The Real Value of TMMi

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- Founder and President QA Radius LLC.
- Founding Member and Vice President TMMI America
- **26 years of direct experience** in the structured software testing, maturity assessments and software quality assurance industries
- **15 years of experience** with using TMMi & CMMi to drive continuous improvements.
- **Core competencies** are implementing large QCOE’s, TMMI & CMMI Maturity frameworks, Performance & Test Automation Frameworks, Agile/DevOps Testing and Training
- Worked for **Fortune 100 and 500** companies like Northwestern Mutual, FIS, Kohl’s and Johnson Controls.
- International speaker, trainer and consultant with engagements in US, Germany, Mexico, Canada, Australia and NOW HUNGARY!!
- **Approach** to Quality Assurance is delivering business value, focused around defect prevention, IT process optimization and metrics driven decision making.

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Common Usages of TMMi

1. Consulting Firms
   ○ Great way to quickly diagnosis testing practices
   ○ Easy to benchmark organization to other similar companies
   ○ Big Box firms often use it to sell additional testing services

2. Suppliers:
   ○ Many companies require suppliers to be accredited at TMMi Level 4 or 5
   ○ Supplies are motivated to leverage TMMi
   ○ Have to have a formal assessment and registered with the TMMI Foundation
   ○ Often only interested in “the number”

3. Test Process Improvement
   ○ Companies interested in transforming software delivery and driving by an internal champion
   ○ Organizations are interested in achieving more frequent, higher quality and secure deployments that deliver value to the the end users.
   ○ Leverage TMMi for the right reason and use recognized TMMi providers like the Hungarian Testing Board.
Why Improve Testing?

• Increasing importance and size of SW in society as a whole
  o amount of software in consumer product doubles every 24 months
  o number of requirements for mobile phones doubles every 6 months
• # defects hardly decreases
  o defect density (defects/KLOC) is almost constant in the last 15 years (Les Hatton)
• High Competition & Competitive Edge
  o Time-To-Market, Product Quality, Price Levels are essential for business success
• Testing often takes 30 - 40% of project costs
• Overall we want more frequency deploy, high quality, secure software that meets the needs of the business/end users.
Benefits of Process Improvement

• Direct benefits
  o Improved Product quality (Defect Removal Efficiency)
  o Better production performance (Response Time, throughput)
  o Test productivity (Velocity)
  o More frequent deployments (Cycle Time)
  o Happy Users (CSAT)
  o Predictability (Reduced Variation)
  o Secure applications (Vulnerabilities)

• Indirect benefits
  o e.g., Employee satisfaction
Critical step in any process improvement framework

Assessment / Gap Analysis step

CMMI IDEAL

Stimulus for Change: Set Context, Build Sponsorship, Charter Infrastructure

Initiating: Characterize Current & Desired States, Develop Recommendations, Set Priorities

Establishing: Develop Approach, Plan Actions

Diagnosing: Analyze & Validate, Implement Solution, Refine Solution, Create Solution

Acting: Propose Future Actions, Pilot/Test Solution, Learning

Define: Set Goals, Develop Strategies

Measure: Monitor Performance, Collect Data

Analyze: Evaluate Results, Identify Patterns

Improve: Implement Changes, Review Feedback

Control: Maintain Improvements, Ensure Stability

Deming Cycle: Plan, Do, Check, Act

Six Sigma Cycle: Define, Measure, Analyze, Improve, Control
## Start the journey with an Assessment

| SG1 - Perform a Product Risk Assessment | CC - Notate CMMI goal | | | | | | |
|----------------------------------------|------------------------|---|---|---|---|---|
| SP1.1 - Define product risk categories and parameters | 2 | Not Applicable | 1 | Not Rated | 2 | 2 | 2 | 2 | 2 |
| SP1.2 - Identify product risks | 2 | Not Applicable | 1 | Not Rated | 2 | 2 | 2 | 2 | 2 |
| SP1.3 - Analyze product risks | 2 | Not Applicable | 1 | Not Rated | 2 | 2 | 2 | 2 | 2 |
| SP2.1 - Identify items and features to be tested | 2 | Not Applicable | 1 | Not Rated | 2 | 2 | 2 | 2 | 2 |
| SP2.2 - Define the test approach | 2 | Not Applicable | 1 | Not Rated | 2 | 2 | 2 | 2 | 2 |
| SP2.3 - Define entry criteria | 2 | Not Applicable | 1 | Not Rated | 2 | 2 | 2 | 2 | 2 |
| SP2.4 - Define exit criteria | 2 | Not Applicable | 1 | Not Rated | 2 | 2 | 2 | 2 | 2 |
| SP2.5 - Define suspension and resumption criteria | 2 | Not Applicable | 1 | Not Rated | 2 | 2 | 2 | 2 | 2 |
| SP3.1 - Establish a top-level work breakdown structure | 2 | Not Applicable | 1 | Not Rated | 2 | 2 | 2 | 2 | 2 |
| SP3.2 - Define test lifecycle | 2 | Not Applicable | 1 | Not Rated | 2 | 2 | 2 | 2 | 2 |
| SP3.3 - Determine estimates for test effort and cost | 2 | Not Applicable | 1 | Not Rated | 2 | 2 | 2 | 2 | 2 |
| SP4.1 - Establish the test schedule | 3 | Largely Achieved compared to TMMI standards | 4 | Largely Achieved compared to TMMI standards | 2 | 2 | 2 | 2 | 2 |
| SP4.2 - Plan for test staffing | 2 | Not Applicable | 1 | Not Rated | 2 | 2 | 2 | 2 | 2 |
| SP4.3 - Plan stakeholder involvement | 2 | Not Applicable | 1 | Not Rated | 2 | 2 | 2 | 2 | 2 |
| SP4.4 - Identify test project risks | 2 | Not Applicable | 1 | Not Rated | 2 | 2 | 2 | 2 | 2 |
| SP4.5 - Establish the test plan | 2 | Not Applicable | 1 | Not Rated | 2 | 2 | 2 | 2 | 2 |
| SP5.1 - Review test plan | 2 | Not Applicable | 1 | Not Rated | 2 | 2 | 2 | 2 | 2 |
| SP5.2 - Reconcile work and resource levels | 2 | Not Applicable | 1 | Not Rated | 2 | 2 | 2 | 2 | 2 |
| SP5.3 - Obtain test plan commitments | 2 | Not Applicable | 1 | Not Rated | 2 | 2 | 2 | 2 | 2 |

**Legend:**
- 0: Not Applicable
- 1: Not Rated
- 2: Not Achieved compared to TMMI standards
- 3: Partially Achieved compared to TMMI standards
- 4: Largely Achieved compared to TMMI standards
- 5: Fully Achieved compared to TMMI standards
Define the test approach

The test approach is defined to mitigate the identified and prioritized product risks.

Example work products

1. The approach, e.g., selected set of test design techniques, should be described in sufficient detail to support identification of major test tasks and estimation of the time required to do each one.

Sub-practices

1. Select the test design techniques to be used. Multiple test design techniques are defined to provide adequate test coverage based on the defined product risks.

Criteria for selecting a test design technique include the following:

- Type of system
- Regulatory standards
- Customer or contractual requirements
- Level of risk
- Type of risk
- Documentation available
- Knowledge of the testers
- Time and budget
- Development lifecycle
- Previous experience with types of defects found

2. Define the approach to review test work products

3. Define the approach for re-testing

Examples of approaches for re-testing include the following:

- For all high risk test items a full re-test will take place re-executing the full test procedure
- For all low risk test items the incidents are re-tested in isolation

4. Define the approach for regression testing

Examples of elements of a regression test approach include the following:

- Focus of the regression testing, e.g., which items and/or features
- Methods to select the test cases to be executed
- Type of testing to be performed
- Manual testing or using test automation tools
Become a Testing Process Improvement Superhero

1. Education: Become a certified TMMi Professional
2. Be your organizations testing and quality champion
3. Sponsor a Formal or Informal Assessment
4. Drive the resulting continuous improvements
5. Measure impacts and create a culture of continuous improvement
6. Get promoted and Ft!!!
Free Assessment!!!

Take the next step to becoming a Testing Superhero and transform your organization by taking advantage of this FREE assessment offer.