

Introducing ISTQB Agile Foundation

Extending the ISTQB Program's Support Further



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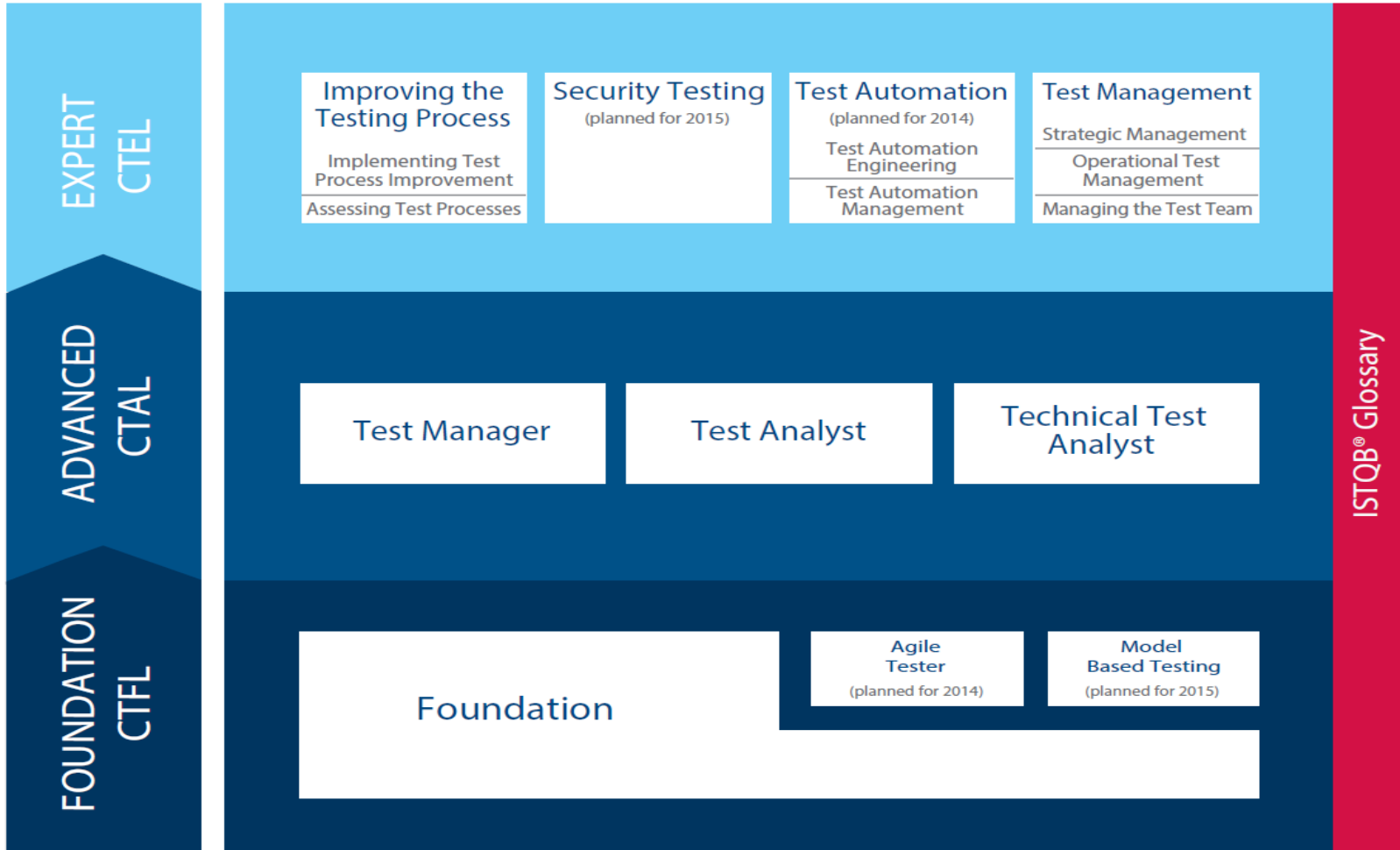


Introduction

- ⊕ The ISTQB has always recognized different software development lifecycles in syllabi
 - ⊕ Sequential, incremental, and agile
 - ⊕ Foundation, Advanced, and Expert
- ⊕ The new syllabus extends the Foundation
- ⊕ Two-day focus on testing in agile projects
- ⊕ Syllabus written in 2013
- ⊕ Draws on established testing and agile best practices
- ⊕ Let's look at learning objectives, content, sample exam questions, and exam structure...



Fitting the Extensions in the Program



ISTQB® Glossary



The Contribution of Agile Testers

- ❖ Agile testers should:
 - ❖ Collaborate in an agile team, being familiar with agile principles and practices
 - ❖ Adapt existing testing experience, knowledge, and best practices
 - ❖ Support the agile team in planning test related activities
 - ❖ Apply relevant test methods and techniques
 - ❖ Assist in test automation
 - ❖ Help business stakeholders define understandable and testable user stories and acceptance criteria
 - ❖ Work and share information with other team members
- ❖ An ISTQB Agile Tester should work effectively within an agile team and environment



The Content of the Syllabus

- ❖ Agile software development
 - ❖ The fundamentals of agile software development
 - ❖ Aspects of agile approaches
- ❖ Fundamental agile testing principles, practices, and processes
 - ❖ The differences between testing in traditional and agile approaches
 - ❖ Status of testing in agile projects
 - ❖ Role and skills of a tester in an agile team
- ❖ Agile testing methods, techniques, and tools
 - ❖ Agile testing methods
 - ❖ Assessing product quality risks and estimating test effort
 - ❖ Techniques in agile projects
 - ❖ Tools in agile projects



Understanding LOs and K Levels

- ❖ In the syllabus, you'll see learning objectives and knowledge levels
- ❖ These indicate what you need to know and the depth of knowledge required for the exam
- ❖ The knowledge levels in the syllabus are:
 - ❖ K1: remember, recognize, recall
 - ❖ K2: understand, explain, give reasons, compare, classify, summarize
 - ❖ K3: apply



The Exam Structure

- ⊕ Forty multiple-choice questions, 65% or more to pass
- ⊕ Thirteen questions for Chapter 1
 - ⊕ K1 = 5 questions
 - ⊕ K2 = 7 questions
 - ⊕ K3 = 1 question
- ⊕ Twelve questions for Chapter 2
 - ⊕ K1 = 1 question
 - ⊕ K2 = 11 questions
 - ⊕ K3 = 0 questions
- ⊕ Fifteen questions for Chapter 3
 - ⊕ K1 = 4 questions
 - ⊕ K2 = 4 questions
 - ⊕ K3 = 7 questions
- ⊕ ASTQB has an exam ready now, awaiting release of the syllabus
- ⊕ The K-level distribution is more challenging than the CTFL exam



Learning Objectives of Chapter 1

- ❖ The fundamentals of agile software development
 - ❖ Recall the basic concept of agile based on the Agile Manifesto (K1)
 - ❖ Understand the advantages of the whole-team approach (K2)
 - ❖ Understand the benefits of early and frequent feedback (K2)
- ❖ Aspects of agile approaches
 - ❖ Recall agile software development approaches (K1)
 - ❖ Write user stories in collaboration with development, business representative and product owner (K3)
 - ❖ Understand how retrospectives can be used as a mechanism for process improvement in agile projects (K2)
 - ❖ Understand the use and purpose of continuous integration (K2)
 - ❖ Know the differences between iteration and release planning, and how a tester adds value to each of activity (K1)



Chapter 1 Example Exam Question

During an iteration planning meeting, the team members are sharing thoughts about a user story. The product owner says that the customer should have one screen to enter information. The developer explains that there are technical limitations on the feature due to the amount of information captured on the screen. Another developer says that there are performance risks as the information will be stored in an external database.

Which of the following would best represent a tester's contribution to this discussion?

- A. The tester suggests a set of testable acceptance criteria for the user story
- B. The tester states that usability is more important than performance
- C. The tester requests that performance acceptance criteria follow an industry standard
- D. The tester advises the group that the screen for the user story should be a single page to reduce test automation effort



Learning Objectives of Chapter 2

- ❖ Differences between testing in traditional and agile approaches
 - ❖ Describe the differences between testing activities in agile projects and non-agile projects (K2)
 - ❖ Describe how coding and testing activities are integrated in agile (K2)
 - ❖ Describe the role of independent testing in agile projects (K2)
- ❖ Status of testing in agile projects
 - ❖ Describe the basic set of work products used to communicate the status of testing in an agile project, including test progress and product quality (K2)
 - ❖ Describe the process of evolving tests across multiple iterations and explain why test automation is important to manage regression risk in agile projects (K2)
- ❖ Role and skills of a tester in an agile team
 - ❖ Understand the skills of a tester in an agile team (K2)
 - ❖ Understand the role of a tester within an agile team (K2)



Chapter 2 Example Exam Question

Consider the following activities

- i. to decide on user acceptance
- ii. to design, create, and execute appropriate tests
- iii. to schedule defect reports for analysis
- iv. to automate and maintain tests
- v. to improve program logic by pair programming

The role of a tester in an agile team includes:

- A. i and iii are correct; ii, iv, and v are incorrect
- B. ii and iii are correct; i, iv, and v are incorrect
- C. ii and iv are correct; i, iii, and v are incorrect
- D. ii and v are correct; i, iii, and iv are incorrect



Learning Objectives of Chapter 3 (1)

✦ Agile testing methods

- ✦ Recall the concepts of test driven development, acceptance test driven development and behavior driven development (K1)
- ✦ Recall the concepts of the test pyramid (K1)
- ✦ Summarize the testing quadrants and their relationships with testing levels and testing types (K2)
- ✦ For a given agile project, practice the role of a tester in Scrum team (K3)

✦ Assessing quality risks and estimating test effort

- ✦ Assess product quality risks within an agile project (K3)
- ✦ Estimate testing effort based on iteration content and product quality risks (K3)



Learning Objectives of Chapter 3 (2)

- ❖ Techniques in agile projects
 - ❖ Interpret relevant information to support testing activities (K3)
 - ❖ Explain to business stakeholders how to define testable acceptance criteria (K2)
 - ❖ Given a user story, write acceptance test driven development test cases (K3)
 - ❖ Write test cases, for both functional and non-functional aspects, using black box test design techniques based on given user stories (K3)
 - ❖ Execute exploratory testing to support the testing of an agile project (K3)
- ❖ Tools in agile projects
 - ❖ Recall different tools available to testers according to their purpose and to the activities in agile projects (K1)



Chapter 3 Example Exam Question

Why is it important to gain insight into the product's quality risks at the beginning of each iteration in an agile project?

- A. Programmers can eliminate the potential impact associated with related failures for each risk
- B. The scrum master can mitigate the quality risks prior to the start of programming
- C. The level of risk will affect the thoroughness of testing and the testing effort
- D. The product owner should reject any user stories that have a high level of quality risk



Is the Agile Extension for You?

- ❖ The target professionals are:
 - ❖ Testers experienced with traditional SDLCs
 - ❖ Entry-level testers with an interest in agile testing
 - ❖ Experienced developers with a lot to a little knowledge of testing who work in agile projects
- ❖ Roles include testers, test analysts, test engineers, test consultants, test managers, user acceptance testers, software developers
- ❖ The ISTQB Foundation certificate is a prerequisite



Exam Preparation Options

- ✦ Training is optional, as always in the ISTQB program
- ✦ RBCS has created a training course and submitted it for accreditation
- ✦ Training guidelines:
 - ▣ Two-day minimum
 - ▣ All K3 learning objectives require lecture, examples, and exercises
 - ▣ All K2 learning objectives require lecture and examples
 - ▣ All K1 learning objectives require lecture
- ✦ Books, other training courses, e-learning, and exam prep guides will follow



Conclusions

- ✦ The ISTQB program has extended its agile coverage
- ✦ The agile syllabus has three chapters with 27 learning objectives
- ✦ It covers the application of testing best practices in an agile project
- ✦ The exam is similar to the Foundation, but focused on understanding and application
- ✦ Training courses are available now, with other options coming soon
- ✦ The ASTQB has an exam ready now, which you can take as soon as the syllabus is formally released



To Contact RBCS

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