

Six Sigma is a statistical quality assurance method. It gathers data and statistical analysis to improve the operational measures in an organization's manufacturing and service-related processes. By systematically reducing defects and variances in processes, Six Sigma contributes to ongoing, incremental improvement. Six Sigma uses DMAIC: Define, Measure, Analyse, Improve, and Control.

- **Define** means inefficiencies in the defined requirements of testing are found and analysed.
- **Measure** means ensuring that the measurements collected are correct, which are further converted into metrics.
- **Analyse** means the measured quantities are analysed and converted into useful metrics. Mathematical formulas are used. The test process is analysed to find out whether any misinterpretation occurred and corrected.
- **Improve** means to improve the testing process based on the work done in the Define, Measure, and Analyse phases. The techniques required to improve the testing processes are suggested and implemented.
- **Control** means Six Sigma ensures that the controlled changes are implemented for software test improvement. It has full control over the entire process. It also has a feedback loop and hence continuous testing process improvement can be carried out by using Six Sigma.

Its goal is to achieve 3.4 defects per million opportunities. Six Sigma finds the root causes of testing issues as it reviews the defined requirements for any discrepancies, and in this way, it contributes to continuous improvement.