# ISTQB® in a Nutshell

## ISTQB® Marketing Working Group

**August 2014**

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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 its 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*

# ISTQB® VIDEOS

- ISTQB® Videos give you insights into the ISTQB® Certified Tester scheme

http://www.istqb.org/introduction-to-istqb.html

# ISTQB® VISION

"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® MISSION

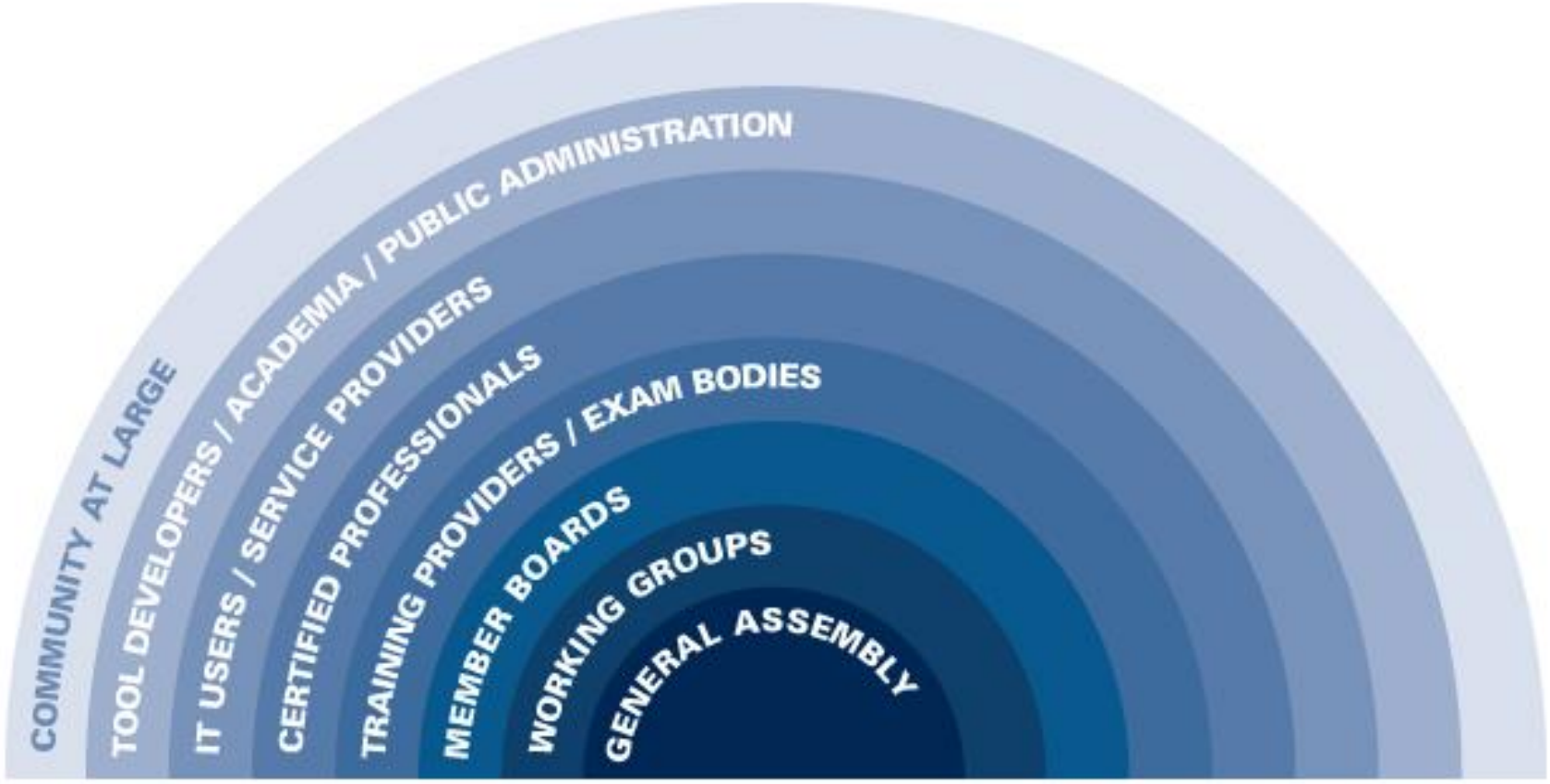
1) We promote the value of software testing as a profession to individuals and organizations.
2) We help software testers to be more efficient and effective in their work, through the certification of competencies.
3) We enable testers to progress their career through a Professionals' Code of Ethics and a multi-level certification pathway that provides them with the skills and knowledge they need to fulfil their growing responsibilities and to achieve increased professionalism.
4) We continually advance the Testing Body of Knowledge by drawing on the best available industry practices and the most innovative research, and we make this knowledge freely available to all.
5) We set the criteria for accrediting training providers, to ensure consistent delivery of the Body of Knowledge, worldwide.

# ISTQB® MISSION

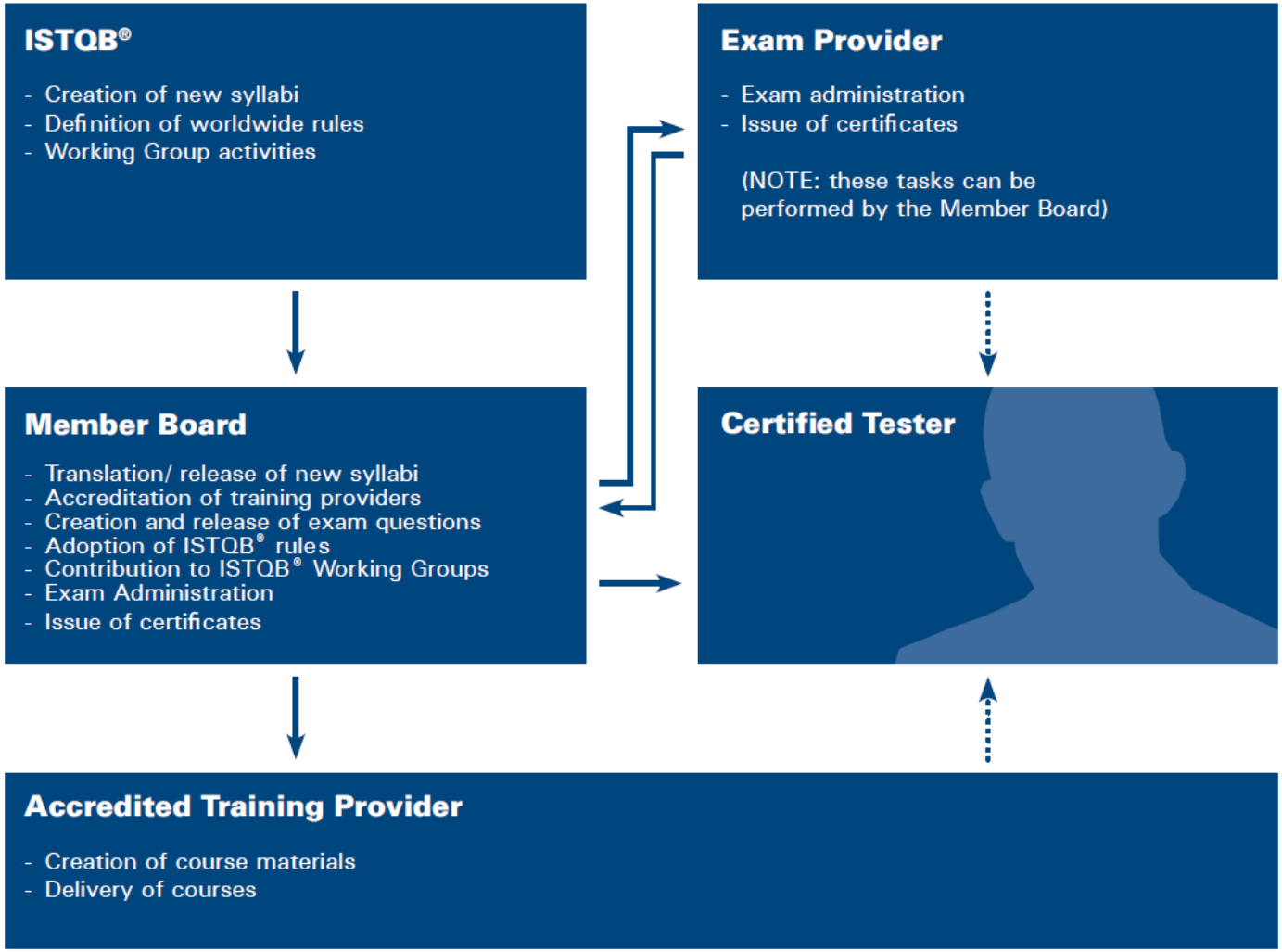
6) We regulate the content and coverage of exam questions, the examination process, and the issuing of certifications by official examination bodies.
7) We are committed to expanding software testing certifications around the world, by admitting member boards into the ISTQB®. These boards adhere to the constitution, bylaws, and processes defined by the ISTQB®, and participate in regular audits.
8) We nurture an open international community, committed to sharing knowledge, ideas, and innovations in software testing.
9) We foster relationships with academia, government, media, professional associations and other interested parties.
10) We provide a reference point against which the effectiveness of testing services can be evaluated, by maintaining our prominence as a respected source of knowledge in software testing.

# ISTQB® VALUES

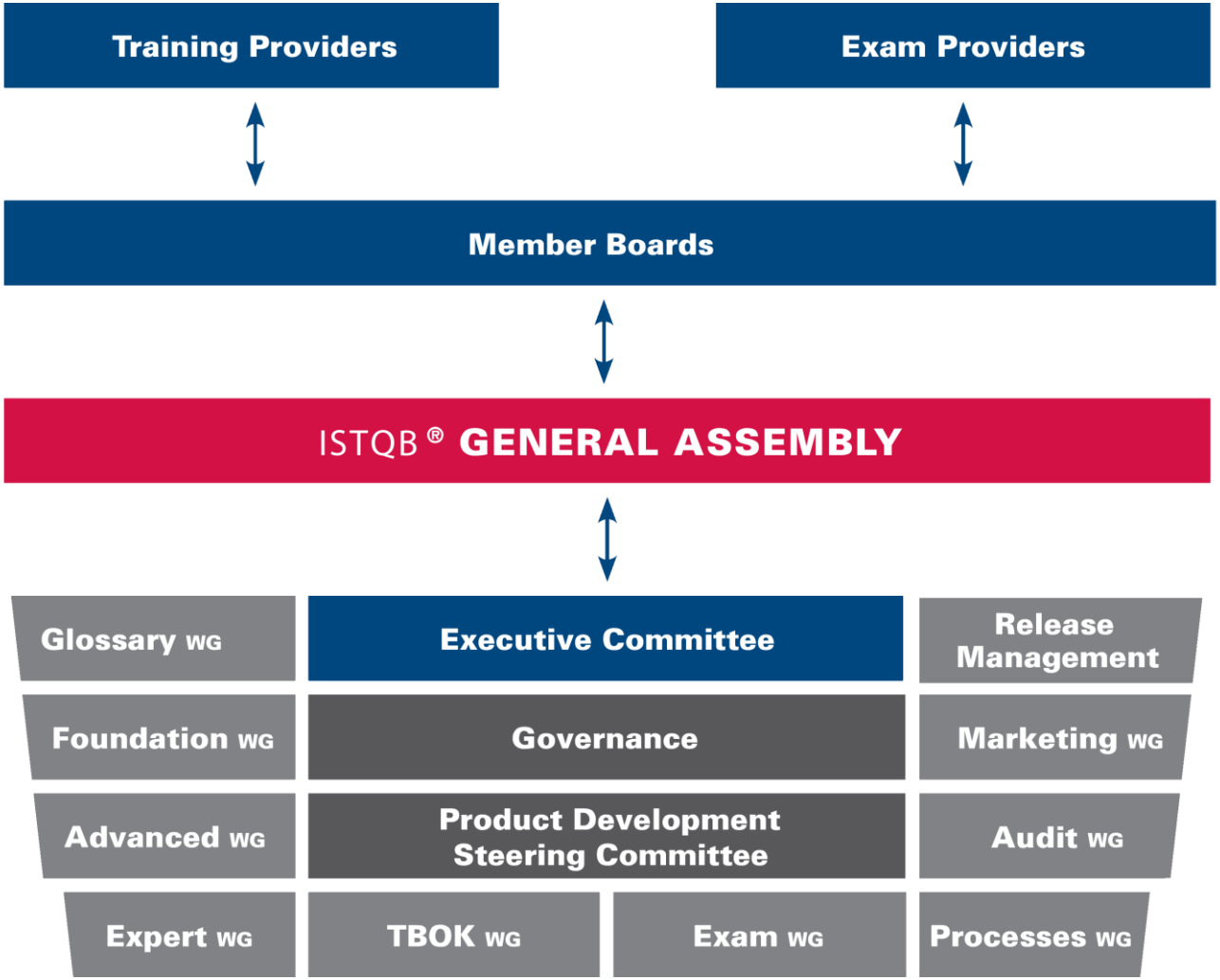
# ISTQB® VALUE CHAIN



# ISTQB® ECO-SYSTEM



# ISTQB® WORKING GROUPS (WGs)



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# SOFTWARE TESTING MARKET CHALLENGES
## *Shortage of Skilled Labor*

- Technavio, an independent technology research and advisory company, analyzed the key challenges faced by the Global Software Testing Services market, highlighting in particular the "Shortage of Skilled Labor"
  - The Global Pure Play Software Testing Services market is growing rapidly, thus increasing the demand for skilled labor. However, this has created a disparity in supply and demand, as a result of which, **sourcing and retaining skilled labor has become a challenge.**
  - The shortage of availability of required skills is now becoming a major challenge for the independent software testing organizations.

**Since the current educational system is not geared up to the required standards and demands of the market, this challenge is expected to have a bigger impact on the market in the future.**

(Global Software Testing Services Market 2011-2015, Technavio)

# ISTBQ® EFFECTIVENESS SURVEY

- As part of its commitment to continuous improvement and the advancement of the software testing profession, in 2013 ISTQB® conducted an international online survey for test engineers and managers.
- The survey was open from June to September 2013 and several thousand responses were received from almost 70 countries; in particular, respondents were:
  - 2855 test engineers
  - 779 test managers
- In the remainder of this presentation, references will be made to some key results of the survey
- The full report is available for free download from the ISTQB ® Web Site

# BENEFITS FOR PROFESSIONALS

- International recognition of acquired competencies and skills
- Authorized to use the “Certified Tester” logo (specifying the level of certification)
- Whole of career path support, from Foundation to Expert level

# BENEFITS FOR PROFESSIONALS - SURVEY

- Would you recommend the ISTQB® Foundation Level (CTFL) certification to your colleagues?

*Test Engineers*

Both Test Engineers and Test Managers are highly satisfied with the ISTQB® CTFL certifications and happy to recommend these to their colleagues (91% - Test Engineers, 94% - Test Managers).

*Test Managers*

# BENEFITS FOR COMPANIES

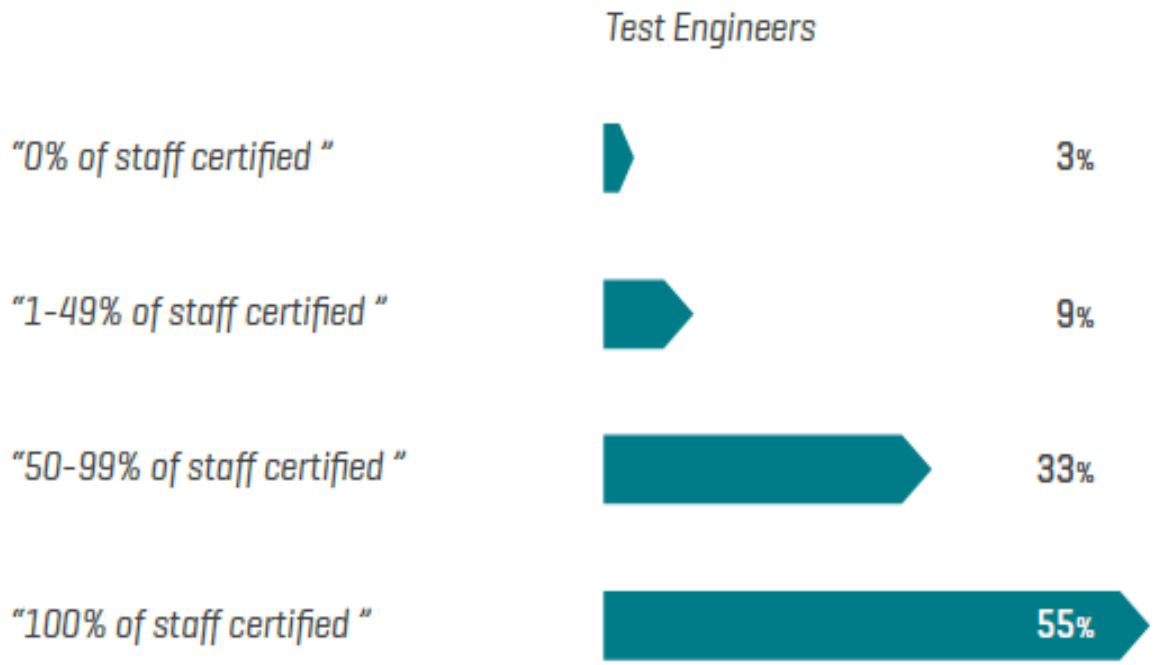
- ISTQB® certification can provide a competitive advantage for companies, promising a higher level of reliability of the applications being developed due to efficient and cost effective testing practices derived from the ISTQB® competencies

- Consulting companies with certified staff can offer higher-level services to customers, increasing revenues and brand value

- ISTQB® has defined a “Partner Program” for companies that engage a large number of certified testers

# BENEFITS FOR COMPANIES - SURVEY

- As a Test Manager, what percentage of your testing staff would you like to see certified at the ISTQB® Foundation Level?




Test Managers appear to see a high value in having their staff trained and certified. Around 88% of Test Managers would like to see more than half of their testing staff being certified at the ISTQB® Foundation Level. On average, the desired number of certified staff is 75%.

# BENEFITS FOR ATPs (Accredited Training Providers)

- Educational institutions and consulting companies may become an ISTQB® Accredited Trainer Provider according to processes and rules defined at the international level
- Accredited Training Providers ensure a high standing of training is delivered through having:
  - certified trainers
  - the content, quality and syllabus coverage of training materials checked by ISTQB® Boards
  - advance notice of changes to the ISTQB® Glossary and syllabi
- Accredited Training Providers are entitled to use relevant logos and are listed in the ISTQB® Website

# BENEFITS FOR ATPs - SURVEY

- How significant do you think the training was in your certification success?

*Test Engineers*

Almost 70% of the survey participants felt that formal training was a significant part of their certification success.

The ISTQB® provides strong support for training providers and accredited training will continue to be an integral part of certification success.

*Test Managers*

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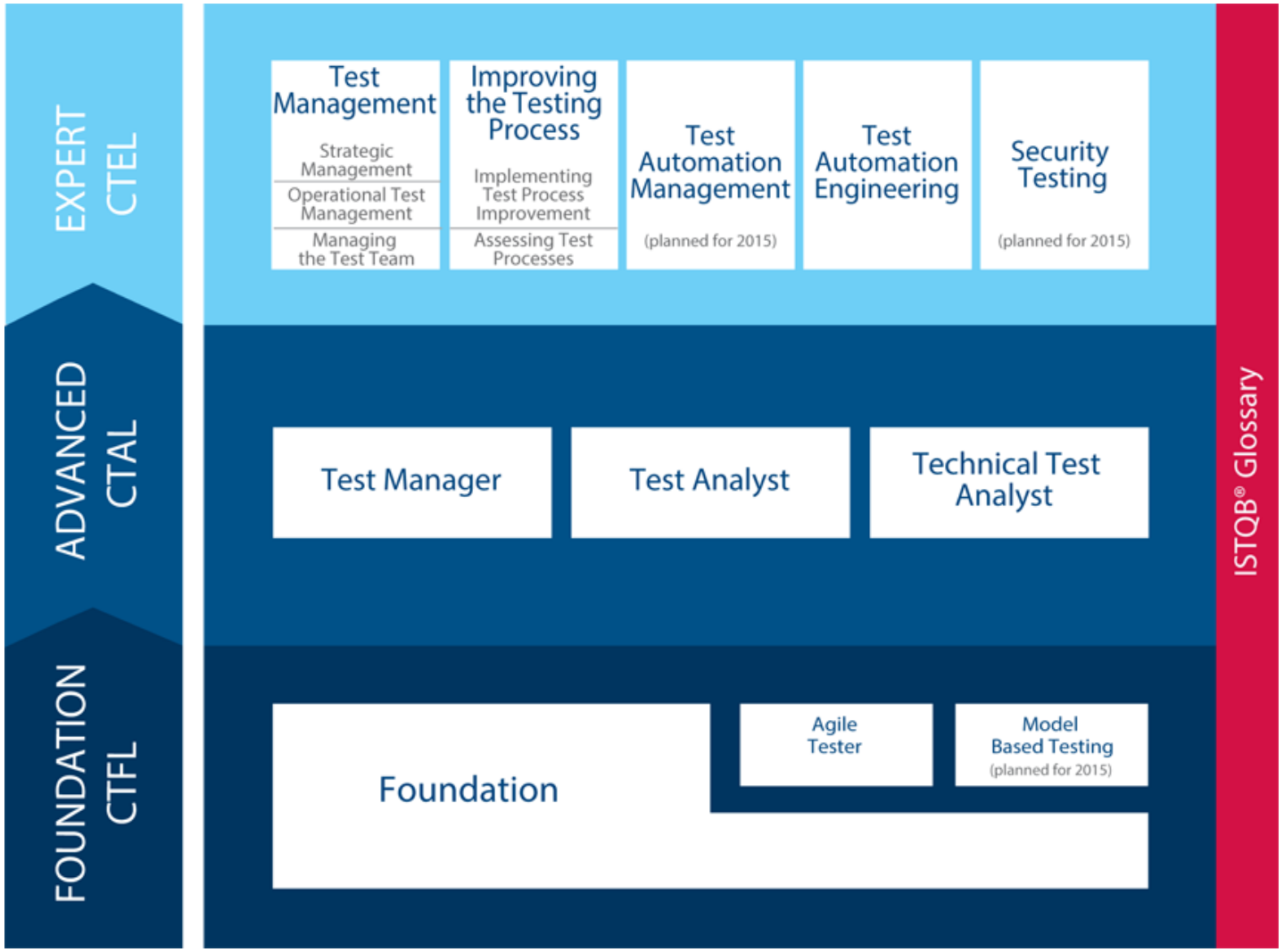
# ISTQB® SYLLABI AND GLOSSARY

- ISTQB® has defined three levels of syllabi:
  - Foundation
  - Advanced (Test Manager, Test Analyst, Technical Test Analyst)
  - Expert (Improving the Testing Process, Test Management, Test Automation Engineering, Test Automation Management, Security Testing, etc.)
- Syllabi are publicly available for download from the ISTQB® Website (http://www.istqb.org/downloads.html)
- Syllabi are written by testing experts and continuously reviewed and improved
- Terms used in the ISTQB® syllabi are defined in the ISTQB® Glossary (http://www.istqb.org/downloads/viewcategory/20.html)
- Syllabi and Glossary are translated in many languages by the ISTQB® Member Boards; please refer to their Websites to download free-of-charge the documents translated into local languages

# ISTQB® LEVELS AND SYLLABI



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# ISTQB® FOUNDATION LEVEL

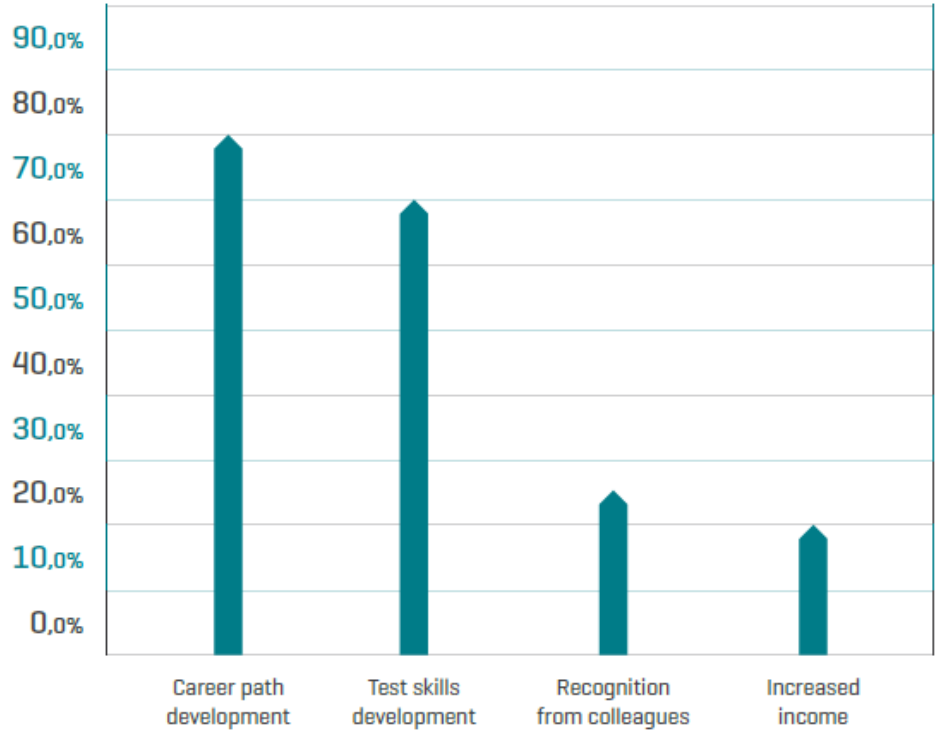
ISTQB® International Software Testing Qualifications Board

## ISTQB® – FOUNDATION LEVEL

| Fundamentals of Testing | Testing Throughout the Software Life Cycle | Static Techniques | Testing Design Techniques | Test Management | Tool Support for Testing |
|---|---|---|---|---|---|
| Why is Testing Necessary? | Software Development Models | Static Techniques and the Test Process | The Test Development Process | Test Organization | Types of Test Tools |
| What is Testing? | Test Levels | Review Process | Categories of Test Design Techniques | Test Planning and Estimation | Effective use of Tools: Potential Benefits and Risks |
| Seven Testing Principles | Test Types | Static Analysis by Tools | Specification-based Techniques (black-box) | Test Progress Monitoring and Control | Introducing a Tool into an Organization |
| Fundamental Test Process | Maintenance Testing | | Structure-based Techniques (white-box) | Configuration Management | |
| The Psychology of Testing | | | Experience-based Techniques | Risk and Testing | |
| Code of Ethics | | | Choosing Test Techniques | Incident Management | |

# BENEFITS FOT TEST ENGINEERS - SURVEY

- As a Test Engineer, what was your motivation in obtaining your ISTQB® CTFL certification?

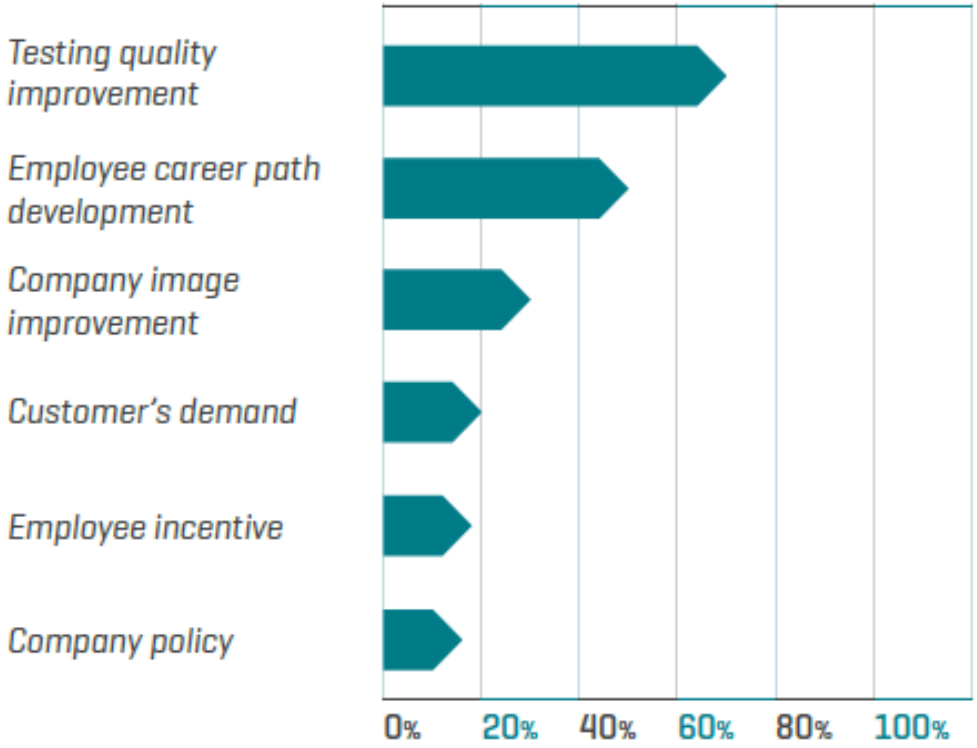



The majority of Test Engineers took the ISTQB® CTFL certification in order to enhance their career path (80%) and develop their testing skills (70%)

Some believe it will help them get more recognition from their colleagues (25%) or increase their income (20%).

# BENEFITS FOT TEST MANAGERS - SURVEY

- As a Test Manager, what was your motivation to have your employees achieve ISTQB® Foundation Level (CTFL) certification?




The majority of Test Managers believe that participating in the ISTQB® certification scheme will positively impact testing quality in their projects (75%), and will enable them to provide positive career path to their employees (55%).

Some Test Managers believe their company image will improve (30%) as a result of having their employees participate in the ISTQB® certification.

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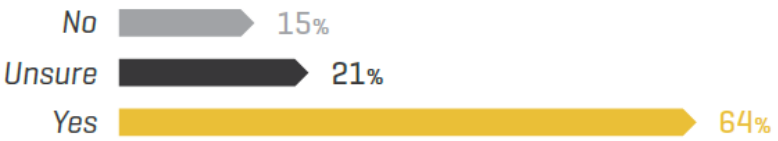
# ISTQB® EXTENSIONS

- In order to satisfy the increasing demand for vertical testing competences, ISTQB® has introduced the concept of “Extension”
- An “Extension” is a training and certification module focused on a specific topic, for instance:
  - Domain-specific testing practices
  - Specific Testing Techniques
  - Specific Testing Methods
- The ISTQB® Foundation Level Certification is a pre-requisite
- The first extension is focused on “Agile Tester”, released in June 2014
- MBT (Model-Based Testing) extension is also in road-map

# FOUNDATION LEVEL AGILE TESTER - SURVEY

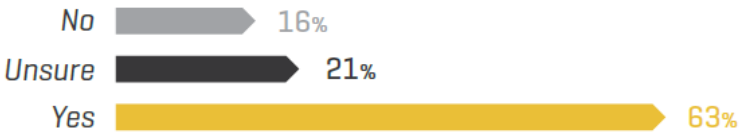
- Would you be interested in Agile Tester certification?

*Test Engineers*




Approximately 85% of the respondents are definitely of possibly interested in Agile testing certification. With the planned release in early 2014 of the Agile tester certification extension to the Foundation Level, ISTQB® is well-positioned to respond to the expected demand.

*Test Managers*



# 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

# ISTQB® FOUNDATION LEVEL
## *AGILE TESTER*

ISTQB®
FOUNDATION LEVEL
AGILE TESTER

| | | |
|---|---|---|
| Agile Software Development | Fundamental Agile Testing Principles, Practices and Processes | Agile Testing Methods, Techniques and Tools |
| The Fundamentals of Agile Software Development | The Differences between Testing in Traditional and Agile Approaches | Agile Testing Methods |
| Aspects of Agile Approaches | Status of Testing in Agile Projects | Assessing Quality Risks and Estimating Test Effort |
| | Role and Skills of a Tester in an AgileTeam | Techniques in Agile Projects |
| | | Tools in Agile Projects |

# LEARNING OBJECTIVES OF CHAPTER 1

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

# 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
  - Describe how coding and testing activities are integrated in agile
  - Describe the role of independent testing in agile projects
- 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
  - Describe the process of evolving tests across multiple iterations and explain why test automation is important to manage regression risk in agile projects
- Role and skills of a tester in an agile team
  - Understand the skills of a tester in an agile team
  - Understand the role of a tester within an agile team

# LEARNING OBJECTIVES OF CHAPTER 3 (1)

- Agile testing methods
  - Recall the concepts of test driven development, acceptance test driven development and behavior driven development
  - Recall the concepts of the test pyramid
  - Summarize the testing quadrants and their relationships with testing levels and testing types
  - For a given agile project, practice the role of a tester in Scrum team
- Assessing quality risks and estimating test effort
  - Assess product quality risks within an agile project
  - Estimate testing effort based on iteration content and product quality risks

# LEARNING OBJECTIVES OF CHAPTER 3 (2)

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

# 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 pre-requisite

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# ADVANCED LEVEL - SURVEY

- How important do you think it is to obtain the ISTQB® Advanced Level (CTAL) certification?

Test Engineers

| | |
|---|---|
| Not significant at all | 4% |
| Not very significant | 7% |
| Neutral | 26% |
| Significant | 42% |
| Very Significant | 21% |

Approximately 85% of the respondents are definitely of possibly interested in Agile testing certification. With the planned release in early 2014 of the Agile tester certification extension to the Foundation Level, ISTQB® is well-positioned to respond to the expected demand.

Test Managers

| | |
|---|---|
| Not significant at all | 2% |
| Not very significant | 6% |
| Neutral | 22% |
| Significant | 46% |
| Very Significant | 24% |

# ISTQB® ADVANCED LEVEL

- ISTQB® Advanced Level is composed of three independent modules:
  - Test Manager (AL-TM)
  - Test Analyst (AL-TA)
  - Technical Test Analyst (AL-TTA)

- The ISTQB® Foundation Level Certification is a pre-requisite for all of them

- When achieving all the three Advanced Modules, a “Full Advanced” certificate is issued

# ISTQB® ADVANCED LEVEL
## *TEST MANAGER (AL-TM)*

ISTQB® International Software Testing Qualifications Board

**ISTQB® – ADVANCED LEVEL TEST MANAGER**

| Testing Process | Test Management | Reviews | Defect Management | Improving the Testing Process | Test Tool and Automation | People Skills |
|---|---|---|---|---|---|---|
| Test Planning, Monitoring and Control | Risk-based Testing | Management Reviews and Audits | Defect Lifecycle | Test Improvement Process | Tool Selection | Individual Skills |
| Test Analysis and Design | Test Documentation | Managing Reviews | Defect Report Information | Improving the test-ing process with CMMi,TPI,CTP,STEP | Tool Lifecycle | Test Team Dynamics |
| Test Implementation and Execution | Test Estimation and Test Metrics | Metrics for reviews | Assessing Process Capability with Defect Report Info | | Tool Metrics | Fitting Testing Within an Organization |
| Evaluating Exit Criteria and Reporting | Business Value of Testing | Managing Formal Reviews | | | | Motivation |
| Test Closure Activities | Distributed, Outsourced and Insourced Testing | | | | | Communication |
| | Managing the Application of Industry Standards | | | | | |

# ISTQB® ADVANCED LEVEL
## *TEST ANALYST (AL-TA)*

ISTQB® International Software Testing Qualifications Board

**ISTQB® – ADVANCED LEVEL TEST ANALYST**

| Testing Process | Test Management | Test Techniques | Testing Software Quality Characteristics | Reviews | Defect Management | Test Tools |
|---|---|---|---|---|---|---|
| Testing in the Software Development Lifecycle | Test Progress Monitoring and Control | Specification-Based Techniques | Accuracy Testing | Using Checklist in Reviews | Defect Report Fields | Test Design Tools |
| Test Planning, Monitoring and Control | Distributed, Outsourced and Insourced Testing | Defect-Based Techniques | Suitability Testing | | Defect Classification | Test Data Preparation Tools |
| Test Analysis and Design | Risk Based Testing | Experience-Based Techniques | Interoperability Testing | | Root Cause Analysis | Automated Test Execution Tools |
| Test Implementation and Execution | | | Usability Testing | | | |
| Evaluating Exit Criteria and Reporting | | | Accessibility Testing | | | |
| Test Closure Activities | | | | | | |

# ISTQB® ADVANCED LEVEL
## *TECHNICAL TEST ANALYST (AL – TTA)*

ISTQB® International Software Testing Qualifications Board

**ISTQB® – ADVANCED LEVEL TECHNICAL TEST ANALYST**

| Risk Based Testing | Structure-Based Testing | Analytical Techniques | Quality Characteristics for Technical testing | Reviews | Test Tools and Automation |
|---|---|---|---|---|---|
| Risk Identification | Condition Testing | Static Analysis | General Planning Issues | Using Checklist in Reviews | Integration and Information Interchange |
| Risk Assessment | Modified Condition/ Decision Coverage (MC/DC) Testing | Dynamic Analysis | Security & Reli-ability Testing | | Defining the Test Automation Project |
| Risk Mitigation | Path Testing | | Performance Testing | | Specific Test Tools |
| | API Testing | | Resource Utilization | | |
| | Selecting a Structure-based Technique | | Maintainability Testing | | |
| | | | Portability Testing | | |

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# ISTQB® EXPERT LEVEL

- For ISTQB®, Expert really means Expert
  - “A person with the special skills and knowledge representing mastery of a particular testing subject.
  - Being an expert means possessing and displaying special skills and knowledge derived from training and experience.“

- Clearly stated expectations and business outcomes are established for each subject covered at Expert Level

# EXPERT LEVEL - SURVEY

- Do you plan to obtain an ISTQB® Expert level certification in next 3 years?

*Test Engineers*

More than 75% of respondents, spanning Test Engineers and Test Managers, are definitely or possibly interested in the expert level certifications. ISTQB® is working to make training and exams available as soon as possible to meet expected demand.

*Test Managers*

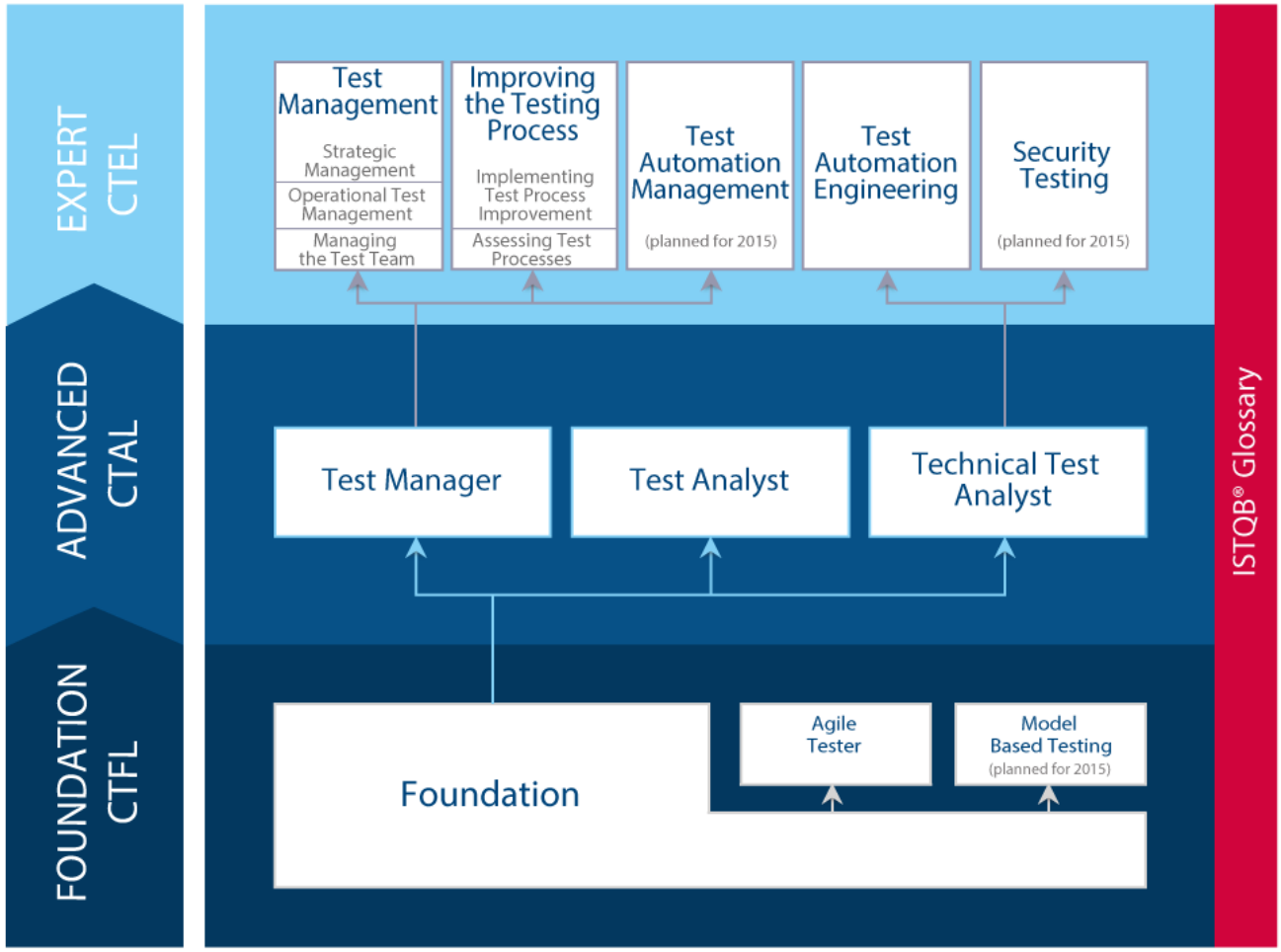
# STATUS OF EXPERT LEVEL SYLLABI

ISTQB®
Expert Level
Syllabi

| Module: | Status: |
| --- | --- |
| Improving the Testing Process | Approved (June 2010) |
| Test Management | Approved (June 2011) |
| Test Automation Engineering | Approved (July 2014) |
| Test Automation Management | In development (Planned for 2015) |
| Security Testing | In development (Planned for 2015) |

# PRE-REQUISITES FOR EXPERT LEVEL

In the following, pre-conditions allowing to take Expert Level exams are shown:



# ISTQB® EXPERT LEVEL
## *TEST MANAGEMENT*

- The Expert Module “Test Management” is composed of three parts:
  - Strategic Test Management
  - Operational Test Management
  - Managing the Test Team

**TEST MANAGEMENT**

| STRATEGIC TEST MANAGEMENT | OPERATIONAL TEST MANAGEMENT | MANAGING THE TEST TEAM |
|---|---|---|

# ISTQB® EXPERT LEVEL
## *STRATEGIC TEST MANAGEMENT*

ISTQB® – EXPERT LEVEL TEST MANAGEMENT – PART 1 - STRATEGIC TEST MANAGEMENT

| Missions, Policies, Strategies and Goals | Evaluating Effectiveness & Efficiency | Managing Across the Organization | Managing External Relationships | Domain and Project Factors |
|---|---|---|---|---|
| Missions, Policies, Metrics of Success | Effectiveness, Efficiency and Satisfaction Metrics for the Test Policy Objectives | Integrating Tools Across the Organization | Merging Test Strategies with Third Party Organizations | Test Management Considerations for Lifecycle Models |
| Test Strategies | | Quality Manage-ment & Testing | | Managing Partial Lifecycle Models |
| Alignment of Test Policy and Strategy Within Organization | | | | |

# ISTQB® EXPERT LEVEL
## *OPERATIONAL TEST MANAGEMENT*

ISTQB® – EXPERT LEVEL TEST MANAGEMENT – PART 2 – OPERATIONAL TEST MANAGEMENT

| Managing External Relationships | Project Management Essentials | Test Project Evaluation & Reporting | Domain and Project Factors | Evaluating Effectiveness & Efficiency |
|---|---|---|---|---|
| Types of External Relationships | Estimating Effort | Tracking Information | Release Considerations | Project Retrospectives |
| Contractual Issues | Balancing Quality Schedule, Budget and Features Implemented | Internal Reporting | | |
| Communication Strategies | | External Reporting | | |
| Integrating from External Sources | Performing Risk Assessment | Test Results Reporting and Interpretation | | |
| | Monitoring and Controlling a Test Project | Statistical Quality Control Techniques | | |

# ISTQB® EXPERT LEVEL
## *MANAGING THE TEST TEAM*

ISTQB®
EXPERT LEVEL
TEST MANAGEMENT – PART 3 – MANAGING THE TEST TEAM

- Managing the Test Team
  - Building the Test Team
  - Developing the Test Team
  - Leading the Test Team
- Managing Across the Organization
  - Advocating for the Test Team
  - Placing the Test Team in the Organization
  - Creating and Building Stakeholder Relationships
  - Handling Ethical Issues

- The Expert Module “Improving the Testing Process” is composed of two parts:
  - Assessing Test Processes
  - Implementing Test Process Improvement

# ISTQB® EXPERT LEVEL
## *ASSESSING TEST PROCESSES*

ISTQB® – EXPERT LEVEL IMPROVING THE TESTING PROCESS – PART 1- ASSESSING TEST PROCESSES

| Context of Improvement | Model based Improvement | Analytical based Improvement | Selecting the Approach | Process for Improvement |
|---|---|---|---|---|
| Why improve? | SW Models (CMMI, ISO 15504) | Causal Analysis | Selection of Test Process Improvement | Initiating & Diagnosing the Situation |
| What can be Improved? | Test Process Models (TPI NEXT, TMMi) | GQM Approach | | |
| Views of Quality | Test Content Models (CTP, STEP) | Measures, Metrics & Indicators | | |
| Generic Improve-ment Process (Deming, IDEAL) | | | | |

# ISTQB® EXPERT LEVEL
## *IMPLEMENTING TEST PROCESS IMPROVEMENT*

ISTQB® – EXPERT LEVEL IMPROVING THE TESTING PROCESS – PART 2- IMPLEMENTING TEST PROCESS IMPROVEMENT

| Process for Improvement | Organizational Aspects | Managing Change | Critical Success Factors | Adapting to Different Life Cycle Models |
|---|---|---|---|---|
| Establishing a Test Improvement Approach | Organization | Change Management Process | Key Success Factors | |
| Implementing Test Improvement | Roles | Human Factors | Setting an Improvement Culture | |
| | Skills of the Test Process Improver | | | |

# ISTQB® EXPERT LEVEL
## *TEST AUTOMATION ENGINEERING*

ISTQB® – EXPERT LEVEL
TEST AUTOMATION ENGINEERING

| Introduction and Objectives for Test Automation | Preparing for Test Automation | The Generic Test Automation Architecture | Deployment Risks and Contingencies | Test Automation Reporting and Metrics | Transitioning Manual Testing to an Automated Environment | Verifying the TAS | Continuous Improvement |
|---|---|---|---|---|---|---|---|
| Purpose of Test Automation | Test Automation requirements for the SUT and its context | Introduction to gTAA | Selection of Test Automation Approach and Planning of Deployment/ Rollout | Selection of TAS Metrics | Criteria for Automation | Verifying Automated Test Environment Components | Options for Improving Test Automation |
| Success Factors in Test Automation | Tool Evaluation and Selection Process | TAA Design | | Implementation of Measurement | Identify Steps needed to Implement Automation within Regression Testing | Verifying the Automated Test Suite | Planning the Implementation of Test Automation Improvement |
| | Design for Testability and Automation | TAS Development | Implementation of Test Automation | Logging of the TAS and the SUT | | | |
| | | | Technical Risk Assessment and Mitigation Strategies | Test Automation Reporting | Factors to consider when Implementing Automation within New Feature Testing | | |
| | | | Test Automation Maintenance | | | | |
| | | | | | Factors to consider when Implementing Automation for Defect Re-test | | |

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# EXAMS

- The exam is based on multiple-choice questions for Foundation and Advanced Levels
- For Expert Level, an essay is also required
- Exams can be attempted also without having attended a training course (e.g. through self-study)
- Number of questions and exams length:
  - Foundation exam and Extensions: 40 questions, length = 1 hour (75 minutes for candidates taking exams not in their native language)
  - Agile Tester structure is the same as Foundation
  - Advanced exams: different lengths and questions, depending on the module (25% more time for candidates taking exams not in their native language)

# EXAMS QUESTIONS AND LENGTH

| MODULE | NUMBER OF QUESTIONS | EXAM LENGTH (IN MINUTES) | EXAM LENGTH FOR NON NATIVE LANGUAGE |
|---|---|---|---|
| **FOUNDATION** | 40 | 60 | 75 |
| **AGILE TESTER** | 40 | 60 | 75 |
| **ADVANCED TEST MANAGER** | 65 | 180 | 225 |
| **ADVANCED TEST ANALYST** | 60 | 180 | 225 |
| **ADVANCED TECHNICAL TEST ANALYST** | 45 | 120 | 150 |

# EXAM QUESTIONS – K LEVELS

- Questions are classified according to the cognitive level, the K-level (also known as level of knowledge):
  - K1 = Remember (recognize a term or concept)
  - K2 = Understand (able to explain a concept)
  - K3 = Apply (select correct application of concept or technique)
  - K4 = Analyze (can distinguish between facts and inferences for deeper understanding)
  - K5 = Evaluate (can make judgments based on criteria and standards)
  - K6 = Create (can put elements together to form a coherent or functional whole)

- The number of questions for each topic is related to the length of the topic in the syllabus

- For more details, see the FAQ section in the ISTQB® Website

# CRITERIA TO ACHIEVE EXPERT LEVEL

## Entry criteria

Recommended :

- At least 7 years of practical testing experience
- Completion of Expert Level course

Mandatory:

- ISTQB® Foundation
- ISTQB® Advanced (depending on Expert Level module)
- Completion of Expert Level course (if a non-public exam is taken)

The Exam

## Exit criteria

- Exam passed (65%)
- Experience levels (may be achieved before or after passing the exam)
  - At least 5 years of practical testing experience
  - At least 2 years of industry experience in the specific Expert Level topic

# EXPERT LEVEL EXAM

ISTQB® International Software Testing Qualifications Board

## The exam

- A certification scheme at Expert Level must meet the expectations and perceptions of its stakeholders and has to be seen to be truly “expert”.
- The exam therefore consists of a multiple-choice section and a written “essay” section
- A score of 65% and above is required to pass

## Multiple-Choice section

- Duration: 1 Hour
- 25 Questions
- Learning objectives covered:
  K2, K3, K4 (like in Advanced Level)

## Essay section

- Duration:
  - Reading: ½ hour
  - Answering: 2 hours
  - Add ¾ hour for non-native speakers
- Answer 4 questions out of 5
- Learning objectives covered:
  Mostly higher learning objectives (K5,K6)

# MAINTAINING EXPERT LEVEL CERTIFICATION

ISTQB® International Software Testing Qualifications Board

## Expert certification is not for life

- An Expert Level certificate is valid for 5 years
- Expert certification must be renewed using one of the following two options

## Repeat the exam

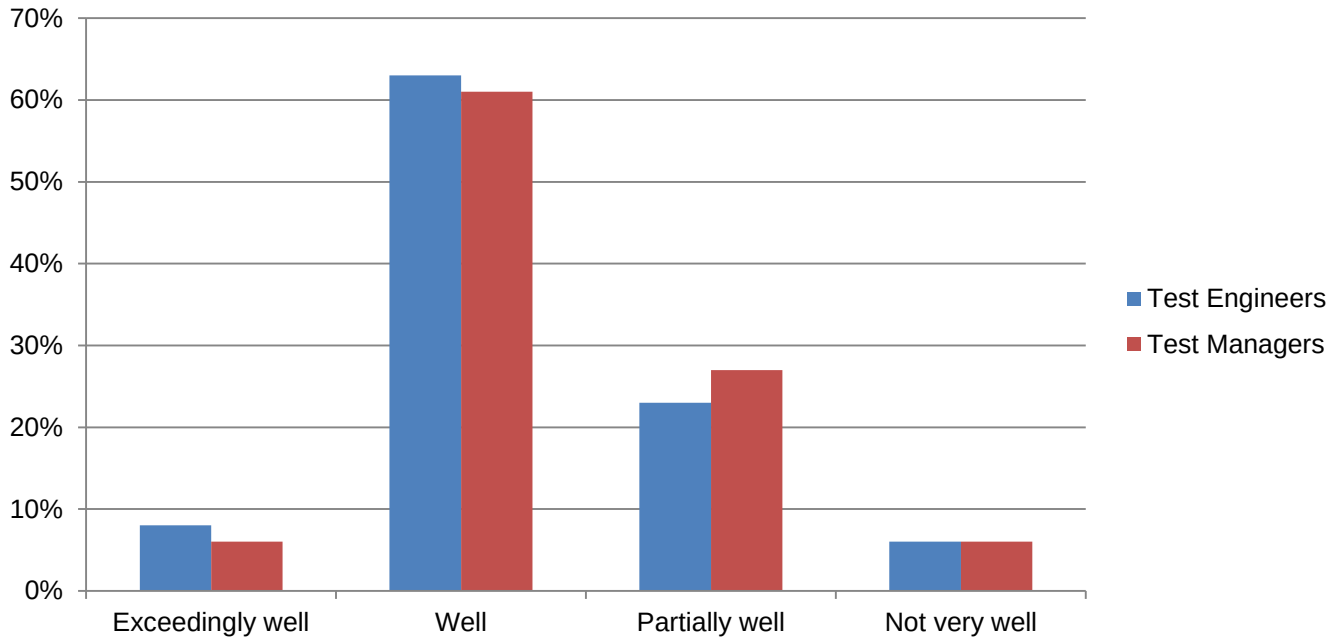
- A passed exam results in certification for a further 5 years

## Achieve 200 „Certification Extension Credits“ (CEC)

- CECs may be achieved in a number of areas. For example:
  - Perform a professional testing activity
  - Take a relevant training course
  - Attend a testing conference
  - Present at a testing conference
  - Teaching a relevant training course
  - Write a testing article or book
  - Actively participate in a Working Group (ISTQB® Member Boards, SIGIST, ….)
- Verifiable evidence must be submitted to the certifier
- The Certification Extension Program is published by ISTQB®

# EXAM RELIABILITY - SURVEY

- To what extent do you feel the ISTQB® Foundation Level certification exam reflects the knowledge of the candidates?




More than 70% of respondents regard the ISTQB® Foundation Level certification exam as fully or exceedingly reliable and these results are consistent throughout the world; only 6% found the exam not very reliable

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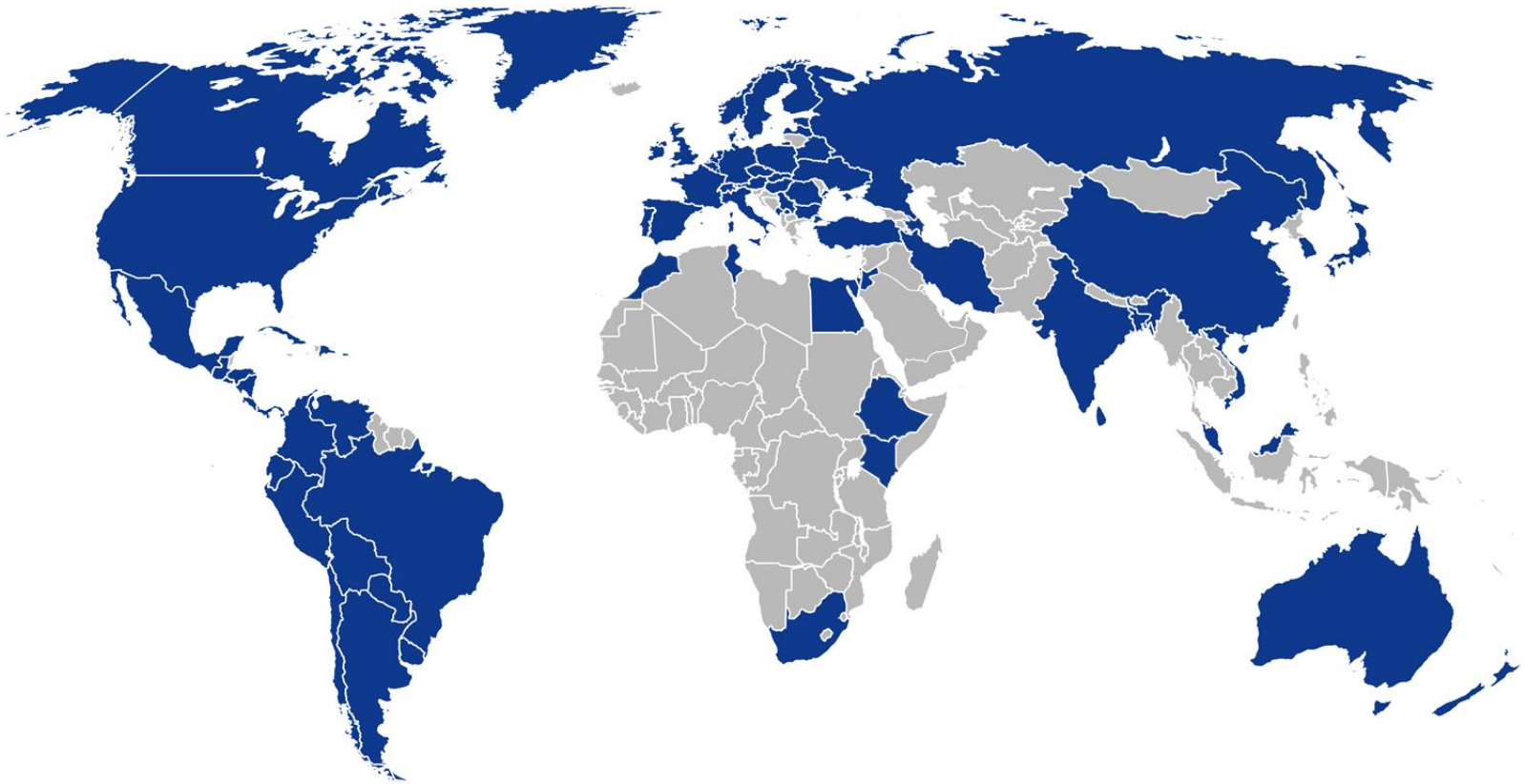
# ISTQB® - THE EVOLUTION

| | |
|---|---|
| **1998** | ISEB (Information Systems Examinations Board, part of the British Computer Society) develops the Certified Tester Syllabus. The first Software Testers are certified in 1998 |
| **2002** | The ISTQB® (International Software Testing Qualifications Board) is founded by 8 member boards: Austria, Denmark, Finland, Germany, Sweden, Switzerland, the Netherlands and UK. |
| **2003** | The syllabus for the “Advanced Level“ is completed |
| **2004** | First exams for “ISTQB® Certified Tester Advanced Level“ are released |
| **2006** | The number of member boards grows steadily |
| **2007** | The Foundation and Advanced Syllabi are enhanced |
| **2009** | The number of Member Boards climbs further<br>The number of certifications reaches 100,000 |
| **2010** | BCS withdraws the ISEB Test Practitioner scheme in favor of ISTQB Certified Tester Advanced Level.<br>The first “Expert Level” syllabus is released |
| **2011** | The number of certifications exceeds 200,000 globally<br>Issue of additional Expert Level Syllabi |
| **2012** | New version of the Advanced Level syllabus and Glossary Testing of Terms; Activation of the “ISTQB® Partner Program”; Activation of the “ISTQB® Conference Network”; Activation of the “ISTQB® Recognized Mobile app” program; Launch of the “ISTQB® international Software Testing Excellence Award” |
| **2013** | The number of certifications exceeds 300,000 globally |
| **2014** | Agile Tester Foundation Extension Syllabus is made available<br>Expert Level Test Automation Engineering Syllabus is made available |

# WORLD-WIDE COVERAGE



- Countries covered by Member Boards (49 Member Boards covering 72 countries, representing over 90% of the world-wide GDP) and Global Exam Providers
- Countries covered by Global Exam Providers

The list of Member Boards and Global Exam Providers is available on the ISTQB® Web Site

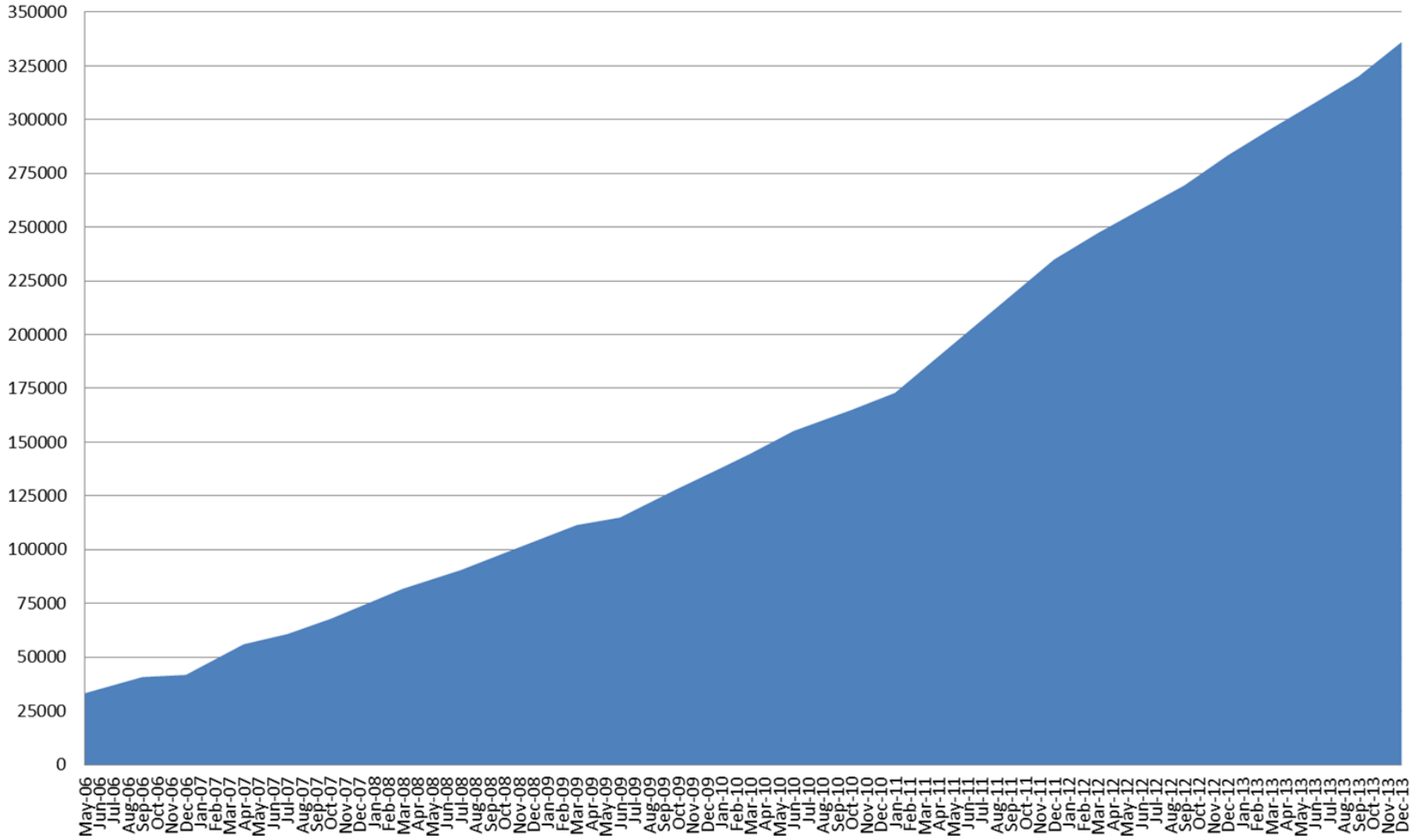
# FOOTPRINT – NUMBER OF CERTIFICATIONS

- As of December 2013 the number of certifications issued has overcome 336,000 with more than 15,000 new certifications being issued per quarter

- Among the technology-independent certifications schemes, ISTQB® is the third largest in the IT industry in terms of number of people certified (exceeded only by PMI and ITIL)

- ISTQB® is the largest testing certification scheme in the World and has become an International de-facto reference on recommended testing practices

# ISTQB® CUMULATIVE CERTIFICATES ISSUED

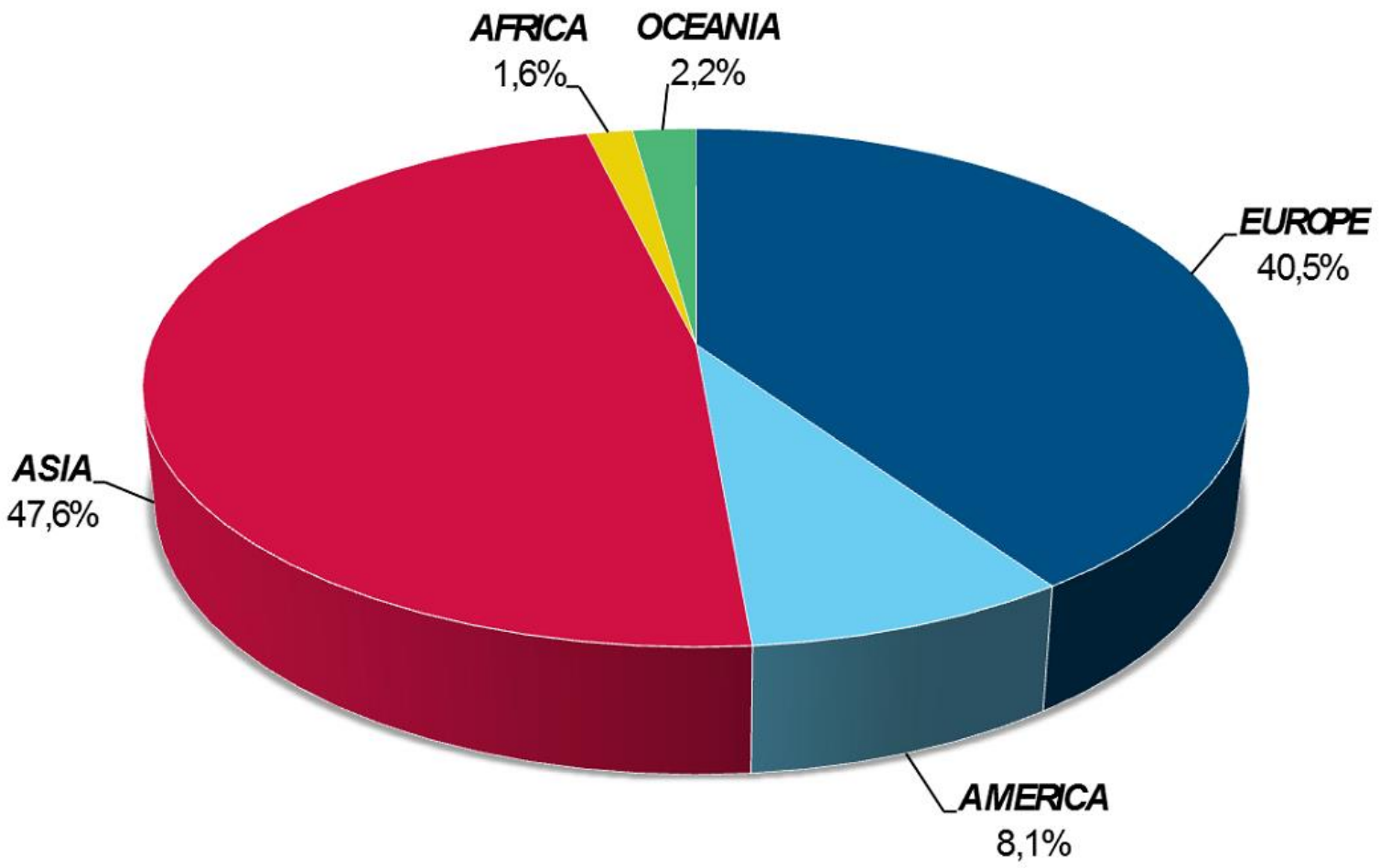


# FOOTPRINT
## *NUMBER OF CERTIFICATIONS*

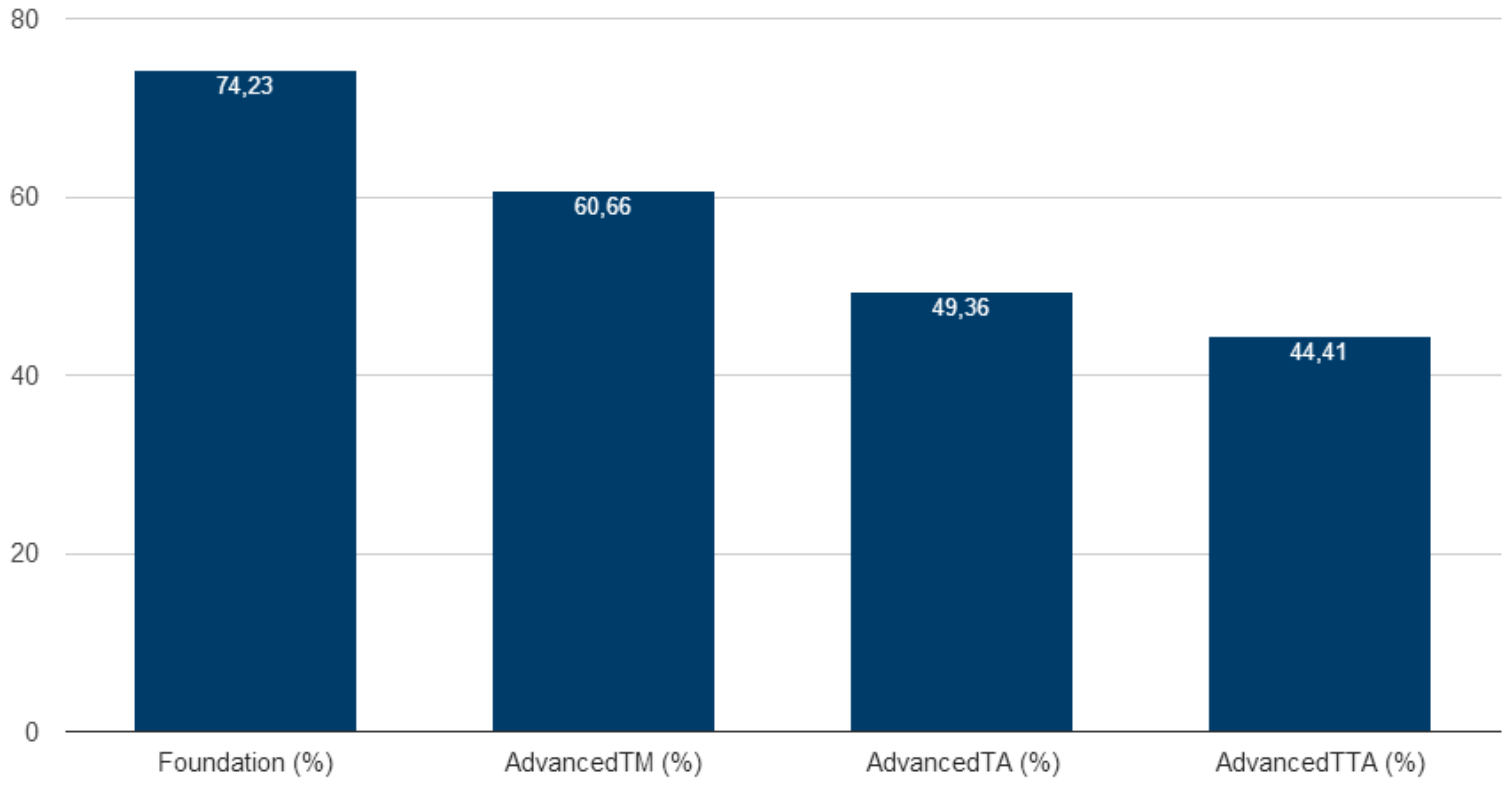
- The distribution of Certificates issued by ISTQB® as of September 2013 is as follows:

| LEVEL | CERTIFICATES |
|---|---|
| **Foundation Level** | 297.265 |
| **Advanced Level – Test Manager** | 17.682 |
| **Advanced Level – Test Analyst** | 11.798 |
| **Advanced Level – Technical Test Analyst** | 6.726 |
| **Full Advanced** | 2.597 |
| **TOTAL** | **336.068** |

# ISTQB® CERTIFICATES BY CONTINENT



# ISTQB® EXAM AVERAGE PASS-RATE



# ACCREDITED TRANING PROVIDERS

- ISTQB® has a large number of Accredited Training Providers worldwide
- As of August 2014 there were:
  - 250+ Accredited Training Providers for Foundation Level
  - 100+ Accredited Training Providers for Advanced Level
  - 2 Accredited Training Providers for Expert Level
- The list of Accredited Training Providers is available on the ISTQB® Web Site

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# ISTQB® PARTNER PROGRAM

Provides recognition to
Companies
that are investing in the
ISTQB® scheme

# BENEFITS FOR PARTNERS

The main benefits of the ISTQB® Partner Program are:

- International visibility of the partnership status through exposure on the ISTQB® Website
- Access to ISTQB® Conference Network events with exclusive benefits
- Access to the alpha versions of new syllabi, with the opportunity to contribute to their review
- Local benefits provided by Member Boards and Exam Providers

# ELIGIBILITY POINTS AND THRESHOLDS

- Companies can become ISTQB® Partners if they have a significant number of employees or external consultants working for them who have passed ISTQB® certification exams.

- The Program comprises four levels of partnership, each with a different eligibility threshold:
  - **Silver**: 5 Points
  - **Gold**: 14 Points
  - **Platinum**: 30 Points
  - **Global**: a minimum of 1 Platinum Partnership and 2 Gold Partnerships in at least 2 different countries.

# ELIGIBILITY POINTS AND THRESHOLDS

- The partnership level of an organization is determined by the number of certification points it has accumulated:
  - Foundation certification = 1 point
  - Advanced certification = + 3 points (for each advanced level certification module achieved)
  - Expert certification = + 5 points (for each expert level certification module achieved)
- Other criteria are the following:
  - GOLD partnership needs at least 1 ADVANCED Level certification
  - PLATINUM partnership needs at least 3 ADVANCED Level certifications

# ISTQB® PARTNERS

- As of May 2014, ISTQB® Partnership has been achieved by:

✓ **1** company at GLOBAL Level

✓ **25** Companies at PLATINUM Level

✓ **24** companies at GOLD Level

✓ **21** companies at SILVER Level

More information at: *www.istqb.org/partner*

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# ISTQB® AWARD

- ISTQB® promotes the “ISTQB® International Software Testing Excellence Award”, an annual prize given to somebody who has made an outstanding contribution to the field of software quality, through professional practice, innovation, or research

- Anyone can nominate a potential winner of the "ISTQB® International Software Testing Excellence Award” by filling in the Nomination Form available on the ISTQB® website

# ISTQB® AWARD CRITERIA

- The winner of the Award is selected for having contributed to:
  - Increasing public awareness for the importance of software quality and testing
  - Publishing research findings in the field of software quality and testing
  - Promoting further education in software quality and testing
  - Supporting the creation of standards and recommended practices in the area of software quality and testing
  - Giving new energy to the improvement of software development and testing processes

# ISTQB® AWARD WINNERS

- 2014 ISTQB® Award: ***Election in progress***
- 2013 ISTQB® Award: **Harry Sneed**
- 2012 ISTQB® Award: **Dorothy Graham**
- ISTQB® Special Award for Lifelong Contribution to Software Testing: **Boris Beizer**
  (issued on 2012)

# ISTQB® CONFERENCE NETWORK

- ISTQB® has created the "ISTQB® Conference Network" to promote the annual events around the world related to ISTQB®
- These events have to:
  - Be focused on Testing and Quality
  - Be organized or recognized by an ISTQB® Member Board or by the ISTQB® Marketing Working Group
- Recognition is based on the following criteria:
  - The event must have an open and public call for papers
  - The selection of presentations must be performed by an independent program committee comprising several people
  - The event should offer at least a 20% discount to ISTQB® Certificate Holders
  - The program should include at least one official ISTQB® speech made by an ISTQB® representative or a representative of the National Board of that region (as agreed with ISTQB®); this speech should be delivered in a keynote slot

# ISTQB® WEB & MOBILE APPS RECOGNITION

- ISTQB® has created the "ISTQB® Web and Mobile Apps" program in order to promote those applications that are based on ISTQB® referenced information.
- Any person or entity can apply to have an ISTQB® recognized Web & App and, before receiving the "ISTQB® Web and Mobile Apps" logo, the Web/ App will be reviewed by the ISTQB® that will check the following criteria (all of them are mandatory):
  - The Web / App shall have a reference to the ISTQB® website as well as all to the ISTQB® social media
  - If the Web / App makes usage of ISTQB® publicly available info (e.g.: glossary, syllabi) the provider shall keep them aligned with the latest official version issued by ISTQB® (for the English version) of by the ISTQB® Member Boards (in case of local translations)
  - The Web /App shall not reference to any scheme competitive to ISTQB®
  - The App must be available for download free of charge
  - The Web / App shall have at least one English version
- The Web / App can use the specific "ISTQB® Web and Mobile Apps" logo that will be provided after successful validation; it cannot use any other ISTQB® logos, unless specifically agreed and approved by ISTQB®

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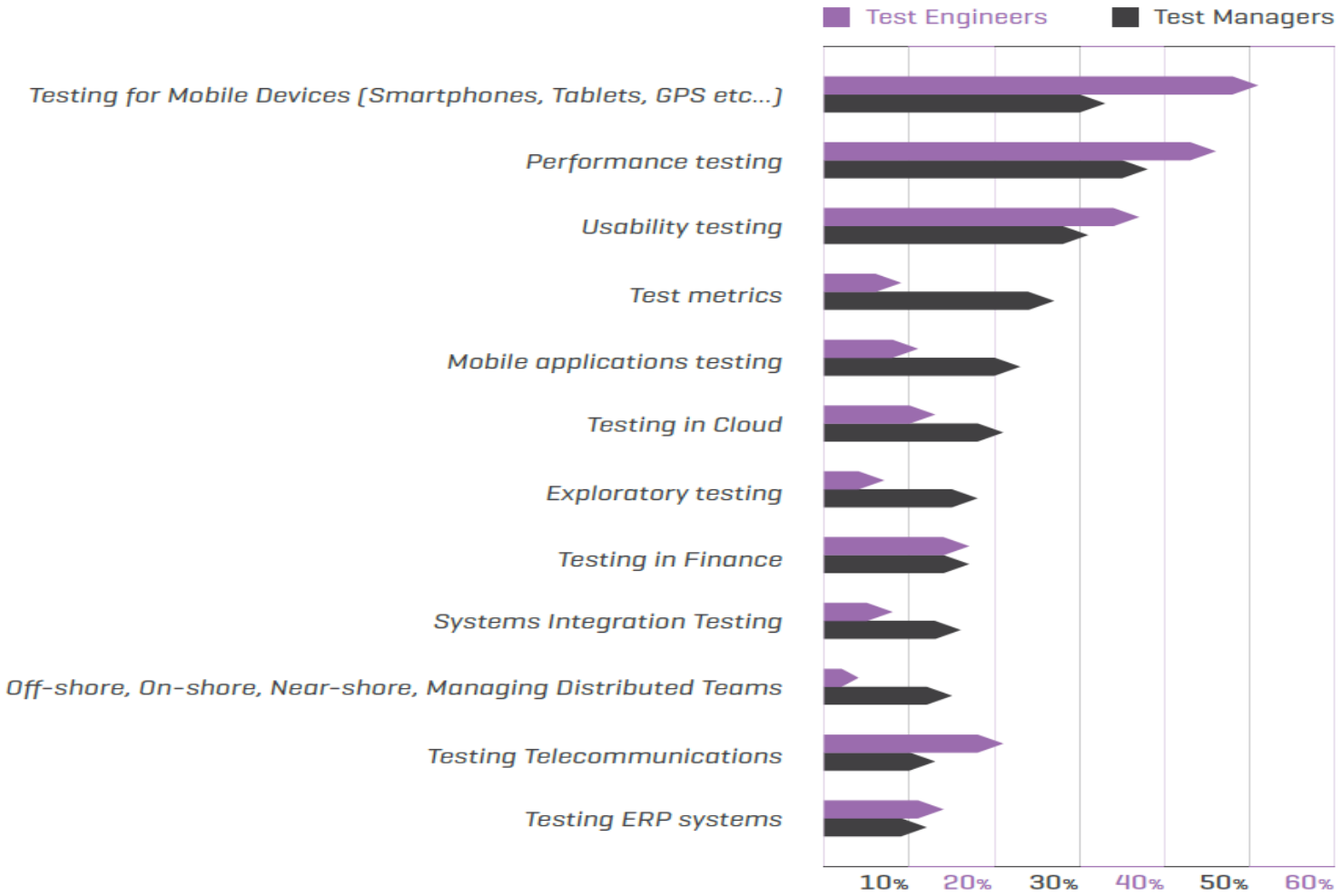
# TOPICS FOR THE FUTURE - SURVEY

- Please select at least 3 topics that you would like ISTQB® to address in the future



# ISTQB® NEXT STEPS

## Market roll-out

- Agile
- Expert
- New Boards joining
- New Surveys and initiatives

## New Syllabi & Exams

- Model Based Testing
- Expert – Test Automation Mngmt
- Expert - Security Testing
- Usability Testing
- Further topics undergoing definition

## Maintenance & Evolution

- Glossary
- Foundation
- Advanced

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ISTQB®

International Software Testing Qualifications Board

## ISTQB® CONTACTS AND CHANNELS

| | |
|---|---|
| You Tube presence | : http://www.youtube.com/user/ISTQBORG |
| Slide Share presence | : http://www.slideshare.net/ISTQBORG |
| LinkedIn Community | : http://www.linkedin.com/groups/ISTQB-International-Software-Testing-Qualifications-99444 |
| Twitter Channel | : http://twitter.com/ISTQBORG |
| XING Community | : https://www.xing.com/net/istqb |
| Facebook Page | : http://www.facebook.com/istqborg |

**ISTQB® Smartshow**

## ISTQB® CONTACTS AND CHANNELS

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