Test Maturity Model integration

results from the world-wide user survey and how to get involved

Erik van Veenendaal
Erik van Veenendaal

www.erikvanveenendaal.nl

- In IT & testing since 1985 working for many different clients and in many different roles
- Author “TMap”, “ISTQB Foundation” and “TMMi” and many other books and papers
- Former Vice-President International Software Testing Qualifications Board (ISTQB)
- President Curaçao Testing Board (CTQB)
- CEO TMMi Foundation
- Winner European & ISTQB International Testing Excellence Award
Test Improvement Directions

- **Hero culture**
- **Poor job Low cost**
- **Good job High cost**
- **Test Process**
- **Infrastructure Tools & Automation**
- **People**
TMMi Foundation (2005)
- Develop the TMMi model
- Framework for TMMi assessments

TMMi model published in 2010
- ISTQB, IEEE, CMMI, best practices
- Available in English, Chinese, French, Spanish and Portuguese

Independent model

World leading model for test process improvement
- Confirmed by IEEE
TMMi Process Areas

- Level 1: Initial
  - Test Policy and Strategy
  - Test Planning
  - Test Monitoring and Control

- Level 2: Managed
  - Test Design and Execution
  - Test Environment

- Level 3: Defined
  - Test Organization
  - Test Training Program
  - Test Lifecycle and Integration
  - Non-Functional Testing
  - Peer Reviews

- Level 4: Measured
  - Test Measurement
  - Product Quality Evaluation
  - Advanced Reviews

- Level 5: Optimization
  - Defect Prevention
  - Test Process Optimization
  - Quality Control

≈ 60% is at TMMi level 1

priorities and focus the test improvement process

± 9 months

± 6 months
TMMi Level 2: Managed

- Test Policy and Strategy
- Test Planning
- Test Monitoring and Control
- Test Design and Execution
- Test Environment

Ensures compliance Verification & Validation
TMMi Trends

Certified TMMi Professionals


TMMi-based Certified Organizations

World-wide User Survey

- Survey designed together with university team
- Address market needs, understanding benefits of TMMi and challenges
- All TMMi assessed organizations invited
  - Both informal and formally assessed
  - Since inception of TMMi assessment framework
- Return rate 64% → Confidence level 85%!!
  - Real value is within ±5% of measured value
- Highly experienced TMMi users (≈ 4 years)
Location and Industries

- Americas: 10%
- Europe: 37%
- Asia: 30%
- Africa & Middle East: 0%
Software Life Cycle

69% of the TMMi users use multiple life cycle models!
Satisfaction & Maturity Level

- **Extremely Satisfied**: 17% benefits have exceeded expectations
- **Very Satisfied**: 37% major benefits achieved
- **Satisfied**: 36% benefits have been achieved
- **Disappointed**: 10% no benefits achieved

Maturity Levels:
- **Level 1 Initial**: 5%
- **Level 2 Managed**: 11%
- **Level 3 Defined**: 42%
- **Level 4 Measured**: 16%
- **Level 5 Optimization**: 26%
TMMi Benefits

**Product Quality**
- Enhanced product quality: 88%
- Reduced product risks
- Reduced number of defects

**Test Efficiency**
- Increased test productivity: 77%
- Accelerated software delivery
- Reduced project costs

**Compliance**
- Achieved TMMi certification: 84%
- Achieved standard compliance

**People**
- Improved test engineering discipline: 77%
- Improved team morale
Quantified Benefits

Test predictability increased by 70%
Number of test tools tools from 10 to 6
Higher product risk coverage (now at 80%)
DDP increase from 60 to 70% at system testing

Time-to-market reduction by 7%
DDP at system level improved by 22%
Development cycle from 3 months to 1 month
Reduced cost of external testers by 10%

DDP to production improved by 30%
Test estimation now 95% accurate
Test efficiency improved by 25%
Regression test cycle from 4 hours to 30 minutes
Test Levels and Test Types

**Test Levels**

- Unit Testing / Component Testing: 39%
- Component Integration Testing: 54%
- System Testing: 88%
- System Integration Testing: 96%
- User Acceptance Testing: 85%
- Operational Acceptance Testing: 42%

**Test Types**

- Functional Testing: 93%
- Regression Testing: 88%
- Performance Testing: 83%
- Usability Testing: 53%
- Reliability Testing: 49%
- Security Testing: 46%
Top Challenges and Advice

**Challenges**
- Inconsistent processes across teams
- Lack of skills/experience with TMMi
- Organizational culture
- Maturity development organization
- Resistance to change
- Too few resources

**Advice**
- Involved testers when defining processes
- Ensure you interpret the model
- Identify and engage process champions early
- Provide templates and share best practices
- Define both long term and short term goals
- Change take time; realistic expectations
Professionals: Career Path

Certified TMMi® Professional course

Assessment knowledge & Skills
Hold at least 2 ISTQB® certificates beyond ISTQB Foundation

Hold at least 2 ISTQB® certificates beyond ISTQB Foundation

TMMi Assessor course
Hold the ISTQB® Foundation certificate

TMMi Lead Assessor course
Hold the ISTQB® Advanced Test Manager certificate

*Holders have the option to be listed on www.tmmi.org
Organization: Supplier or User
Country: Local Chapter
Objective Driven
ISTQB related
Well-founded
Clear Priorities
Self-Assessments
Freely Available
Also to be used with Agile
Open community
On-going development
Further Reading

TMMi.org
www.erikvanveenendaal.nl
A TMMi page with all documents for download

erik@erikvanveenendaal.nl

@ErikvVeenendaal
I will keep you updated on TMMi
THANK YOU
13-16 APRIL
A4Q WORLD CONGRESS