



## Quality Metrics and Measurements

Ability to measure the right things is imperative in these modern times. Even successful businesses find that they also need to assess other aspects of their business not just financial performance. This course is designed to equip the participants in designing metrics that are specific, measurable, achievable, realistic & time-bound. In this course, participants will be able to prevent misguided metrics; infer what data is needed and how to collect it; use a proven process for designing metrics and evaluate metrics' effectiveness. This course also covers how to quantify process performance and results in software quality. This course discusses methods and tools to gather, analyze and interpret metrics and measurement software engineering, software testing processes and other related process areas.

### Training Objectives

At the end of the course, the participants will be able to:

1. Identify the reasons for measurement.
2. Determine elements to measure.
3. Define various models in measurement.
4. Align performance measures in objectives
5. Setup a measurement plan in a project.
6. Use common graphical tools for metrics presentation and reporting.

**Duration** 2 days

### Topics

- I. Introduction to Metrics and Measurement
  - a) Rationale Needed in Measurements
  - b) Scales of Measurement
  - c) Characteristics of a Good Measure
  - d) Measure vs. Metric
- II. Performance Measurement Design Process
  - a) Understanding and Mapping Business Structures and Processes
  - b) Stakeholder Analysis
  - c) Using Critical-to-Quality (CTQ) in Stakeholder Analysis
  - d) The CTQ Tree
  - e) Developing Business Performance Opportunities
  - f) The Kano Model
  - g) Understanding the Current Performance Measurement System
  - h) Developing Business Performance Indicators
  - i) Using Goal-Question-Metric (GQM) Model in Deriving Indicators
  - j) Using Input-Process-Output-Outcome (IPOO) in Deriving Indicators
  - k) Deciding How to Collect the Required Data
  - l) Designing, Reporting and Performance Data Presentation Formats
  - m) Testing and Adjusting the Performance Measurement System
  - n) Implementing the Performance Measurement System
- III. Metrics in Software Testing and Software Engineering Processes