Testability Maturity Model Integration (TMMI)

TMMI provides detail model for test process improvement. It has 5 maturity levels for process evaluation in software engineering which are discussed below.

Level1: Initialization

- In first level of the Test maturity model. There is no defined testing process.
- The software should execute successfully and there is no obstruction.
- Exploratory or Adhoc testing performed on the software, and there are no quality checks before delivering the product.

Level2: Managed

- The second level of a Test maturity model, which is all about defining the requirements.
- The test strategies, test planning, test monitoring and control, test environment, test design are managed at this level.
- All the test cases are executed against the requirements and hence the testing is done.

Level3: Defined

- In the third level the testing is integrated with the software development lifecycle (SDLC) process and becomes a part of it.
- For instance, as we know that the V model has both development and testing phases, which means that the testing comes after when the development process is completed.
- The entire testing objectives including Test Organization, Test Training Program, Test Lifecycle and Integration, Non-Functional Testing, Peer Reviews are tested to manage the risks.

Level4: Measurement and Management

- In the fourth level all the testing procedures become part of the software life cycle.

- These include reviews of requirement analysis, design documents, and Code reviews.

- All the Testing-related activities Test Measurement, Product Quality Evaluation, Advanced Reviews are measured here.

Level5: Optimization

- At the optimization level, we mainly focus on defect prevention rather than defect detection and with the help of the different tools, we can perform this testing.

- The Testing process is verified, and optimized.

- Emphasis on Quality control and bug prevention throughout the software lifecycle