Benefits of Adopting TMMi for the Nigerian Digital Economy

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In IT and 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)

CEO TMMi Foundation

Winner European & ISTQB International Testing Excellence Award
INDUSTRIAL REVOLUTION

- **INDUSTRY 1.0**
  - Mechanization, steam power, weaving loom

- **INDUSTRY 2.0**
  - Mass production, assembly line, electrical energy

- **INDUSTRY 3.0**
  - Automation, computers and electronics

- **INDUSTRY 4.0**
  - Cyber physical systems, Internet of things (IoT), networks

Digital Revolution (1980 – 2050)

1784, 1870, 1969, Today
Digital Transformation requires Software Product Quality!

- high quality Requirements
- high quality Software
- high quality Testing

Time-to-market
Systems-of-systems
Technology advancement
Outsourcing
Variety of devices, OS’s, browsers
Security vulnerabilities
Increasing code size and complexity

IMPACT DIGITAL TRANSFORMATION
TEST IMPROVEMENT DIRECTIONS

- Test Process
  - Good job: High cost
  - Poor job: Low cost

- Test Automation

- People
  - Hero culture
40% of project effort is spent on testing
6% of CMMI is dedicated to testing
TMMi FOUNDATION

- TMMi Foundation (2005)
  - Develop the TMMi standard
  - Framework for TMMi assessments

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

- Independent model

- World leading model for test process improvement
  - Confirmed by IEEE

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Priorities and focus the test improvement process.

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

- **Level 2: Managed**
  - Non-Functional Testing
  - Peer Reviews
  - Test Design and Execution
  - Test Environment

- **Level 3: Defined**
  - Test Measurement
  - Product Quality Evaluation
  - Advanced Reviews
  - Test Organization
  - Test Training Program
  - Test Lifecycle and Integration

- **Level 4: Measured**
  - Defect Prevention
  - Test Process Optimization
  - Quality Control
  - Test Measurement

- **Level 5: Optimization**
  - Test Measurement
  - Product Quality Evaluation
  - Advanced Reviews
  - Defect Prevention
  - Test Process Optimization
  - Quality Control

±6 months
±9 months

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TMMi LEVEL 2 MANAGED

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

Ensures compliance
Verification & Validation

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WHERE IS IT BEING USED

Test Levels

- Unit / 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%

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TMMi BENEFITS

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

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

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

**People**
- Improved test engineering discipline
- Improved team morale
- 77%

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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
TMMi TREND

Number of formal TMMi assessments

- 39% growth in 2021!
- 56% growth in Q1/Q2 2022!
STORIES

www.tmmi.org
COURSE EVALUATION

- Objective Driven
- ISTQB related
- Well-founded
- Clear Priorities
- Self-Assessments
- Freely Available
- Also to be used with Agile
- Open community
- On-going development

www.tmmi.org
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A TMMi page with all documents for download

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www.tmmi.org
THANK YOU!