



# Test Management Part 2

## Test Maturity Model

# Objective

---



## **Objective**

Assess the maturity level of a testing organization.

# Applicable Maturity Models

| CMMI

| TMMI

Capability Maturity Model  
CMMU - SEI

1 - 5

self  
assessment

# CMMI Levels

1 - 5

HMOs



Initial: ad hoc 1

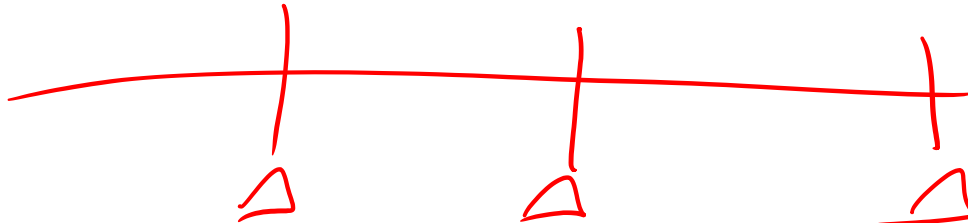
Repeatable: expertise lies in individuals 2

Defined: processes are defined and documented 3

Managed: metrics are used extensively to guide process 4

Optimizing: emphasis on continuous improvement 5

wf



# TMMI

Test maturity model Integrated

| Developed in an analogous manner to assess maturity of testing process

| Five levels of maturity defined

| Each level has goals and subgoals that are achieved via ATRs (activities, tasks, responsibilities)

1 - 5

# TMMI Level 1: Initial



- | Ad hoc testing without specific goals

- | Test process begins after code is written



- | Testing is not a priority

- | Test tracking is not performed

# TMMI Level 2: Phase Definition

| Software testing plans are developed that include well defined testing phases

*unit  
integration*

| Basic testing methods are introduced

| Goals for testing are defined

# TMMI Level 3: Integration

| Software testing is integrated into the software development process

| Test progress is monitored and tracked

| Testers are trained

| Test plan risk management is performed

*prioritize*



# TMMI Level 4: Management and Measurement


**Metrics** are introduced to assess test process

**Review processes** are introduced to assess effectiveness and efficiency

$\$/\text{effort}$   
effectiveness

$$\frac{\# \text{ defects detected}}{\text{defects detectable}}$$

# TMMI Level 5: Optimization, Defect Prevention and Quality Control



| Root cause analysis  
is performed to  
prevent defects from  
reaching the customer

unit

| Statistical quality control  
used to monitor test  
process

| Test process  
improvement  
implemented

# Summary

$$\underline{C_{mmI}} \approx T_{mmI}$$