Risk-based Testing in an Agile Scrum Environment

(2 Days)

One of the most common complaints from software testers is the lack of time for testing. Actually, if you had all the time in the world, you still wouldn't have the time to completely test most software due to the possible combinations of conditions. So the issue becomes how do you know what are the most important things to test?

Risk is an important consideration in any software project context, but there are some special considerations in agile projects using Scrum. This workshop emphasizes those considerations and has exercises based entirely in the agile Scrum context.

This workshop is an experiential journey in learning how to apply a sound understanding of risk in the planning and performance of software tests. You will learn proven and practical ways to assess risk from the project, technical and business perspectives. You will also learn how to apply the various levels of risk in test planning and performance. Finally, you will learn how risks can be missed and misinterpreted.

Return on Investment

- Learn how to get the most of your testing time by prioritizing your testing efforts
- Understand how to deal with risks that materialize by having contingency plans
- Learn how to better identify risks by viewing them from multiple perspectives
- Learn how to test better by focusing where the problems are

Who Should Attend

- Software testers
- Software test managers
- Software QA professionals and managers
- Project managers
- Developers
- End-users of software

Course Topics

Module 1 – Introduction (1 hr.)

- The problem – Too little time, too much to test
- The nature of risk
- Three views of risk – Project, Product and Business
- Common software risks
- The impact of agile methods
- How the Scrum approach can deal with risk
- Who owns risk assessment?
- When should risks be assessed?
- Experience – Introduction to the case study

Module 2 – A Project View of Risk (2 hrs.)

- Common project risks
- Methods of assessing project risks
- Agile methods and risk
- How testing can be focused at a project level in agile projects
- An attribute-based project risk assessment
- Identifying critical success factors for a project
- Arriving at the desired project attributes through risk-based iterations
- A process for assessing project risk
- Prioritizing tests based on project risks
- How project risk can help in test planning and performance
- Experience – Perform a project-based risk assessment in an agile Scrum project

Module 3 – The Product View of Risk (2 hrs.)

- What is product risk?
- Why is product risk important to understand in agile projects
- Iterations of product risk – How iterations can impact risk levels
- Tracking product risks based on iterations
- Assessing product risk
- A process for assessing product risk
- Prioritizing tests based on risk
- The METS (Minimal Essential Test Strategy) approach
- Mindmaps for prioritizing tests based on risk
- Experience – Identifying the risk in an application developed in the agile Scrum context

Module 4 – The Business View of Risk (1 hr.)

- What is business risk?
- Assessing business risk
- Engaging business stakeholders

- Dealing with changing business risks
- Dealing stakeholder priorities that change
- Experience – Identifying the business risk in an agile Scrum project

Module 5 – Risk-based Test Planning (1 hr.)

- The role of risk in defining a test strategy/approach
- Documenting risks and contingencies
- Shaping your overall test approach based on risks
- Experience – Designing a test strategy based on risk in an agile context

Module 6 – Practical Methods for Risk-Based Test Estimation (1.5 hrs.)

- Why test estimation is flawed
- The METS approach for test estimation
- Iterations of test estimation based on residual risk
- How to measure and get better at test estimation
- Case study and exercises

Module 7 – Risk-based Test Performance (1 hr.)

- How risk impacts the performance of a test
- Defect triage using risk
- Experience – Performing defect triage

Module 8 – Expressing Test Results in a Risk-based Way (1 hr.)

- The role of risk in test reporting
- Reporting risks in constructive ways
- Using mindmaps as a dashboard
- Experience – Reporting the results of testing based on risk

Module 9 – The Risks of Risk-based Testing (1 hr.)

- 12 ways it's possible to be fooled by risk
- How to build reserves into the test plan
- How to create a contingency plan

Module 10 – Summary (.25 hr.)

- Top ten workshop points
- Final questions and answers