

## Risk-Based Testing Workshop Outline

### General Description

Risk is the possibility of a negative or undesirable outcome or event. Testing is concerned with two main types of risks:

- Product or quality risks, which are problems that can potentially affect the quality of the product itself.
- Project or planning risks, which are problems that can potentially affect overall project success.

Not all risks are equal and there are a number of ways to assess the level of risk.

Risk-based testing is guided by the level of risk associated with the quality risk items. During all test activities, test teams allocate effort to each quality risk item based on the relative level of risk. Test managers implement control steps for all significant identified project risks. Test managers and test analysts report test results and project status in terms of residual risks.

So, how can we identify risks, assess their level, implement appropriate controls (including tests), and report test results based on risk? This hands-on workshop will show attendees how to do so. We'll look at quality risks and quality risk categories. We'll talk about how to identify risk items and assess their level of risk. We'll look at how risk-based testing adapts to various software development lifecycle models, how project risks can affect testing, and metrics we can use during risk-based testing. The course concepts are illustrated with examples and case studies throughout. This one-day course includes realistic, hands-on exercises.

### Learning Objectives

Through presentation, discussion, and hands-on exercises, attendees will learn to:

- Understand risks generally, and quality risks and project risks in particular.
- Identify, analyze, assess, prioritize, and document quality risks.
- Understand regression risks and regression risk mitigation strategies.
- Identify and manage project risks that affect testing.

- Report test results in terms of residual risks.
- Measure the how effectively testing addresses risks.
- Understand alternative ways of documenting and assessing quality risks.

## Course Materials

This course includes the following materials:

<i>Name</i>	<i>Description</i>
Course Outline	A general description of the course along with learning objectives, course materials and an outline of the course topics.
Noteset	A set of about 100 PowerPoint slides covering the topics to be addressed.
Omninet Marketing Requirements	Specification for the realistic example project used in the course exercise.
Quality Risk Categories	A checklist used as a framework to identifying and documenting quality risks.
Quality Risk Analysis Template	A thorough Excel template for capturing quality risk analysis information, including supplemental worksheets with categories of risk categories and analytical tools for detecting problems with risk assessments.
<i>Quality Risk Analysis</i>	An article originally published in <u>Software Quality Professional</u> , which describes the quality risk analysis process and options for carrying it out.
<i>A Case Study in Risk-Based Testing</i>	An article originally published in <u>Better Software</u> , which describes a case study of introducing risk-based testing for a client.

The printed course materials are provided in a binder in a way which makes it convenient for course attendees to remove portions as needed for reference.

## Session Plan

Introduction and objectives

What is risk-based testing?

Identifying quality risks

Exercise: Identifying quality risks

Capturing and assessing quality risks

Informal quality risk analysis: A case study

Categories of quality risks

Options for increasing formalism and precision

Risk-based testing, the SDLC, and the test process

Exercise: Analyzing quality risks

### **Recommended Readings**

Attendees should read the articles, *Quality Risk Analysis* and *A Case Study in Risk-Based Testing*, before the workshop.