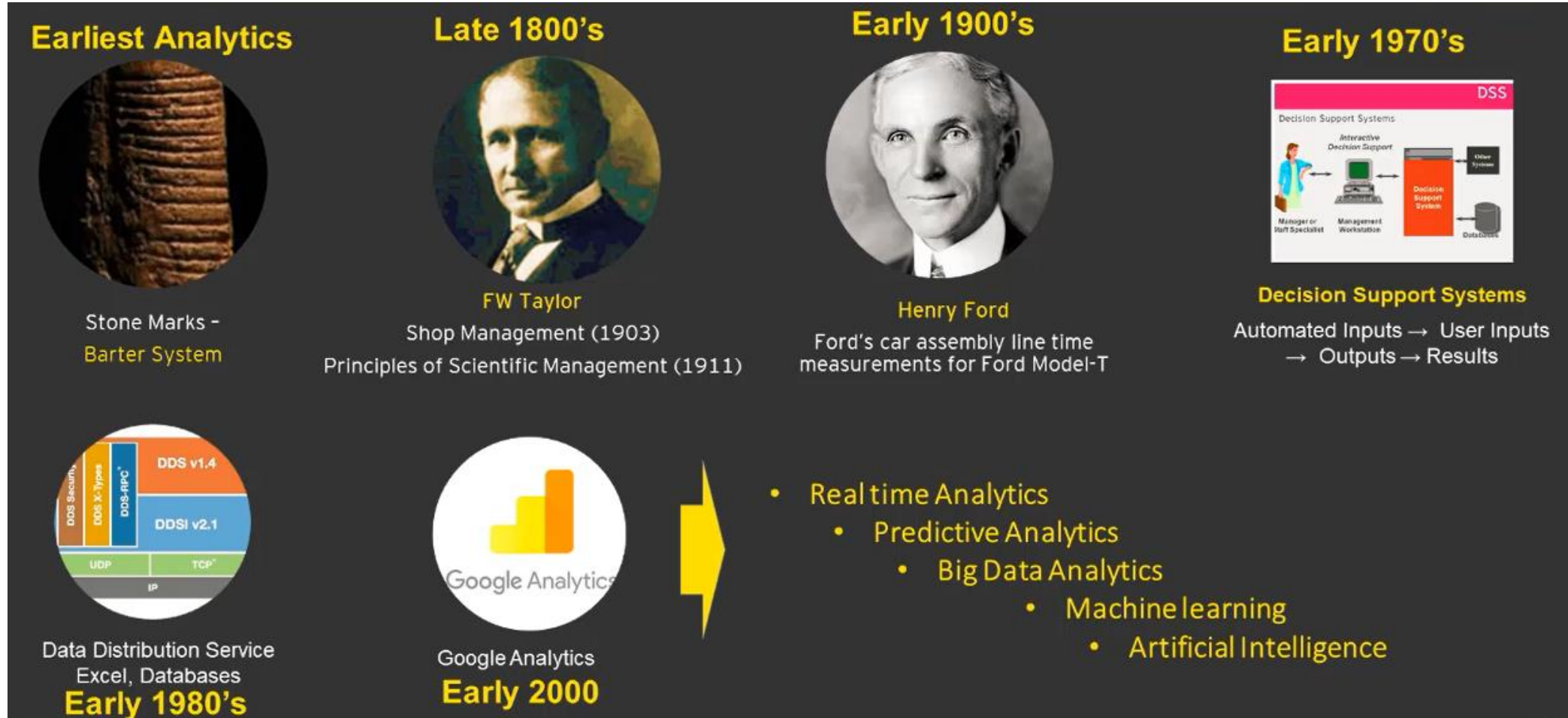
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Data Analytics and CSR

- ► Data Management
- ► Monitoring the impact of CSR activities (Key performance indicators)
- ► Monitoring the CSR fund allocated and utilized in each sector
- ► Identifying outliers
- ► Track progress against CSR Strategy and Vision
- ► Publication of achievements

"In god we trust, all others must bring data"

- W. Edwards Deming

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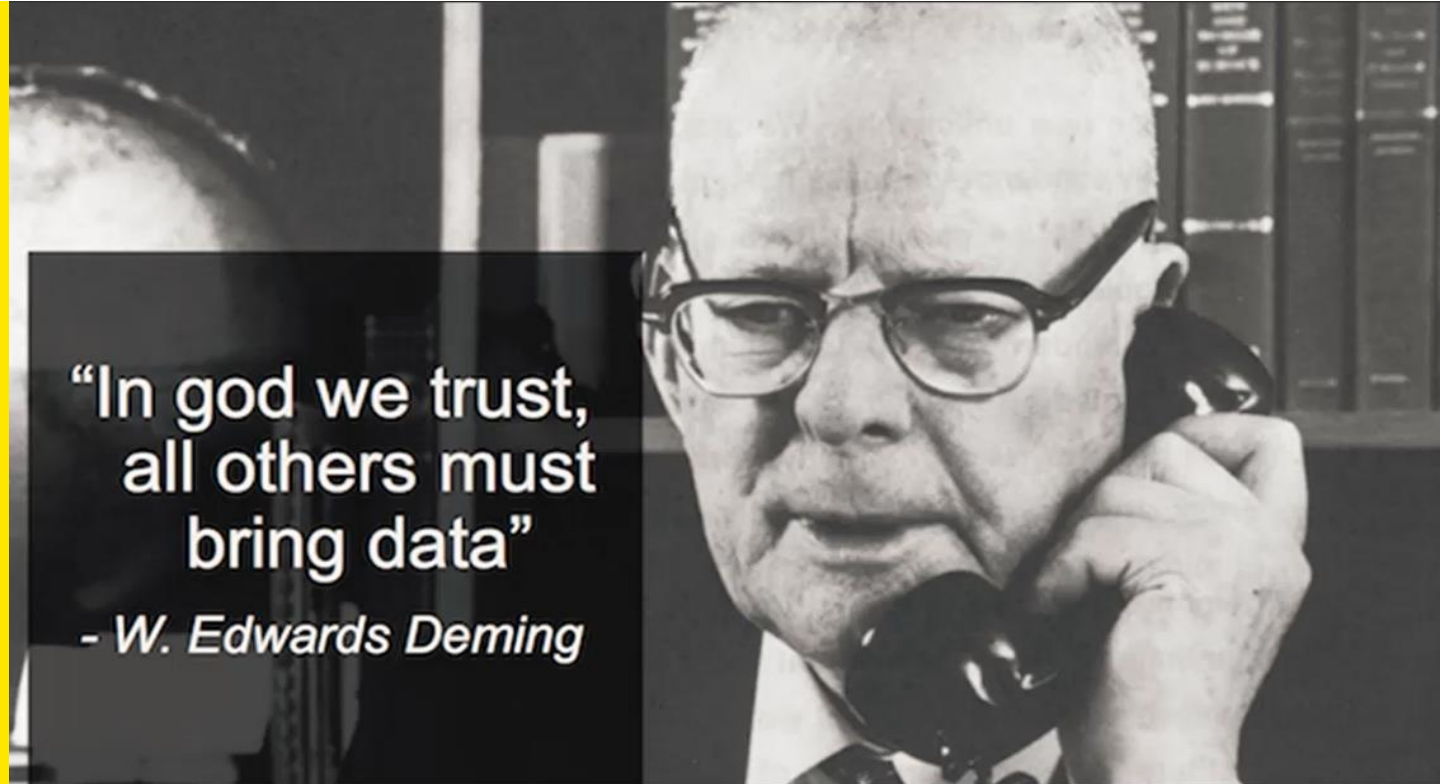
Data Analytics - Evolution

Earliest Analytics

Stone Marks –
Barter System

Late 1800's

FW Taylor
Shop Management (1903)
Principles of Scientific Management (1911)

Early 1900's

Henry Ford
Ford's car assembly line time
measurements for Ford Model-T

Early 1970's

DSS

Decision Support Systems

Decision Support Systems

Automated Inputs → User Inputs
→ Outputs → Results

Data Distribution Service
Excel, Databases
Early 1980's

Google Analytics
Early 2000

- Real time Analytics
  - Predictive Analytics
    - Big Data Analytics
      - Machine learning
        - Artificial Intelligence

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Data Analytics

When:

In any situation, where the result is:

- ► Not known
- ► Needs to be predicted
- ► Not meeting the requirements
- ► Needs improvements, etc.

How:

Step 1: Data Collecting

Step 2: Compiling Data

Step 3: Analyzing Data

Step 4: Interpreting the data

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What is Data

WHAT

► Data are factual information used as basis for resoning, discussion or calultion, often this term refers to quantitative information

WHY

► A measure of 'where we are' is critical to determining 'where we should be'

► Have you reached where you intend to? --- only data answers that question

► A good data collection simplifies the probem solving effort

► If the solution costs more than the problem, its not worth it. A good data collection should concentrate as much on measuring problems as it does on measuring solutions

Data collection is highly dependent on its **'objective'**

Eg.: Objective – To know the impact of CSR programs in the region

► Key Performance Indicators

► Disagree, Neutral, Agree – CSR program meeting the needs of the region

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Types of Data

Example:
What do we know about Arnold Schwarzenegger?

Qualitative:
He is a body builder
He has short hair
He has lots of muscle

Quantitative:

Discrete:
He has 2 legs
He has 5 children

Continuous:
He weighs 113 kg
He is 1.88 m tall

Discrete Data

Discrete data is information that can be categorized into a classification. Discrete data is based on counts. Only a finite number of values is possible, and the values cannot be subdivided meaningfully.

Example: the number of students in a class (you can't have half a student).

Continuous Data

Continuous data is information that can be measured on a continuum or scale. Continuous data can have almost any numeric value and can be meaningfully subdivided into finer and finer increments, depending upon the precision of the measurement system

Example: Time in a race: you could even measure it to fractions of a second.
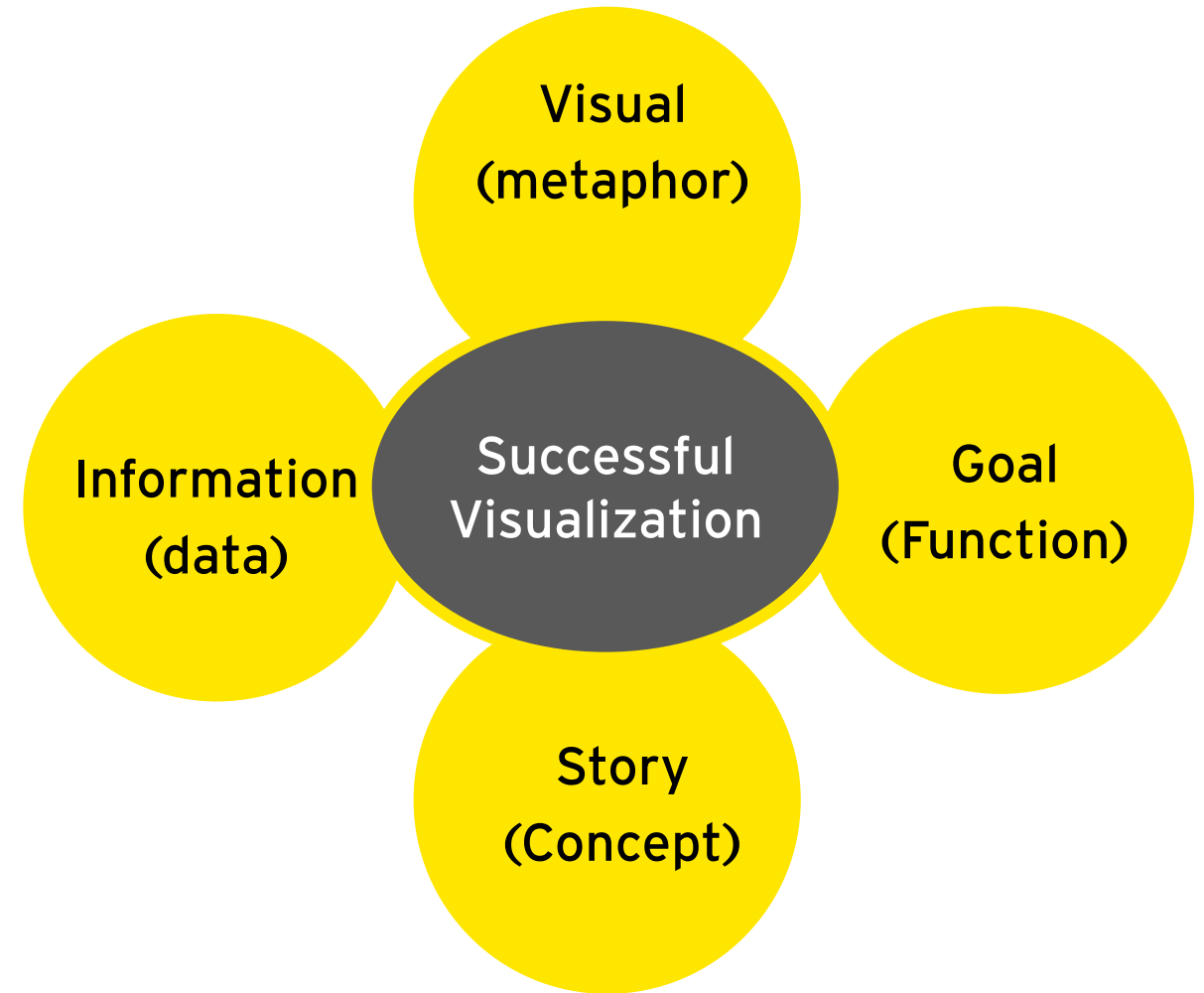
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Data Visualization

Data Visualization is a general term that describes any effort to help people understand the significance of data by placing it in visual context.

Patterns, trends and correlations that might go undetected in text based data can be exposed and recognised easier with data visualization software.

## Available tools for Data Visualization

- ► Tableau
- ► Power BI
- ► Qlik view
- ► Fusion Charts
- ► High Charts
- ► Data wrapper
- ► Ploty
- ► Sisense
- ► Spotfire
- ► Datahero

Visual (metaphor)

Information (data)

Successful Visualization

Goal (Function)

Story (Concept)

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Illustrative Data Visualization

	KPI 1	KPI 2	KPI 3
PIA 1	0.000	0.000	62.227
PIA 2	36.855	1.142	15.420
PIA 3	0.000	0.130	35.110
PIA 4	22.200	0.000	2.310
PIA 5	9.000	0.000	9.610
PIA 6	5.280	0.000	10.263
PIA 7	6.840	0.228	3.771
PIA 8	9.647	0.004	0.000
PIA 9	7.251	0.224	0.385
PIA 10	7.147	0.000	0.000
PIA 11	5.462	0.060	0.000
PIA 12	3.368	0.000	0.000
PIA 13	3.113	0.010	0.000
PIA 14	0.294	0.010	2.536
PIA 15	2.160	0.000	0.101
PIA 16	0.000	0.000	1.969
PIA 16	1.739	0.000	0.000
PIA 18	1.025	0.056	0.393
PIA 19	0.230	0.000	0.505
Total	246.520	15.630	193.470

Raw Data

Analysed Data Visualization
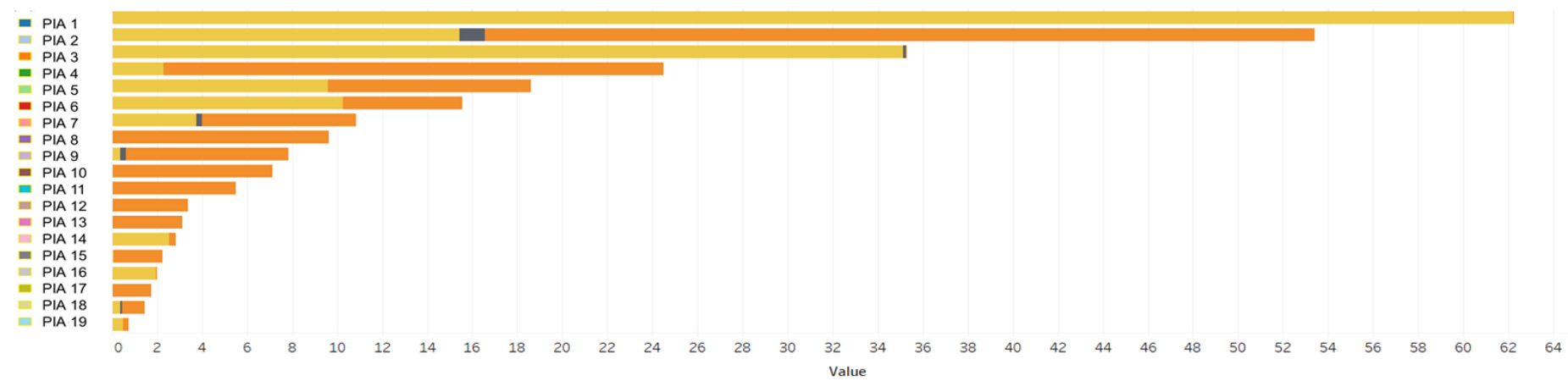
Total Footprint

PIA	KPI 1	KPI 2	KPI 3	PIA	KPI 1	KPI 2	KPI 3
PIA 1	0.000	0.000	62.227	PIA 11	5.462	0.060	0.000
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PIA 10	7.147	0.000	0.000				

KPI 1 - Water Potential – Supply side subjected to Rainfall   - 45%
KPI 2 - Water Potential – Supply side yet to be Subjected to Rainfall   - 1%
KPI 3 - Water Potential – Demand side   - 54%

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Illustrative Dashboard

Link to the dashboard

Thank you