

BASICS OF DATA INTEGRATION

Measurement S/M Terminology

- **Data:** It is a collection of facts which have similar attributes or characteristics.
 - Phone number, e-mail id
- **Measure:** Data with associated Unit of Measure (UOM) is typically termed as measure.
 - Lab hours per month
 - Average wait time for bill payment

Measurement S/M Terminology

- **Metric:** it is a system of measures based on a standard UOM with a business context.
 - Product defect rate
 - Employee attrition rate

Measurement S/M Terminology

- **Indicator:** it is a business metric used to track business results or success or performance.
 - Call drop frequency
 - Earning per share
 - Cost per unit shipped

Measurement S/M Terminology

- **Index:** it consists of composite set of indicators used to address the overall health of the business operations.
 - Customer satisfaction index
 - Market performance index

Metric Components

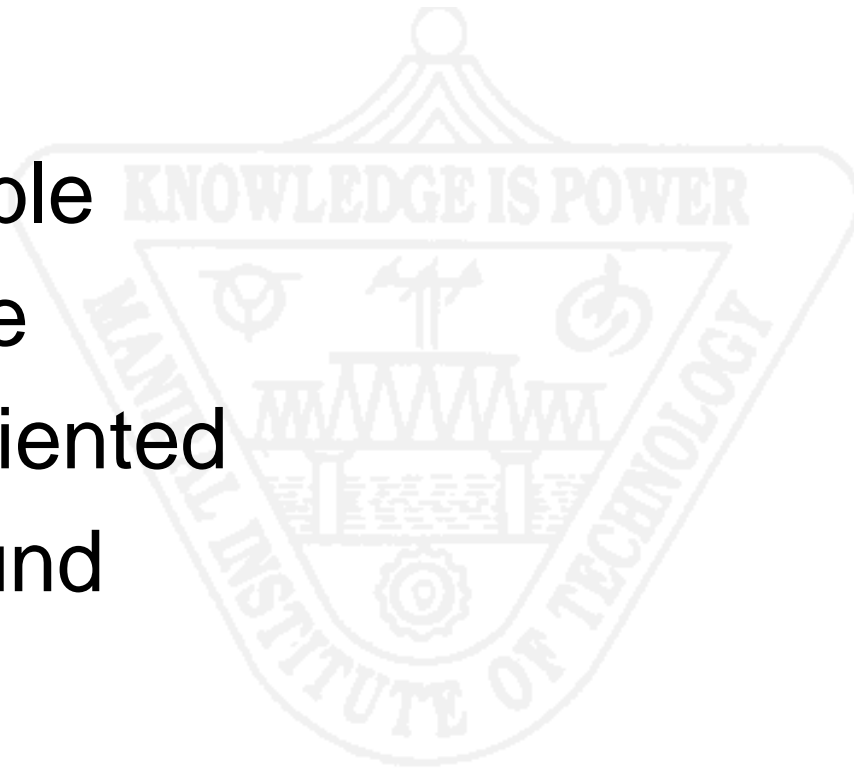
- **Subject:** this measure is about customer, product, a supplier, an employee, etc.
- **Quantum:** It is the value of the measure, such as cost, frequency, duration, amount, etc.
- **Stratum:** it is the grouping consideration expressed like By Location, By Quarter, by customer etc.
- **Application:** Value compared with similar measurements like previous month, forecast ,target etc.

Metric Components

- Cell phone cost in Asia pacific region is USD 100 against target of USD 75.
- Subject-cellphone
- Quantum-USD100
- Stratum- Asia pacific region
- Application – USD75

SMART test ensuring metric relevance to business

- Specific
- Measurable
- Attainable
- Result-oriented
- Time-bound



Fact based decision making and KPI

- Fact based systems for decision making in businesses.
- All businesses develop a high level vision, objectives for each function/initiative, key performance areas/goals, key performance indicators, targets, and allowed variance for targets to steer the business toward its goals.
- This is performance management process of enterprise.

- Performance measurement is about analyzing the success of a project team, department or country wide business or global business effort by comparing data on what actually happened to what was planned or intended.
- Performance measurement is the selection and use of quantitative measures.

- We will identify those metrics that are important at the entire company level and called as Key Performance Indicators (KPIs).
- Some characteristics of good business metrics -

- Relevance and functionality – The KPI chosen should be directly related to business results that the company is trying to produce in the specific business function.
- Understandable – Chosen KPI must be defined unambiguously. It can be documented, and its definition must be easily accessible to all users.

- Reliability and Credibility – The value of KPIs need to be authentic and should be validated as “trusted” or “dependable”. Means data must represent single version of truth.
- Abuse-Proof – An abuse proof measure is unlikely to be used against intended purpose or individual involved in the measurement process.

- KPIs are objective, measureable attributes of business performance, which assist in informed decision making.
- They are the means of assessing the business functions health and assisting in the prediction of business success and potential failure.
- Key performance indicators are quantitative or qualitative measures which reflect the business performance of a company in achieving its goals and strategies.

KPIs employed by Employee

Training Management Division

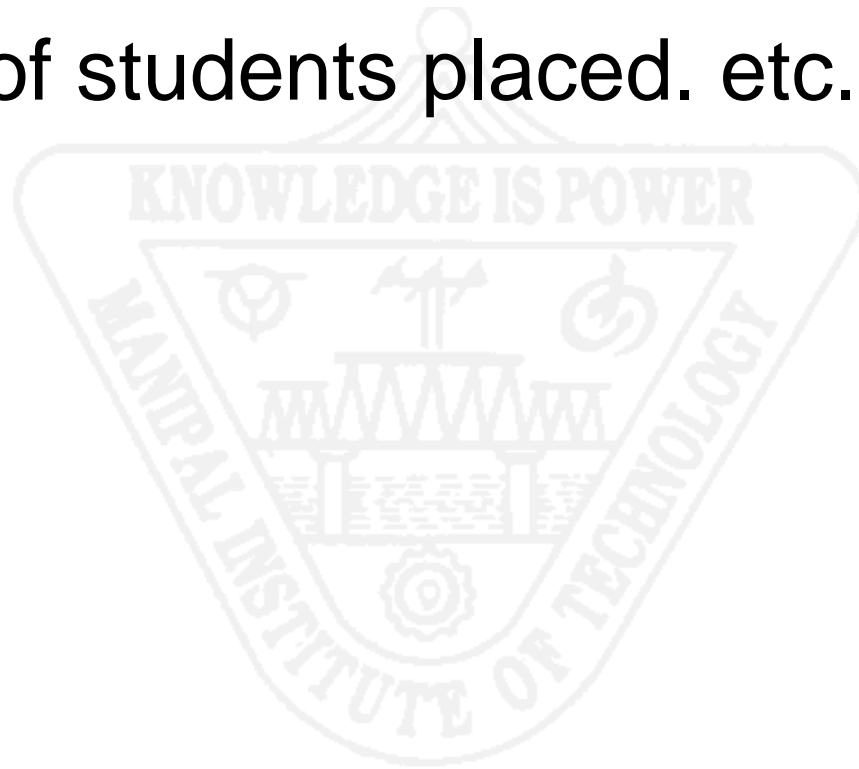
- “GoodFood Restaurant”
- % of employees who underwent training.
- Average training cost per employee.
- % of employees satisfied with training.
- Average training hours per employee.
- Ratio of internal vs external training.
- % of budget spent on employees training.
- ROI of training.

KPIs differs from industry to industry

- For the retail industry, the average dollars per sale is a good KPI.
- For project managers, employee attrition rate is an important KPI.
- Inventory accuracy is an important KPI for distribution companies, etc.....

Fact based decision making and KPI

- Number of students placed. etc.



References

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- Mike Biere, “Business Intelligence for the Enterprise”, 2nd edition, IBM Press, 2003.
- R N Prasad, Seema Acharya, “Fundamentals of Business Analytics”, Wiley India, 2011