THE MODEL-BASED TESTING SYLLABUS AT ISTQB

© Matthias Heyde / Fraunhofer FOKUS

Ina Schieferdecker

A-MOST Workshop at ICST 2016, April 11, 2016, Chicago

STATUS OF MODEL-BASED TESTING IN ENGINEERING

1. MBT is a hyped topic in research …

2. … but not yet a hyped topic in industrial application

3. MBT is not yet established on the market on a wider scale and it is not working like Agile Testing, Mobile Testing, et al

→ Increasing MBT industrial acceptance and deployment through growing networks of practitioners and industrial applicants

→ Educate, train and certify people on MBT

→ The ISTQB Certified Tester Model-Based Testing Essentials

Fraunhofer
FOKUS

1. 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 from almost 50 National Boards
   – Responsible for the "ISTQB® Certified Tester" scheme worldwide
   – Already over 600.000 exams and 450.000 certificates worldwide

2. ISTQB® is a world's leading organization for Software Testing Certification
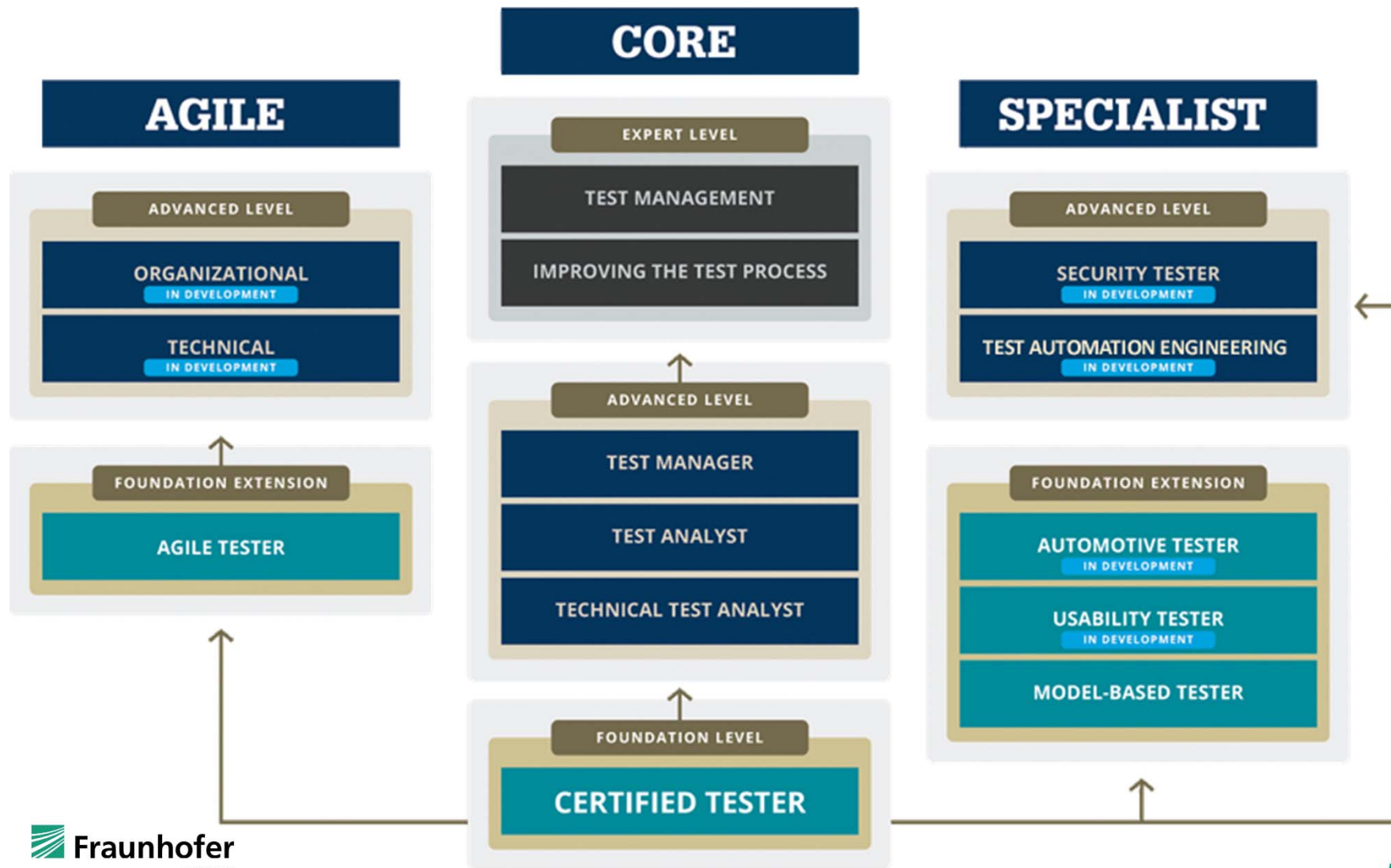
Advancing
the software testing profession

ISTQB VALUE CREATION CHAIN

- Working Groups: http://www.istqb.org/about-istqb/working-groups.html
- Member Boards: http://www.istqb.org/istqb-where-you-are/your-local-member-board.html
- Training Providers: http://www.istqb.org/istqb-where-you-are/find-a-training-provider.html
- Exam Providers: http://www.istqb.org/istqb-where-you-are/find-an-exam-provider.html
- ISTQB® Partners: http://www.istqb.org/partner/istqb-partners.html

Fraunhofer

FOKUS

© GTB

1. Model-based testing is an innovative test approach to improve effectivity and efficiency of the test process.

2. 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.

3. ISTQB® Model-Based Tester certification complements the core foundation level as a specialist module.

4. 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 »

Fraunhofer
FOKUS

MBT COURSE OBJECTIVES

1. In general, an ISTQB Certified Tester Model-Based Testing Essentials has acquired the necessary skills to successfully contribute to MBT projects in a given context.
    –   Practical modeling approach (excercises, …)
    –   On a foundation level
    –   On a technical level

2. Target audience – practitioners rather than enablers
    –   Main target: test analysts
    –   but also: test and project managers, analysts, quality engineers, et al

Fraunhofer
FOKUS

MBT SYLLABUS BUSINESS OBJECTIVES

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

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

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

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

5. Support the organization to improve its quality assurance process to be more constructive and efficient.

MBT SYLLABUS OVERVIEW

ISTQB®
FOUNDATION LEVEL
MODEL-BASED TESTER

Introduction to Model-Based Testing	MBT Modeling	Selection Criteria for Test Case Generation	MBT Test 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 Generation and Execution	Evaluate an MBT Deployment
MBT Process	Languages for MBT Models	Applying Test Selection Criteria	MBT Test Adaptation	Manage and Monitor the Deployment of an MBT Approach
Integrating MBT into the Software Development Lifecycles	Good Practices for MBT Modeling Activities			

9

SELECTED NUMBERS ON MBT SYLLABUS

- 2 days for training: 36 learning objectives + 10 glossary terms + 5 business outcomes

- 60 min examination: 40 questions – Candidates must score 65% or above (26 or more points) to pass the exam.
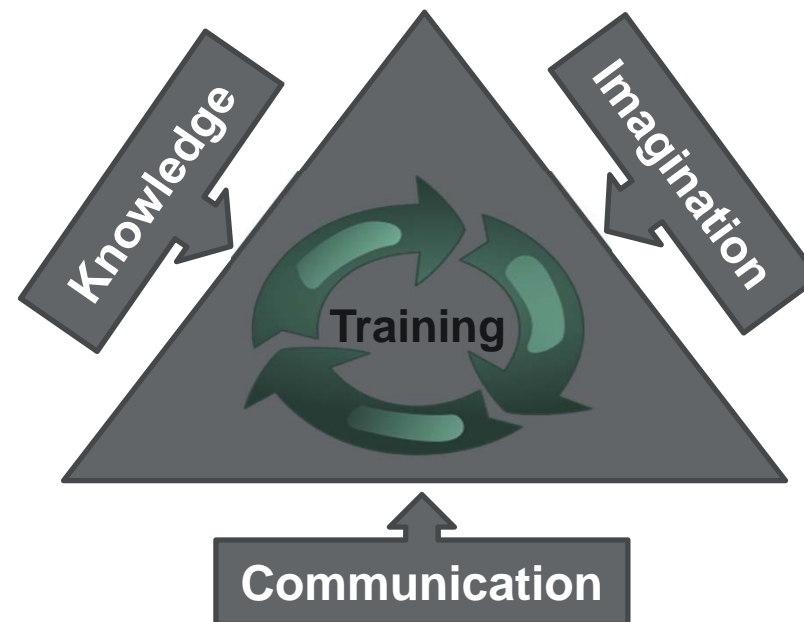
	Timing	K1	K2	K3	TOTAL
Chap. 1	90 mins	1	5		6
Chap. 2	250 mins	4	7	2	13
Chap. 3	205 mins	1	4	2	7
Chap. 4	120 mins		3	1	4
Chap. 5	60 mins	3	3		6
TOTAL	**725 mins**	**13**	**22**	**5**	**36**

K1: Remember, K2: Understand, K3: Apply

Fraunhofer FOKUS

MBT is not self-propelling!

- Requires access to and acceptance from MBT communities
- Requires providers with specific industrial MBT expertise
- Requires a network of providers with the objective to foster MBT with MBT courses

A GOOD MBT TESTER HAS MORE THAN KNOWHOW, HE/SHE HAS ADEQUATE SKILLS

Knowledge

Imagination

Training

Communication

Fraunhofer FOKUS

CONTACT

**Fraunhofer-Institut für
Offene Kommunikationssysteme
FOKUS**

Kaiserin-Augusta-Allee 31
10589 Berlin, Germany

info@fokus.fraunhofer.de

www.fokus.fraunhofer.de

Director

Prof. Dr. Ina Schieferdecker
Tel. +49 (30) 34 63 -7241
ina.schieferdecker@fokus.fraunhofer.de

Fraunhofer

FOKUS