



ISTQB® Model-Based Tester in a Nutshell

ISTQB® Marketing Working Group

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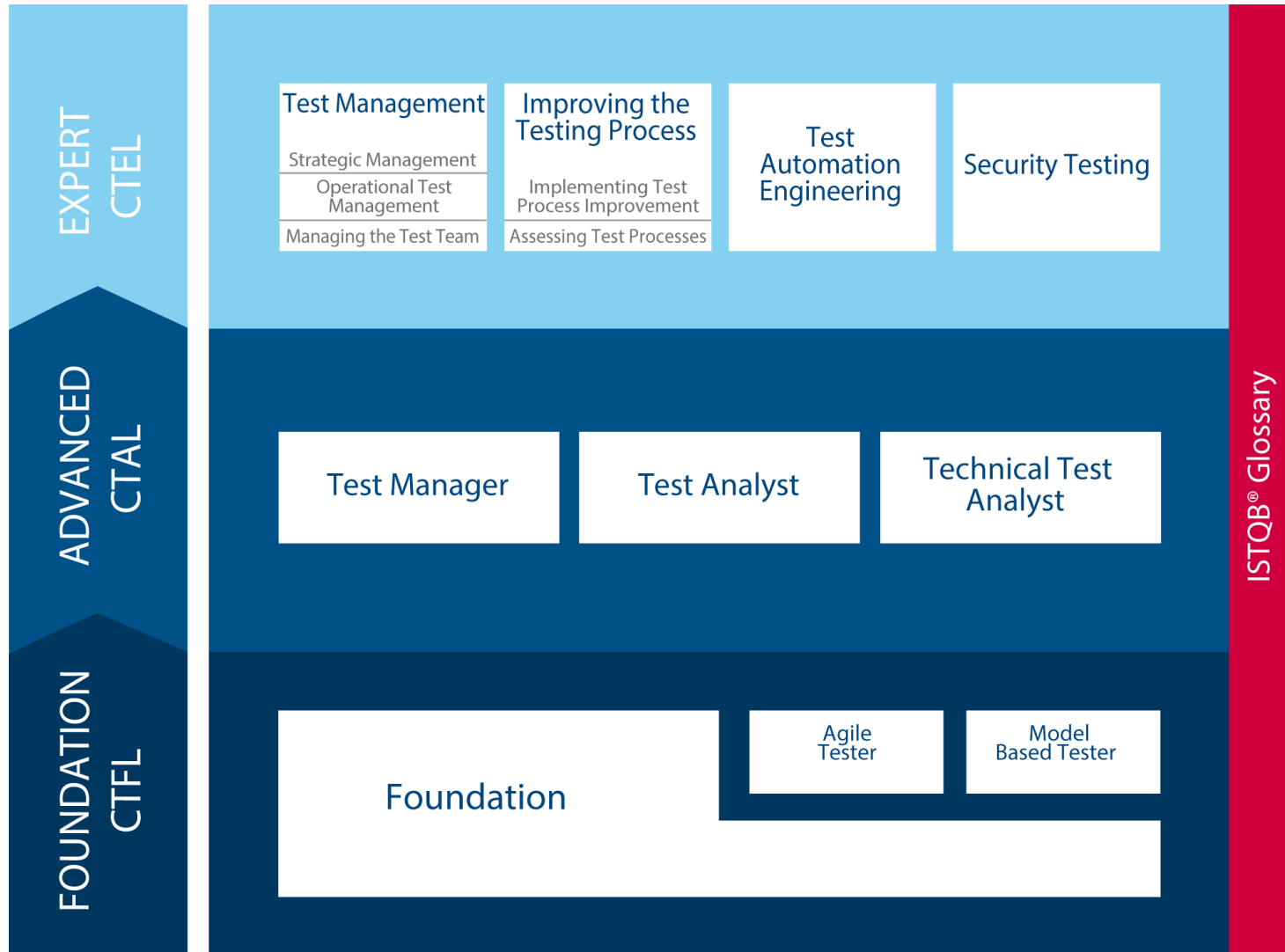
WHAT IS THE ISTQB®?

- ISTQB®: International Software Testing Qualifications Board (www.istqb.org):
 - Non-profit association
 - Founded in 2002
 - Headquartered in Belgium
 - Has own constitution, rules and regulations
 - Composed of volunteer international Testing Experts
 - Responsible for the “ISTQB® Certified Tester” scheme worldwide
- ISTQB® is the world’s leading organization for Software Testing Certification

*Advancing
the software testing profession*

“To continually improve and advance the software testing profession by:
Defining and maintaining a Body of Knowledge which allows testers to be certified based on best practices, connecting the international software testing community, and encouraging research.”

ISTQB® certification scheme



Why a Model-Based Tester certification at foundation level?

- Model-based testing is an innovative test approach to improve effectivity and efficiency of the test process.
- A model-based tester on a project uses models to drive test analysis and design, and keeps advantage of the models for other testing activities such as test implementation and reporting.
- ISTQB® Model-Based Tester certification complements the core foundation level as a specialist module.
- It provides a practical and easy entry to the MBT approach.

The ISTQB glossary of software testing terms defines Model-Based Testing as « Testing based on or involving models »

- Business Outcome 1:
Collaborate in a model-based testing team using standard terminology and established MBT concepts, processes and techniques.

=> Challenge: Since MBT was born, many terminology were created and used which lead to inefficient discussion about what MBT really is, before any productive realization could start.

=> Solution: The ISTQB® certifications deliver a de facto standard for general testing terminology and integrated to that the terminology for model-based testing. This will make it much easier for users to start with MBT based on a common language within their organization



- Business Outcome 2:
Apply and integrate model-based testing in a test process.

=> Challenge: needs process preconditions and prerequisites, that it can realize its full potential to improve efficiency and effectiveness of the test process. As long as this environment is not known and can not be calculated, people tend to avoid a new technology because of economic risks.

=> Solution: The ISTQB® MBT certification shows which prerequisites are mandatory for a successful start with MBT. Furthermore it shows how MBT could fit well to specific development processes and what should be taken into account to adapt a development process for MBT.



- Business Outcome 3:
Effectively create and maintain MBT models using established techniques and best practices of model-based testing.

=> Problem :The quality of models is essential for a success of MBT in a given Project. Many users do not have the knowledge to decide about the quality and therefore to have a criteria on hand to decide when the model is finished for a given task.

=> Solution: The ISTQB® MBT certification gives a practical approach to create MBT models and to assess their quality. It shows a perspective of the modelling paradigm as a process which helps people to correct their approach as soon as possible if it goes in the wrong direction.



- Business Outcome 4:
Select, create and maintain test artifacts from MBT models considering risk and value of the features tested.

=> Challenge: MBT is a powerful approach to provide test artifacts. It can deliver many kind of artifacts for the testing process which can be confusing for users to select the right ones.

=> Solution: The ISTQB® MBT certification delivers practical criteria on which artifacts on which level will be useful and how they can be used to improve the test process. It shows best practices how to select the most valuable information and how to take advantage of MBT's leading edge capability of creating the test process artefacts automatically..



- Business Outcome 5:
Support the organization to improve its quality assurance process to be more constructive and efficient.
- => Challenge: Testing if it is sued on an analytical approach just to verify the functionality of a given testobject at the end of development is expensive and should be reduced to a more constructive approach to avoid errors at the beginning of or during the development process. Furthermore, in many test processes there is poor understanding of the coverage and quality of the test.
- => Solution: MBT has the potential to support such constructive approach. MBT extensions shows, how to address and use this potential and to assure that the software artifact is build with a high quality even from the beginning of the project. The advanced systematics of a model-based test design compared to classical test design methods guarantees a well known understanding of the test coverage and test quality as well as means for defining and scaling the needed quality level of the test.



Content structure

ISTQB® FOUNDATION LEVEL MODEL-BASED TESTER				
Introduction to Model-Based Testing	MBT Modeling	Selection Criteria for Test Case Generation	MBT Test Implementation and Execution	Evaluating and Deploying an MBT Approach
Objectives and Motivations for MBT	MBT Modeling activities	Classification of MBT Test Selection Criteria	Specifics of MBT Test Implementation and Execution	Evaluate an MBT Deployment
MBT Activities and Artifacts	Languages for MBT Models	Applying Test Selection Criteria	Activities of Test Adaptation in MBT	Manage and Monitor the Deployment of an MBT Approach
Integrating MBT into the Software Development Lifecycles	Good Practices for MBT Modeling Activities			

Learning objectives, K levels and timing

- 36 learning objectives + 10 glossary terms
- 2 days for training
- Exam: 40 questions – 60 minutes - Candidates must score 65% or above (26 or more points) to pass the exam.

	Timing	K1	K2	K3	TOTAL
Chap. 1	90 mins	1	5		6
Chap. 2	250 mins	4	7	2	13
Chap. 3	205 mins	1	4	2	7
Chap. 4	120 mins		3	1	4
Chap. 5	60 mins	3	3		6
TOTAL	725 mins	13	22	5	36



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