



# Release Notes TMMi® V2.0

**#SuccessWithTMMi**

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TMMi version 2 introduces significant enhancements to the Test Maturity Model integration (TMMi) framework, aligning more closely with current industry practices and standards. This release improves process clarity, expands coverage of Agile and DevOps environments, and strengthens guidance for test process improvement. Maturity levels and process areas are refined in this updated TMMi version and feedback from practitioners is incorporated, ensuring greater usability and practical applicability.

In this release note you will find an overview and background to the changes made and detailed descriptions of all changes to the TMMi process areas, goals and practices with their rationale. Generic goals and generic practices have been removed to simplify and lean the model. The way these generic parts are now covered by the TMMi model is also explained.

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## Revisions

This section summarizes the key revisions between releases of this document.

This section is provided for information only.

| Release        | Revision Notes  |
|----------------|-----------------|
| V1.0 (06/2026) | Initial version |
|                |                 |
|                |                 |

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# 1 TMMi<sup>®</sup> Release Notes

## 1.1 Overview and Background of Changes

This section provides an overview of the rationale and background to the changes made to the TMMi model from Release 1.3 (2022) to TMMi Version 2.0 (2026). Detailed descriptions of the various changes and their impact on process areas, goals and practices are provided in the next section.

### 1.1.1 Business Value and Objectives

To emphasize business objectives, a value statement for the test improvements has been added for each process area. These aim to support communication with stakeholders about the improvement benefits of each process area. They also aim to provide clarity as to why certain test process areas need to be improved. The descriptions of the goals have been revisited and aligned with the purpose of the associated process area, emphasizing their intent and business value.

Reference TMMi V2.0: Throughout all process areas

### 1.1.2 Agile and DevOps

TMMi has been adapted to support Agile and DevOps ways of working. Accordingly, new examples, work products, and sub-practices have been added to the model, using “TMMi in the Agile world” and “TMMi in the DevOps world” as source documents. TMMi is now integrated with practices and examples from both Agile and DevOps.

Reference TMMi V2.0: Throughout all maturity levels and process areas

### 1.1.3 Leaning

In general, testing practices have evolved over time and become less documentation-heavy. Today’s IT industry further prioritizes lean ways of working and shorter time-to-market. The goals and (sub)practices in every process area have therefore been reviewed for their relevance today with the aim of making the model (slightly) leaner without losing the original intent of the practices and goals. As a result, TMMi V2.0 has approximately 30% fewer pages than TMMi Release 1.3.

Reference TMMi V2.0: Throughout all maturity levels and process areas

### 1.1.4 Test Automation and Artificial Intelligence

The TMMi Foundation has adopted the principles of a highly popular framework in the business domain: the People, Process and Technology framework (also known as the PPT framework). It illustrates how the balance of people, processes, and technologies drives successful organizational change, improvements, and re-engineering. Technology provides the tools that people can use to implement and perform the process. The PPT framework has been introduced to define the scope of the TMMi model, as well as to clarify the roles of test automation and artificial intelligence in driving test improvement. The framework focuses on how these three elements interact and the need for them to be balanced.

Artificial Intelligence (AI) is a powerful emerging technology that will influence how we work, offering opportunities to make testing more efficient and, when applied wisely, more effective. There are many testing process areas where AI can play a supporting role and make testing more effective and efficient. Annex A of

TMMi version 2.0 provides an expanded discussion of AI and software testing, including details of where and how AI can support the various TMMi process areas.

Reference TMMi V2.0: Section 1.4 Scope, especially 1.4.3 Test Automation, 1.4.4 Artificial Intelligence and Annex A Artificial Intelligence and TMMi

## 1.1.5 TMMi Structure

The chapter on TMMi structure has been updated to reflect the changes in TMMi V2.0. In TMMi V2.0, the distinction between Generic Goals / Generic Practices and Specific Goals / Specific Practices has been removed. This has been a major structural change, but makes TMMi easier to use and understand. It will also have an impact on TMMi assessments. In TMMi V2.0 the Generic Goals and Generic Practices are now covered by a new process area at TMMi level 2 “Implementation and Habit” and the revised process area “Test Process and Integration” (previously named Test Lifecycle and Integration) at TMMi Level 3. In the TMMi structure chapter, the tables mapping TMMi process areas and goals to their CMMI counterparts have also been fully updated to reflect CMMI V3.0.

Reference TMMi V2.0: Chapter 3 Structure of the TMMi, Process area 2.6 Implementation and Habit, and process area 3.3 Test Process and Integration.

## 1.1.6 TMMi Level 1 Initial

The description of TMMi Level 1 (Initial) has been revised to more accurately reflect current practices observed in Level 1 organizations, resulting in a more up-to-date portrayal of their characteristics. TMMi Level 1 covers a broad range of organizations in terms of test maturity, including those that are just beginning to treat testing as a dedicated practice and, in parallel, starting their test process improvement journey. In TMMi V2.0, some testing practices are listed and briefly described that are typically performed by TMMi level 1 organizations that are already “on their way”. This sample set of TMMi level 1 testing practices can also be used as an initial checklist by organizations that have yet to start on their test improvement journey.

Reference TMMi V2.0: Section 2.2 TMMi Level 1 Initial, and Annex D TMMi Level 1 Practices

## 1.1.7 Quality Engineering

Some testing approaches now refer to quality engineering. The concept of quality engineering has been studied and assessed for the potential inclusion of its principles and practices in TMMi V2.0. Note, TMMi already includes the notion of shift-left, emphasizing upstream quality initiatives like peer reviews, Behavior Driven Development (BDD), service virtualization and integrated development and test approaches. In Annex B of TMMi V2.0 a set of detailed quality engineering topics is mapped to the TMMi process areas and improvement goals. thereby discussing and showing the applicability of TMMi in the context of quality engineering.

Reference TMMi V2.0: Section 1.4.5 Quality Engineering and Annex B Quality Engineering Mapping

## 1.1.8 TMMi is NOT a checklist

Too often TMMi has been perceived and applied as a checklist, with (sub-)practices treated as items to be ticked off. This is clearly at odds with the intention of TMMi, which focuses on the meaningful interpretation of goals and practices, recognizing that not everything needs to be fully achieved. To make clearer what is

required, expected, and how TMMi should be used, a paragraph has been added under the heading “TMMi is NOT a checklist” .

Reference TMMi V2.0: Section 1.6.2 TMMi is NOT a Checklist

### 1.1.9 Template and Re-write

The layout of TMMi Version 2.0 has been changed to be consistent with other TMMi documents and give a more up-to-date look and feel. The whole document has been updated to improve coverage of current testing practices, readability and understandability. This applies to sections including introduction, background, sources, scope and those explaining the TMMi maturity levels, and to all subpractices and examples. The glossary has also been updated based on various sources, e.g., the ISTQB Glossary of Testing Terms.

Reference TMMi V2.0: Whole document

## 1.2 Changes to Process Areas, Goals and Practices

This section provides details of the changes made to TMMi process areas, goals and practices from Release 1.3 (2022) to Version 2.0 (2026). For most of the changes, the rationale is provided. Note that detailed changes to subpractices and examples are not provided as part of this release note.

### 1.2.1 TMMi Level 2 Process Areas

#### Process area 2.1 Test Policy and Strategy

The practice **SP2.1 Perform a generic product risk assessment** (R1.3) has been removed and is now a subpractice within P2.2 Define test strategy (V2.0).

*Rationale:* In practice, a generic product risk assessment was, typically, not formally performed as a separate activity. The change reflects a more real-life way of working and has been implemented in the context of leaning the TMMi model.

#### Process area 2.2 Test Planning

The **scope** of the process area Test Planning has been changed. A test plan may be developed for a specific test level or test type, or as a master test plan defining a coherent test approach across multiple test levels and test types, possibly also involving external parties. In TMMi R1.3 master test planning was a specific goal within process area 3.3 Test Lifecycle and integration.

*Rationale:* The concept of master test planning is more related to sequential software development and less to Agile and DevOps, it was therefore removed as a dedicated goal. Also, in situations where master test planning is relevant, it should already be part of test planning at TMMi level 2 and not delay its implementation until TMMi level 3.

**SP1.1 Define product risk categories and parameters** (R1.3) has been removed.

*Rationale:* This is expected to be part of the defined process for product risk assessments. It is not an activity that each project or team will perform for every instance of a product risk assessment.

**SP2.5 Define suspension and resumption criteria** (R1.3) has been removed and is now a subpractice within P2.2 Define the test approach (V2.0).

*Rationale:* Suspension and resumption criteria are less relevant in the Agile and DevOps way of working.

**SP3.1 Establish a top-level work breakdown structure (R1.3)** and **SP3.2 Define test lifecycle (R1.3)** have both been removed and replaced by P3.1 Identify test work products to be developed and test tasks to be performed (V2.0).

*Rationale:* The removed practices do not relate to the Agile and DevOps way of working, and the new practice provides a more up-to-date description.

**SP5.1 Review test plan (R1.3)** and **SP5.3 Obtain test plan commitments (R1.3)** have been removed and are now combined in the new practice P5.1 Review test plan and obtain commitments (V2.0).

*Rationale:* In practice, the review of a test plan with stakeholders includes obtaining commitments. The change reflects a more real-life way of working and has been implemented in the context of leaning the TMMi model.

## Process area 2.3 Test Monitoring and Control

**SG1 Monitor Test Progress against Plan (R1.3)** has been renamed to G1 Monitor Test Progress (V2.0).

*Rationale:* This provides a better fit with Agile and DevOps. In an Agile or DevOps context, monitoring is less plan driven, with progress being reviewed continuously using results from testing to adapt the plan and approach as necessary.

**SP1.3 Monitor test commitment (R1.3)** **SP1.5 Monitor stakeholder involvement (R1.3)** have been removed from the TMMi model.

*Rationale:* Both specific practices were considered theoretical and of little added value in the model. They have been removed in the context of leaning the model and making it more practical.

**SP 1.6 Conduct test progress reviews (R1.3)** has been renamed to P1.4 Report and discuss test progress (V2.0).

*Rationale:* This practice has been updated to improve the understanding of the intent and make it easier to use. In addition, the practice is now more in line with Agile and DevOps ways of working.

**SG2 Monitor Product Quality against Plan and Expectations (R1.3)** has been renamed to G2 Monitor Product Quality (V2.0).

*Rationale:* This is a better fit with Agile and DevOps and is consistent with G1. In an Agile or DevOps context, monitoring is less plan driven, with progress being reviewed continuously using results from testing to adapt the plan and approach as necessary.

**SP2.5 Monitor suspension and resumption criteria (R1.3)** has been removed from the TMMi model.

*Rationale:* Suspension and resumption criteria are less relevant in the Agile and DevOps ways of working.

**SP 2.6 Conduct product quality reviews (R1.3)** has been renamed to P2.5 Report and discuss product quality (V2.0).

*Rationale:* This practice has been updated to improve the understanding of the intent and make it easier to use. In addition, the practice is now more in line with Agile and DevOps ways of working.

## Process area 2.4 Test Design and Execution

**SG1 Perform Test Analysis and Design using Test Design Techniques (R1.3)** has been renamed to G1 Perform Test Analysis and Design (V2.0).

*Rationale:* The goal is not the formal application of test design techniques. In practice, their underlying principles are often applied implicitly, which is perfectly acceptable. There are various ways, other than test design techniques, to identify a thorough set of test conditions or acceptance criteria.

**P1.1 Study and analyze the test basis (V2.0)** has been introduced as a practice within G1 Perform Test Analysis and Design (V2.0).

*Rationale:* Test analysis was only a subpractice in TMMi R1.3. This is an important step in the test design process and forms part of refinement sessions. This has now been made explicit with the introduction of the practice.

**SP 1.3 Identify necessary specific test data (R1.3)** has been renamed to P1.4 Identify specific test data (V2.0).

*Rationale:* The word “necessary” is redundant. Test data is identified to support the set of identified test conditions and test cases.

**P2.1 Develop and prioritize test procedure (R1.3)** has been renamed to P2.1 Implement test cases (V2.0).

*Rationale:* Today, test cases are often implemented through automated test scripts and not just manual test procedures. The renaming allows for both test scripts and test procedures, but no longer anymore emphasize test procedures over test scripts.

**P2.3 Specify intake test procedure (R1.3)** has been renamed to P2.3 Specify smoke test (V2.0).

*Rationale:* According to the ISTQB Glossary, the term smoke test is now preferred over intake test.

**P3.1 Perform intake test (R1.3)** has been renamed to P3.1 Perform smoke test (V2.0).

*Rationale:* According to the ISTQB Glossary, the term smoke test is now preferred over intake test.

**P3.4 Write test log (R1.3)** has been renamed to P3.4 Establish test log (V2.0).

*Rationale:* Today, test logs are most often generated automatically, not written manually. The renaming allows for both generation and writing, but does not emphasize written over generated test logs.

**P4.1 Decide disposition of test incidents in configuration control board (R1.3)** has been renamed to P4.1 Decide on disposition of test incidents (V2.0).

*Rationale:* Today, configuration control boards are less frequently used, and are only one of many approaches for managing decisions related to test incidents.

**SP 4.2 Perform appropriate action to fix the test incident (R1.3)** has been renamed to P4.2 Perform appropriate action to close test incidents (V2.0).

*Rationale:* Not every test incident will be fixed, some will be deferred, other will be rejected. The end state of a test incident is closed, not fixed. Also, we are referencing general test incidents here, not specific ones, thus unnecessary to use “the” as a definite article.

**SP4.3 Track the status of test incidents (R1.3)** has been renamed to P4.3 Monitor and communicate the status of test incidents (V2.0).

*Rationale:* Monitoring is the TMMi preferred term, not tracking. Sub-practices are also about communication, thus this has been added to the name of the practice.

## Process area 2.5 Test Environment

**P1.1 Elicit test environment needs (R1.3)** has been renamed to P1.1 Elicit test environment and generic test data needs (V2.0).

*Rationale:* The name now explicitly reflects that generic test data needs must also be elicited, and related sub-practices have been added accordingly.

**P1.2 Develop test environment requirements (R1.3)** has been renamed to P1.2 Develop test environment and generic test data requirements (V2.0).

*Rationale:* The name now explicitly reflects that generic test data needs must also be developed, and related sub-practices have been added accordingly.

**P1.3 Analyze test environment requirements (R1.3)** has been renamed to P1.3 Analyze test environment and generic test data requirements (V2.0).

*Rationale:* The name now explicitly reflects that generic test data needs must also be analyzed, and related sub-practices have been added accordingly.

**P2.3 Specify test environment intake test procedure** (R1.3) has been renamed to P2.3 Specify test environment smoke test.

*Rationale:* According to the ISTQB Glossary, the term smoke test is now preferred over intake test.

**P2.4 Perform test environment intake test** (R1.3) has been renamed to P2.4 Perform test environment smoke test.

*Rationale:* According to the ISTQB Glossary, the term smoke test is now preferred over intake test.

**SP3.1 Perform systems management** (R1.3) has been renamed to P3.1 Perform test environment management (V2.0).

*Rationale:* This is a clearer name and more consistent with other practice names in this process area.

**SP3.2 Perform test data management** (R1.3) has been renamed to P3.2 Perform generic test data management (V2.0).

*Rationale:* This is consistent with practice naming for all test data related practices in this process area.

## Process area 2.6 Implementation and Habit

**Process area 2.6 Implementation and Habit** is a newly introduced process area with TMMi V2.0.

*Rationale:* This has been introduced to cover most of the generic practices from GG2 Institutionalize a Management Process from TMMi release 1.3. For more information on generic practices coverage see section 1.3 Generic Goals and Generic Practices.

## 1.2.2 TMMi Level 3 Process Areas

### Process area 3.1 Test Organization

**P4.2 Analyze lessons learned using the organizational test process** (V2.0) is a newly introduced practice in TMMi V2.0

*Rationale:* Test improvement ideas and proposals can be identified during assessments (top-down) or based on lessons learned in practice, e.g., during retrospectives (top-down). Analyze lessons learned to identify test improvement has been made a more explicit part of the model by introducing this new practice.

**P4.6 Manage the deployment** (V2.0) is introduced as a new practice in TMMi V2.0

*Rationale:* This practice has been introduced to cover all activities needed: determine, plan, implement and deploy test process improvements. It also references the newly introduced G3 Deploy the Organizational Test Process and Test Process Assets (V2.0) within the process area 3.3 Test Process and Integration, which is the core goal for deployment. The practice has also been introduced within this process area since SG5 Deploy the Organizational Test Process and Incorporate Lessons Learned (R1.3) was removed from this process area and therefore a deployment practice was needed.

**SG5 Deploy the Organizational Test Process and Incorporate Lessons Learned** (R1.3) has been removed and replaced by G3 Deploy the Organizational Test Process and Test Process Assets (V2.0) within the process area 3.3 Test Process and Integration.

*Rationale:* The core goal for deployment has a better fit with the process area where the organizational processes are being defined and development. SG5 has therefore been removed from this process area and replaced by the newly introduced G3 within the process area 3.3 Test Process and Integration.

## Process area 3.2 Test Training Program

**SG1 Establish an Organizational Test Training Capability** (R1.3) has been renamed to **G1 Establish a Test Training Capability and Organizational Test Training Plan** (V2.0).

*Rationale:* This goal has two main results/outputs. The updated name of the goal better reflects both results/outputs.

**SP1.1 Identify the strategic test training needs** (R1.3) has been renamed to **P1.1 Identify test training needs** (V2.0).

*Rationale:* P1.1 Identify test training needs (V2.0) now covers both the strategic and project driven needs. Based on practical experiences, this is now combined into one practice and reflects the way of working in many organizations.

**SP1.2 Align the organizational and project test training needs** (R1.3) has been removed from the TMMi model.

*Rationale:* The intent and content of this practice has been moved to P1.1 Identify test training needs (V2.0). This update has also been done in the context of leaning the TMMi model.

**P1.2 Establish a test training capability** (V2.0) and **P1.3 Establish an organizational test training plan** (V2.0) are now in a different order compared to TMMi model R1.3.

*Rationale:* The new numbering reflects the order in which these practices are typically performed.

## Process area 3.3 Test Process and Integration

The process area **Test Lifecycle and Integration** (R1.3) has been renamed to **Test Process and Integration** (V2.0)

*Rationale:* The name of the process has been updated to indicate that the process area 3.3 Test Process and Integration covers some of the generic practices of the generic goals **GG2 Institutionalize a Management Process** and **GG3 Institutionalize a Defined Process** (R1.3). (For more information on generic practices coverage see section 1.3 Generic Goals and Generic Practices.)

**SG1 Establish Organizational Test Process Assets** (R1.3) has been renamed to **G1 Develop the Organizational Test Process and Test Process Assets** (V2.0).

*Rationale:* Test process to be developed has explicitly been added to show the coverage of the former generic goal **GG3 Institutionalize a Defined Process** and to make the intent of this goal clearer. “Develop” is preferred over “Establish”, considering what will be performed within this goal.

**P1.1 Define a test process architecture** (V2.0) is a newly introduced practices with TMMi V2.0.

*Rationale:* Practical experiences have shown that defining a test process architecture before starting the development of test process and test process assets is beneficial and provides a needed structure.

**SP1.1. Establish standard test processes** (R1.3) and **SP1.2 Establish test lifecycle model descriptions addressing all test levels** (R1.3) have been replaced by **P1.2 Develop standard test processes and test process assets** (V2.0).

*Rationale:* The term test lifecycle is highly related to sequential software development and less applicable in an Agile and DevOps context where there is no separate independent test lifecycle. “Develop” is preferred over “Establish”, considering what will be performed within this practice (consistent usage within this goal).

**SP1.3 Establish tailoring criteria and guidelines** (R1.3) has been renamed to **P1.3 Develop and use tailoring criteria and guidelines** (V2.0).

*Rationale:* Not only should tailoring criteria and guidelines be developed, they should also be used by projects and teams. This is now emphasized in the practice name and subpractices. “Develop” is preferred over “Establish”, considering what will be performed within this practice (consistent usage within this goal).

The practice **SP1.4 Establish the organization’s test process database** (R1.3) has been removed from the process area and introduced at TMMi level 4 within the process area 4.1 Test Measurement, specifically the practice P1.5 Establish a test measurement repository (V2.0).

*Rationale:* SP1.4 Establish the organization’s test process database has been removed from process area 3.3 Test Lifecycle and Integration (R1.3) since test measurement only truly starts at TMMi level 4. The practice P1.5 Establish a test measurement repository (V2.0) has been added within process area 4.1 Test Measurement, as a substitute for SP1.4 Establish an organization’s test process data at TMMi level 3.

**P1.5 Establish the organization’s test process asset library** (R1.3) has been renamed to P1.4 Develop test process asset library (V2.0).

*Rationale:* “Develop” is preferred over “Establish”, considering what will be performed within this practice (consistent usage within this goal).

The practice **SP1.6 Establish work environment standards** (R1.3) has been removed from the TMMi model.

*Rationale:* This practice as defined in TMMi R1.3 to establish work environment standards has in practice not been very beneficial to organizations in the context of TMMi. It has also been removed as part of the initiative to lean the TMMi model.

**SG2 Integrate the Test Lifecycle Models with the Development Lifecycle Models** (R1.3) has been renamed to G2 Integrate the Organizational Test process with the Development Lifecycle Model (V2.0)

*Rationale:* The term test lifecycle is highly related to sequential software development and less applicable in an Agile or DevOps context where there is no separate independent test lifecycle. Within G1 organizational test processes are developed, this is now used consistently also in the heading of this goal.

**SP2.1 Establish integrated lifecycle models** (R1.3) has been renamed to P2.1 Develop an integrated lifecycle model (V2.0).

*Rationale:* “Develop” is preferred over “Establish”, considering what will be performed within this practice (consistent usage within this process area).

**SP2.2 Review integrated lifecycle models** (R1.3) and **SP2.3 Obtain commitments on the role of testing with the integrated lifecycle models** (R1.3) have been replaced by P2.2 Review integrated lifecycle model and obtain commitments (V2.0)

*Rationale:* In practice, the review of an integrated lifecycle model with stakeholders includes obtaining commitments. The change reflects a more real-life way of working and has been implemented in the context of leaning the TMMi model.

**G3 Deploy the Organizational Test Process and Test Process Assets** (V2.0) is new to this process area, originally with TMMi R1.3 at the process area Test Organization.

*Rationale:* The core goal for deployment has a better fit within the process area where the organizational processes are being defined and developed. This goal has therefore been moved to the process area 3.3 Test Process and Integration.

**P3.1 Deploy the standard test process and test process assets** (V2.0) is new to this process area, originally with TMMi R1.3 at the process area Test Organization, SG5 Deploy the Organizational Test Process and Incorporate Lessons Learned.

*Rationale:* In line with goal being moved (see G3 above), also the practice has been moved.

**P3.2 Monitor deployment (V2.0)** is new to this process area, originally with TMMi R1.3 at the process area Test Organization, SG5 Deploy the Organizational Test Process and Incorporate Lessons Learned (R1.3).

*Rationale:* In line with goal being moved (see G3 above), also the practice has been moved.

**P3.3 Evaluate process adherence (V2.0)** is a newly introduced practice with TMMi V2.0 for G3 Deploy the Organizational Test Process and Test Process Assets.

*Rationale:* This has been introduced to cover most of the generic practice GP2.9 Objectively evaluate adherence from GG2 Institutionalize a Management Process (R1.3). (For more information on generic practices coverage see section 1.3 Generic Goals and Generic Practices.)

**P3.4 Collect and Share Test Best Practices (V2.0)** is a newly introduced practice with TMMi V2.0 for G3 Deploy the Organizational Test Process and Test Process Assets.

*Rationale:* The test process re-use goal with process area 5.3 Test Process Optimization has been removed. This practice has been introduced based on practical experiences where this has shown to be beneficial. Best practices are identified, and shared / re-used across the organization.

**SG3 Establish a Master test Plan (R1.3)** has been removed from the TMMi model V2.0.

*Rationale:* The concept of master test planning is more related to sequential software development and less to Agile and DevOps, it was therefore removed as a dedicated goal. Also, in situations where master test planning is relevant, it should already be part of test planning at TMMi level 2 rather than delaying its implementation to TMMi level 3. Master test planning is now within scope of the process area 2.2 Test Planning.

## Process area 3.4 Non-Functional Testing

**SP3.3 Identify necessary specific test data (R1.3)** has been renamed to P3.3 Identify specific test data (V2.0).

*Rationale:* The word “necessary” is redundant. Test data is identified to support the set of identified non-functional test conditions and test cases.

**SP4.1 Develop and prioritize non-functional test procedures (R1.3)** has been renamed to P4.1 Implement non-functional tests (V2.0).

*Rationale:* Today, non-functional test cases are often implemented through automated test scripts and not only anymore through manual test procedures. The renaming allows for both test scripts and test procedures, but no longer emphasizes test procedures over test scripts.

**SP5.1 Execute non-functional test cases (R1.3)** has been renamed to P5.1 Execute non-functional tests (V2.0).

*Rationale:* The term “tests” covers executing non-functional tests using documented test procedures, test charters and/or automated test scripts. The term “tests” provides in this context a more up-to-date terminology than “test cases”.

**SP5.3 Write test log (R1.3)** has been renamed to P5.3 Establish test log (V2.0).

*Rationale:* Today, test logs are most often generated automatically, not written manually. The renaming allows for both generation and writing but does not emphasize written over generated test logs.

## Process area 3.5 Peer Reviews

**SP1.2 Define peer review criteria (R1.3)** has been removed and replaced by P1.1 Develop peer review procedures (V2.0)

*Rationale:* A more practical and understandable practice heading, new content, with added value and a better fit with Agile and DevOps. The procedures have the option to include peer review criteria.

**SP1.1 Identify work products to be reviewed (R1.3)** has been renumbered to **P1.2 Identify work products to be reviewed (V2.0)**

*Rationale:* The new numbering reflects the order in which these practices within G1 Establish a Peer Review Approach are typically performed.

**P2.3 Resolve issues identified in peer reviews (V2.0)** is a newly introduced practice with TMMi V2.0.

*Rationale:* An important practice to complete and close the peer review, that was missing with TMMi R1.3.

**SP2.3 Analyze Peer Review data (R1.3)** has been removed from the TMMi model.

*Rationale:* Collecting and analyzing (peer review) data is performed at TMMi level 4 “Measured”, within the process area 4.1 Test Measurement. It is part of the overall test measurement process, it does not anymore have a dedicated practice.

## 1.2.3 TMMi Level 4 Process Areas

### Process area 4.1 Test Measurement

**SG1 Align Test Measurement and Analysis Activities (R1.3)** has been renamed to **G1 Define Test Measurement Objectives (V2.0)**.

*Rationale:* The new heading for G1 is much more accurate and to-the-point. It clearly states the intent and expected output for G1 Define Test Measurement Objectives.

**SP1.4 Specify analysis procedures (R1.3)** has been renamed to **P1.4 Specify analysis and reporting procedures (V2.0)**.

*Rationale:* The updated name provides better coverage of what is intended (both analysis and reporting procedures) by this practice.

**P1.5 Establish a test measurement repository (V2.0)** is a newly introduced practice with TMMi V2.0 as part of G1 Define Test Measurement Objectives (V2.0).

*Rationale:* SP1.4 Establish the organization’s test process database has been removed from process area 3.3 Test Lifecycle and Integration (R1.3) since test measurement only truly starts at TMMi level 4. This practice has been added at process area 4.1 Test Measurement, as a substitute for SP1.4 Establish the organization’s test process database at TMMi level 3.

**SP2.1 Collect test measurement data (R1.3)** has been renamed to **P2.1 Obtain test measurement data (V2.0)**

*Rationale:* Collect has been changed to “obtain” to improve understanding and ease of use, but also “obtain” better reflects how test measurement data is gathered. Today, much data is obtained automatically, rather than collected manually.

### Process area 4.2 Product Quality Evaluation

**SG1 Measurable Project Goals for Product Quality and their Priorities are Established (R1.3)** has been renamed to **G1 Establish Quantitative Project Goals for Product Quality (V2.0)**.

*Rationale:* The name of the goal has been shortened to improve understanding and ease of use. Establishing priorities for the project goals for product quality is part of the subpractices.

**SP1.2 Define the project’s quantitative product quality goals (R1.3)** has been renamed to **P1.2 Define the project’s product quality goals (V2.0)**

*Rationale:* The name of the goal has been shortened to improve understanding and ease of use. Quantitative is already stated in the goal, and is addressed by the subpractices of this practice.

**SP1.3 Define the approach for measuring progress toward the project's product quality goals** (R1.3) has been renamed to P1.3 Define the approach for measuring product quality (V2.0).

*Rationale:* The name of the goal has been shortened to improve understanding and ease of use. The intent of this practice has not changed and is elaborated upon by the various subpractices.

**SG2 Actual Progress toward Achieving the Project's Product Quality Goals is Quantified and Managed** (R1.3) is renamed to G2 Manage Progress towards Achieving the Project's Product Quality Goals (V2.0)

*Rationale:* The name of the goal has been shortened to improve understanding and ease of use.

**SP2.1 Measure product quality quantitatively throughout the lifecycle** (R1.3) is renamed to P2.1 Measure product quality (V2.0).

*Rationale:* The name of the goal has been shortened to improve understanding and ease of use. The intent of this practice has not changed, e.g., quantitatively and throughout the lifecycle, and is elaborated upon by the various subpractices.

**SP2.2 Analyze product quality measurements and compare them to the product's quantitative goals** (R1.3) is renamed to P2.2 Analyze product quality measures and compare with product quality goals (V2.0)

*Rationale:* The name of the practice has been changed to improve understanding and ease of use.

## Process area 4.3 Advanced Reviews

**Process area 4.3 Advanced Reviews** (R1.3) has been removed from the TMMi model, and therefore not a part of TMMi V2.0.

*Rationale:* Advanced Reviews had been added in the past to address the sampling way of doing reviews as advocated by Tom Gilb. When reviews are performed in this way, they provide a measurement of product quality. With Agile and DevOps being much less documentation-focused, document sampling does not make too much sense anymore. This has taken away the most important background reason for having Advanced Reviews as a separate process area.

**SG1 Coordinate the Peer Review Approach with the Dynamic Test Approach** (R1.3) is now covered by process area 3.5 Peer Reviews, G1 Establish a Peer Review Approach, specifically P1.2 Identify work products to be reviewed (V2.0)

**SG2 Measure Product Quality Early in the Lifecycle by Means of Peer Reviews** (R1.3) and **SG3 Adjust the Test Approach Based on Review Results Early in the Lifecycle** (R1.3) are both now (implicitly) covered by the process area 4.2 Product Quality Evaluation (V2.0).

## 1.2.4 TMMi Level 5 Process Areas

### Process area 5.1 Defect Prevention

**SG1 Determine Common Causes of Defects** (R1.3) has been renamed to G1 Determine Root and Common Causes of Defects (V2.0).

*Rationale:* A more accurate naming of the intent of this goal: root and subsequently common causes of selected defects are determined

**SP 1.1 Define defect selection parameters and defect classification scheme** (R1.3) has been renamed to P1.1 Define defect selection parameters (V2.0).

*Rationale:* In an Agile or DevOps context an extensive defect classification scheme is most often not applied. The defect classification scheme reference has therefore been removed from the practice name and is now a subpractice.

**SP 1.2 Select defects for analysis (R1.3)** has been renamed to **P1.2 Select defects for causal analysis (V2.0)**.

*Rationale:* A more accurate description of the practice; the defects are selected for causal analysis.

**SP 1.3 Analyze causes of selected defects (R1.3)** has been renamed to **P1.3 Perform causal analysis for selected defects (V2.0)**.

*Rationale:* A more accurate description of the practice; causal analysis is performed for the selected defects.

**SG 2 Prioritize and Define Actions to Systematically Eliminate Root Causes of Defects (R1.3)** has been renamed to **G2 Define Actions to Systematically Eliminate Root Causes of Defects (V2.0)**.

*Rationale:* The goal's intent has changed, with improvement actions now defined and proposals submitted at this stage. Their priorities are defined at a later stage within the Test Process Optimization process area.

**SP 2.1 Propose solutions to eliminate common causes (R1.3)** has been renamed **P2.1 Propose solutions to eliminate root causes (V2.0)**.

*Rationale:* Ultimately the objective is to eliminate root causes which is now reflected in the practice name.

**SP 2.2 Define action proposals and submit improvement proposals (R1.3)** has been renamed to **P2.2 Define and submit improvement proposals (V2.0)**.

*Rationale:* This practice has been made leaner and more directive.

## Process area 5.2 Quality Control

**SP 1.4 Apply statistical methods to understand variations (R1.3)** has been renamed to **P1.4 Understand and address test process performance variations (V2.0)**.

*Rationale:* The updated heading for practice P1.4 Understand and address test process performance variations better describes the intent of the practice. Using statistical methods is not the intent, although they can be used to achieve the objective.

**SP 1.5 Monitor performance of the selected test processes (R1.3)** has been renamed to **P1.5 Monitor test process performance against objectives (V2.0)**.

*Rationale:* That only the selected test processes are within scope is redundant information. More important is the fact that monitoring of test performance is performed against the defined objectives.

**SG 2 Perform Testing using Statistical Methods (R1.3)** has been renamed to **G2 Perform Testing using Statistical Techniques (V2.0)**.

*Rationale:* Throughout the TMMi, the terminology "statistical techniques" is used as a preferred term over "statistical methods".

## Process area 5.3 Test Process Optimization

**SG 2 Evaluate New Testing Technologies to Determine their Impact on the Testing Process (R1.3)** has been renamed to **G2 Evaluate New Testing Technologies (V2.0)**.

*Rationale:* The name of the goal has been shortened to improve understanding and to be more consistent with the naming of other practices.

**SG 3 Deploy Test Improvements (R1.3)** has been renamed to **G3 Implement and Deploy Test Improvements (V2.0)**.

*Rationale:* The implementation phase was missing with TMMi model R1.3, and has now been added.

**SP 3.1 Plan the deployment (R.3)** has been renamed to **P3.1 Plan test improvements (V2.0)**.

*Rationale:* The plan now covers both the implementation and deployment of the test improvements, not just the deployment phase as per TMMi R1.3.

**P3.2 Implement test improvements (V2.0)** is a newly introduced practice with TMMi V2.0.

*Rationale:* Since the implementation phase has been added to the goal, it is also reflected in the list of practices.

**SP 3.2 Manage the deployment (R1.3)** has been renumbered to **P3.3 Manage the deployment (V2.0)**.

*Rationale:* Renumbered because of the newly added practice P3.2 Implement test improvements.

**SP 3.3 Measure improvement effects (R1.3)** has been renumbered to **P3.4 Measure improvement effects (V2.0)**.

*Rationale:* Renumbered because of the newly added practice P3.2 Implement test improvements.

**SG 4 Establish Re-use of High Quality Test Assets (R1.3)** has been removed from the TMMi model.

*Rationale:* This goal as defined in TMMi R1.3 to re-use test processes has in practice not been very beneficial to organizations. It is also very much focused on large organizations. As a result the goal has been removed. Re-use is now introduced at TMMi level 3 within the process area 3.3 Test Process and Integration, more specifically the practice P3.4 Collect and Share Test Best Practices.

## 1.3 Generic Goals and Generic Practices

In TMMi R1.3 every process area had Specific Goals (SGs) and Specific Practices (SPs), and Generic Goals (GGs) and Generic Practices (GPs). The Generic Goals/Practices were there to institutionalize the process — making sure it was managed, sustained, trained, measured, reviewed, etc. With TMMi V2.0, they were effectively removed as separate sections and replaced by a different model structure. The institutionalization concepts are now handled through a new TMMi level 2 process area under the heading of Implementation and Habit, but also through the renamed TMMi level 3 process area 3.3 Test Process and Integration. The process area 2.6 Implementation and Habit has three goals, all related to the institutionalization and covering generic goals and practice per TMMi R1.3. The three goals of the process area 2.6 Implementation and Habit are: G1 Establish Governance, G2 Implement Infrastructure and G3 Manage management.

In summary, TMMi did not truly eliminate the intent of Generic Goals and Generic Practices. TMMi removed them as explicit reusable components, and in parallel embedded institutionalization into the new model structure. This aims to make the TMMi easier to understand and use, simplify assessments, and make the framework more adaptable to modern engineering organizations.

The following shows how the generic goals and generic practices from TMMi R.1.3 are translated to the new structure and TMMi model V2.0. Although the translations are not always one to one, it provides a good overview of how institutionalization is organized in TMMi V2.0.

| TMMi Release 1.3                              | TMMi Version 2  |
|---|---|
| <b>GG2 Institutionalize a Managed Process</b> | -   |
| GP2.1 Establish an Organizational policy      | Process area 2.6 Implementation and Habit<br>G1 Establish Governance<br>P1.1 Define organizational test directives  |
| GP2.2 Plan the process                        | Process area 2.6 Implementation and Habit<br>G1 Establish Governance<br>P1.1 Define organizational test directives<br>G2 Implement Infrastructure<br>P2.1 Develop and maintain test processes |

| TMMi Release 1.3                              | TMMi Version 2   |
|---|--|
| GP2.3 Provide resources                       | Process area 2.6 Implementation and Habit<br>G1 Governance<br>P1.4 Provide resources for test process improvement<br>G2 Implement Infrastructure<br>P2.3 Provide resources to perform the test process |
| GP2.4 Assign responsibilities                 | Process area 2.6 Implementation and Habit<br>G1 Governance<br>P1.3 Assign authority for test process improvement<br>G2 Implement Infrastructure<br>P2.1 Develop and maintain test processes            |
| GP2.5 Train People                            | Process area 2.6 Implementation and Habit<br>G2 Implement Infrastructure<br>P2.2 Train people  |
| GP2.6 Manage Configurations                   | Process area 2.6 Implementation and Habit<br>G3 Manage configurations  |
| GP2.7 Identify and involve stakeholders       | Process area 2.6 Implementation and Habit<br>G2 Implement Infrastructure<br>P2.1 Develop and maintain test processes<br>P2.3 Provide resources to perform the test process                             |
| G2.8 Monitor and Control the process          | Process area 2.6 Implementation and Habit<br>G2 Implement Infrastructure<br>P2.4 Monitor implementation  |
| GP2.9 Objectively evaluate adherence          | Process area 3.3 Test Process and Integration<br>G3 Deploy the Organizational Test Process and Test Process Assets<br>P3.3 Evaluate process adherence  |
| GP2.10 Review status with higher management   | Process area 2.6 Implementation and Habit<br>G1 Governance<br>P1.2 Identify information needs and use collected information  |
| <b>GG3 Institutionalize a Defined Process</b> | -  |
| GP3.1 Establish a defined process             | Process area 3.3 Test Process and Integration<br>G1 Develop the Organizational Test Process and Test Process Assets<br>P1.2 Develop standard test processes and test process assets                    |
| GP3.2 Collect improvement information         | Process area 3.1 Test Organization<br>G4 Determine, Plan and Implement Test Process Improvements   |

| TMMi Release 1.3 | TMMi Version 2   |
|------------------|--|
|                  | P4.2 Analyze lessons learned using the organizational test process<br>Process area 4.1 Test Measurement<br>P2.1 Obtain test measurement data |

*Table 1: Generic goals and Generic practices TMMi R.1.3 coverage by TMMi model V2.0*