

# Technical Test analyst

Overview of the ISTQB Advanced Level Certification

# The Technical Test Analyst: Contents

- Technical Test Analyst: Principal Tasks
- Structure-Based Testing
- Analytical Techniques
- Quality Characteristics
  - Security Testing
  - Performance Testing
  - Other Attributes
- Reviews with Checklists
- Test Tools and Automation

# Technical Test Analyst Tasks and Skills

## Similarities with TA:

- The Technical Test Analysts (TTA) supports an effective test process
- Focus on the analysis and design steps
- Often there is no fixed TTA role

## Different focus of TTA:

- For the TTA the focus is on technical aspects
- Risks associated with technical quality attributes
- Working closer to the architecture and code
- Becoming more relevant !
- Required skills set expanding rapidly

# TTA as a Platform for Specialist Subjects

■ Security Testing



■ Advanced Level  
Security Tester

■ Test Tools and  
Automation



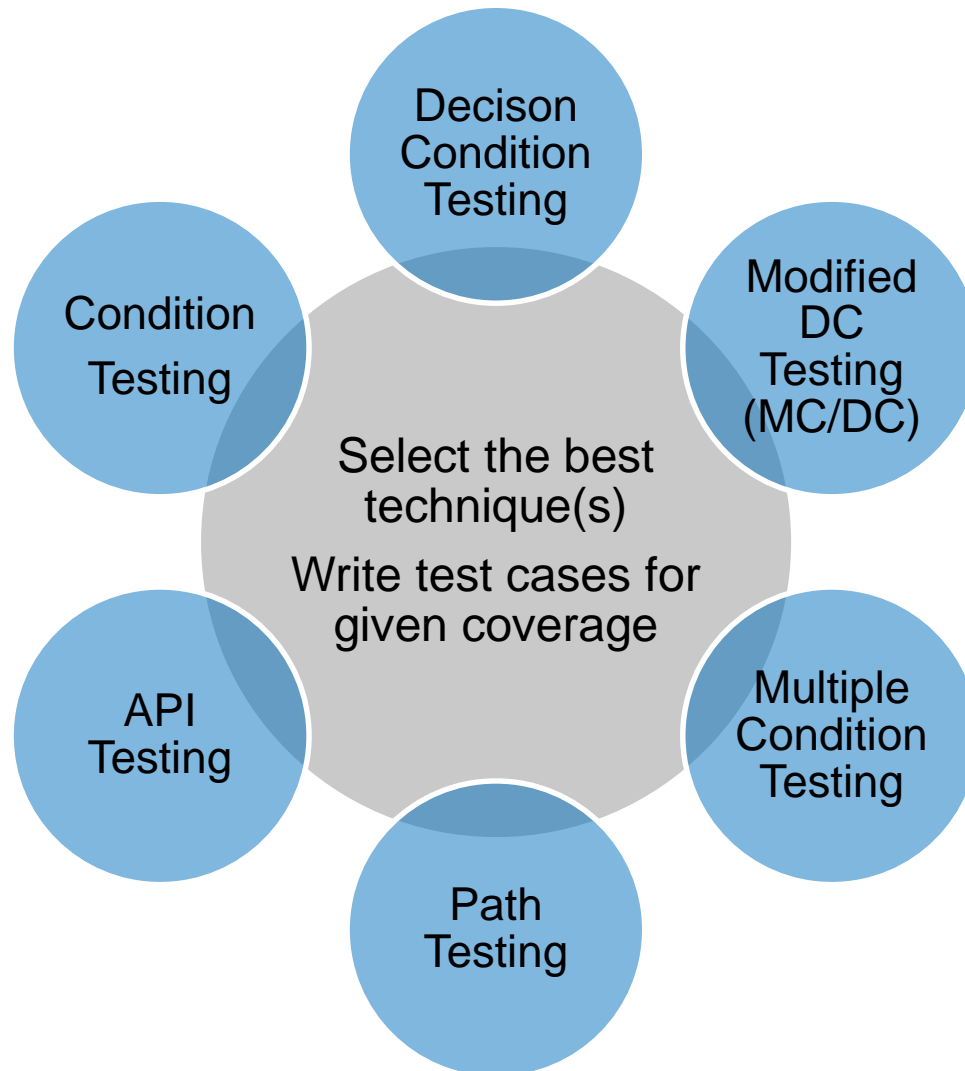
■ Advanced Level  
Test Automation  
Engineer

■ Performance  
Testing



■ Foundation Level  
Performance Tester

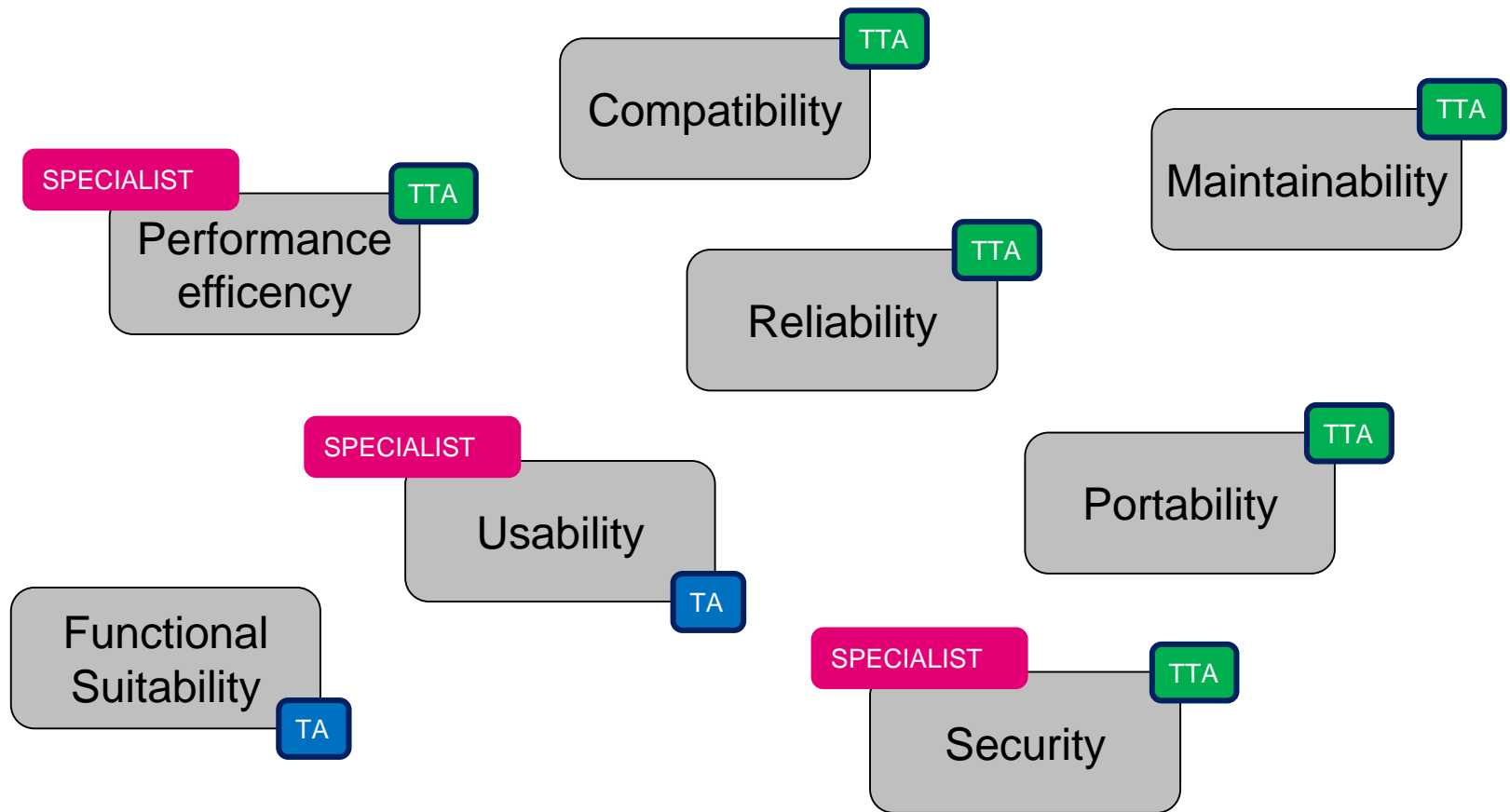
# Structure-Based Testing



# Analytical Techniques

- Static analysis
  - Control flow analysis (e.g., dead code, endless loops)
  - Data flow analysis (e.g., incorrect use of data in code)
  - Call graphs (e.g., to help identify bottle-necks and determine integration sequences)
- Dynamic analysis
  - Memory use (e.g., identification of leaks and incorrect usage of pointers)
- Tool support

# Quality Characteristics



- What are the various attributes?
- How to approach testing (broadly)
- Introduce subjects which are covered in specialist modules

# Security Testing

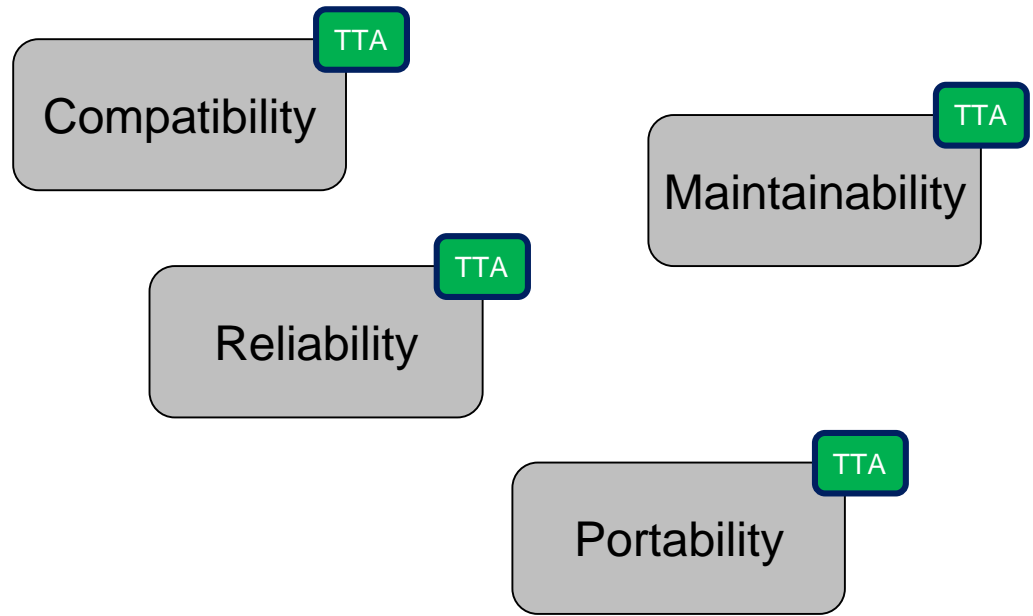
- Typical categories of security vulnerability (e.g., DOS, input buffer overrun)
- How to approach security testing (broadly)
  - Planning aspects (e.g., identification of security risks and vulnerabilities)
  - Test design aspects (e.g., design of security attacks)



# Performance Testing

- Typical types of performance test (e.g., load, stress, volume)
- How to approach performance testing (broadly)
  - Planning aspects (e.g., identification of performance risks)
  - Test design aspects:
    - Identification of usage profiles for different types of user
    - Construction of load profiles to examine system performance under different conditions:
      - Normal load
      - Maximum load
      - Stress loads
      - Data loads

# Other Quality Characteristics



- Recognizing the need to evaluate the different attributes and their sub-attributes
- How to approach testing (broadly)

# Test Automation

- Tool selection and ownership issues
- See specialist module

## Using Checklists in Technical Reviews

- Checking architectural designs
- Performing code reviews



# An Update on the Horizon

- The AL Core modules are due to be updated
- Key aspects to be considered
  - “Agilization”
  - Scoping to new and updated modules
    - Foundation core
    - Performance Testing
    - Security Testing
  - There may be some other modifications done which are still to be approved by the ISTQB member boards

# The exam

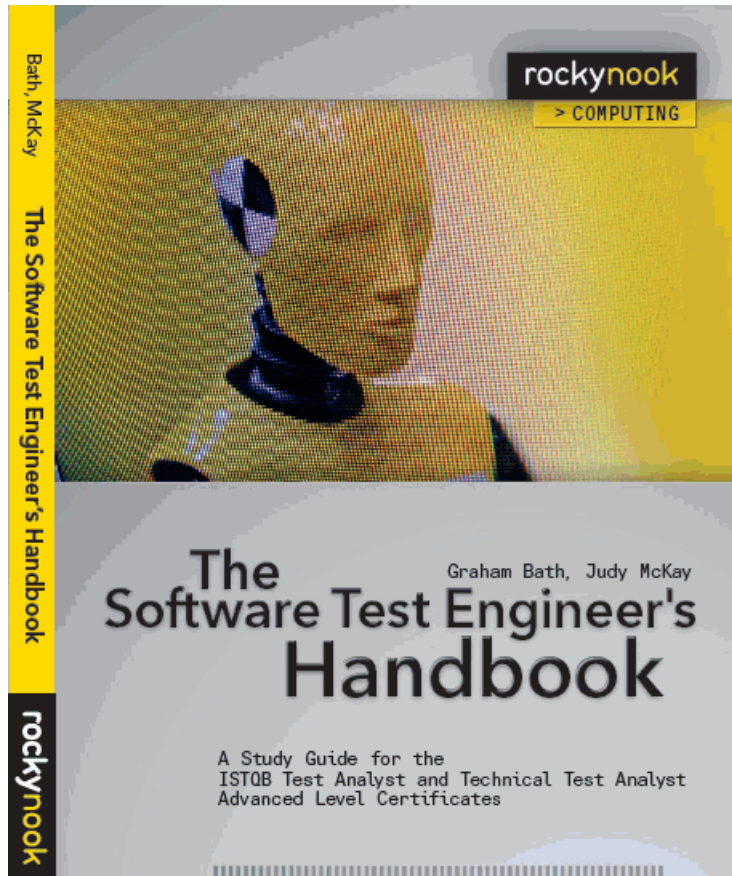
	Questions	Duration	Duration (non-English)
ADVANCED TEST MANAGER	65	180	225
ADVANCED TEST ANALYST	60	180	225
ADVANCED TECHNICAL TEST ANALYST	45	120	150

Pre-Condition: Foundation level certificate

## Getting Help

[www.istqb.org](http://www.istqb.org)

- Syllabi
- Sample papers



This book may also help