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TPI NEXT®

# Foundation

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Preparation Guide

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TPI NEXT®

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# 1. Overview

## Summary

TPI NEXT® (Test Process Improvement) is the international standard for (test) organizations that strive towards lowering the cost of testing, shortening the time for testing and/or improving the quality of their test process. The TPI NEXT® model is a reference model for test processes, developed by Sogeti Nederland BV and applicable in all environments. The TPI NEXT® model is used in two ways: on the one hand to measure the maturity of test processes and on the other hand it also provides a roadmap for improvements.

## Context

As an independent model it can be used in relationship with any testing or development method. The model easily adapts to situations and environments like Agile, waterfall, maintenance, etc. Furthermore the model provides guidelines for CMMi-related projects. The TPI NEXT® Qualification Program will comprise a Foundation Certificate and a Practitioner Certificate which is still to be developed.

In the domain of Testing EXIN also provides examination and certification for TMap NEXT® Test Engineer and TMap NEXT® Test Manager.

## Target group

The TPI NEXT® Foundation certification is aimed at all those who are involved in and interested in test process improvement, either as a test professional or in the project / programme or technical-management areas.

## Prerequisites

Knowledge and experience in the testing area is an advantage and helps for a better understanding.

## Examination type

Computer based multiple-choice questions

## Estimation of study load

60 hours

## Practical assignments

None

## Time allotted for examination

60 minutes

## Examination details

Number of questions:	40
Pass mark:	65 % (26 of 40)
Open book/notes:	no
Electronic equipment permitted:	no

**Sample questions**

To prepare for your examination you can download a sample exam at <http://www.exin.com>.

**Training****Group size**

The maximum number of course participants is 25.

*(This does not count for online- or computer based training.)*

**Contact hours**

The minimum number of contact hours for the course is 15. This number includes group assignments, exam preparation and short coffee breaks. Not included are: homework, the logistics related to the exam session, the exam session or lunch breaks.

**Training provider**

A list of accredited training providers may be found on EXIN's website <http://www.exin.com>.

## 2. Exam requirements

### Requirements and weight

The exam requirements are specified in the exam specifications. The following table lists the topics for the module (exam requirements). The weight of the different topics in the exam is expressed as a percentage of the total.

Exam requirement	Exam specification	Weight (%)
<b>1 Positioning testing and TPI NEXT®</b>		<b>5</b>
	1.1 The scope and value of testing	
	1.2 The scope and value of test process improvement	
	1.3 The value of TPI NEXT® as a reference model	
<b>2 Elements of the TPI NEXT® model for Measuring</b>		<b>40</b>
	2.1 Key areas	
	2.2 Maturity levels	
	2.3 Checkpoints	
	2.4 Test maturity matrix	
<b>3 Elements of the TPI NEXT® model for Improvements</b>		<b>40</b>
	3.1 Target situation	
	3.2 Clusters	
	3.3 Improvement suggestions	
	3.4 Enablers	
<b>4 Business Driven Improvement</b>		<b>15</b>
	4.1 Business drivers	
	4.2 Translating the drivers	
	4.3 Adapting the model	
<b>Total</b>		<b>100</b>

## Specifications

### 1. Positioning testing and TPI NEXT®

#### 1.1 Testing

The candidate knows the meaning and value of testing

The candidate can

1.1.1 define testing in the context of the Software Development Life Cycle.

#### 1.2 Test Process Improvement

The candidate knows the value of test process improvement.

The candidate can

1.2.1 explain the advantages of a matured test process.

#### 1.3 TPI NEXT® as a reference model

The candidate knows the value of TPI NEXT® as a reference model

The candidate can

1.3.1 describe the characteristics of the model.

### 2. The elements of the TPI NEXT® model for measuring a test process

#### 2.1 Key areas

The candidate knows the Key areas

The candidate can

2.1.1 recognize the TPI NEXT® key areas

2.1.2 describe the significance of the Key areas

2.1.3 define the three groups of Key areas

#### 2.2 Maturity levels

The candidate knows the Maturity levels

The candidate can

2.2.1 recall the 4 four levels of maturity

2.2.2 define the characteristics of the Initial level

2.2.3 define the characteristics of the Controlled level

2.2.4 define the characteristics of the Efficient level

#### 2.3 Checkpoints

The candidate knows the Checkpoints

The candidate can

2.3.1 recall the characteristics of the Checkpoints

2.3.2 match the checkpoints of the Controlled level to their Key area

#### 2.4 Test maturity matrix

The candidate knows the Test maturity matrix

The candidate can

2.4.1 recall the elements of the maturity matrix

### **3. The elements of the TPI NEXT model for Improving a test process**

#### 3.1 Target situation

The candidate knows the Target situation

The candidate can

3.1.1 describe the target situation

3.1.2 identify how the target situation is illustrated by the Test maturity matrix

#### 3.2 Clusters

The candidate knows the Clusters

The candidate can

3.2.1 define the characteristics of a cluster

3.2.2 explain the difference between 'base clusters' and 'business driven clusters'

#### 3.3 Improvement suggestions

The candidate knows the Improvement suggestions

The candidate can

3.3.1 identify the characteristics of the Improvement suggestions

3.3.2 match improvement suggestions to Key area's

#### 3.4 Enablers

The candidate knows the Enablers

The candidate can

3.4.1 define the meaning of Enablers

3.4.2 identify the elements from other processes that are closely related to the test process

### **4. Business driven improvement**

#### 4.1 Business drivers

The candidate knows the Business drivers

The candidate can

4.1.1 define the characteristics of a business driver

#### 4.2 Translating the drivers

The candidate knows the translation of the business drivers into goals for test process improvement

The candidate can

4.2.1. describe the relationship between business drivers, IT-goals and goals for improvement

#### 4.3 Adapting the model

The candidate knows the adaptability of the model

The candidate can

4.3.1 explain how business drivers affect the use of the model in terms of setting priorities to Key areas.

### 3. List of basic concepts

This list contains the terms with which candidates should be familiar. Terms are listed in alphabetical order.

Acceptance test
BDTPI
Business case
Business driver
Checkpoint
Cluster
CMMI
Controlled level
Defect
Defect management
Dynamic testing
Effectiveness
Efficiency
Efficient level
Enabler
End-to-end test
Error
Evaluation
Failure
Fault
Initial level
Improvement suggestion
Inspection
Integration test
Key area
Known errors
Master test plan
Maturity

Maturity category
Maturity level
Maturity matrix
Metrics
Optimizing level
Outsourcing
Pre-test
Product risk
Product risk analysis
Project risk
Quality
Quality assurance
Quality characteristic
Reference model
Regression
Regression test
Return On Investment (ROI)
Reliability
Reusability
Review
Risk reporting
SDLC
Software Development Life Cycle
SPI
SPICE®
Stakeholder
Stakeholder relations
Static testing
System integration test
System test
Target situation
Test basis
Test case
Test design technique

Test environment
Test goal
Test infrastructure
Test level
Test line
Test management
Test maturity matrix
Test object
Test organization
Test plan
Test policy
Test process
Test Process Improvement
Test profession
Test script
Test situation
Test strategy
Test team
Test technique
Test tool
Test tool policy
Test type
Test unit
Testability
Testing
Testware
Tool-specific maturity stage
TPI NEXT
Unit integration test
Unit test
Users acceptance test
Walkthrough



## 4. Literature

- A TPI®NEXT**  
Business Driven Test Process Improvement  
Sogeti, 2009  
ISBN: 9789072194978

### Literature reference

Exam specifications	Lit.	Literature reference
1.1 Testing	A	Chapter 2.1
1.2 Test process improvement	A	Chapter 2.2
1.3 TPI NEXT® as a reference model	A	Chapter 2.3, 3.1
2.1 Key areas	A	Chapter 3.2; Chapter 4
2.2 Maturity levels	A	Chapter 3.3; Chapter 4
2.3 Checkpoints	A	Chapter 3.4; Chapter 4
2.4 Test maturity matrix	A	Chapter 3.5, 3.6
3.1 Target situation	A	Chapter 3.8
3.2 Clusters	A	Chapter 3.7; Appendix Creating new Clusters
3.3 Improvement suggestions	A	Chapter 3.9; Chapter 4
3.4 Enablers	A	Chapter 3.10; Chapter 4
4.1 Business drivers	A	Chapter 6.1
4.2 Translating the drivers	A	Chapter 6.2
4.3 Adapting the model	A	Chapter 6.3

## Contact EXIN

[www.exin.com](http://www.exin.com)

