Risk Based testing, a piece of cake or not?

Motivation and novelty

Risk based testing is not a novelty at all. Based on the fact that it is impossible to test everything, the idea of focusing test effort on the most risky areas has been embraced by both testers and management. But even today many companies and projects are struggling with their risk based test approach. Especially since systems under test are becoming more complex the need to focus on the risky areas increases. And thus the need for a flexible and practical approach for identifying and managing risks.

Problem addressed and proposed solution

Many projects start off with a product risk analysis and promising words in the testplan. During most projects the risk analysis disappears in the background. The set of executed test cases is not evidently based on risk. Testers, management and stakeholders cannot see whether the test approach was appropriate considering the risks involved; risk based reporting becomes impossible. Projects that must deal with continuous change do not benefit by a complex product risks analysis.

A practical solution is to base the product risk analysis on three types of product risk:
• Specification;
• Integral;
• Regression.

These three types of product risk are very much in line with the way testers (should) test. First of all the specification is tested, where more attention is paid to the parts which are identified as most risky. Then special attention is paid to risks that exist, but are not clear in the specification; the integral risks. Finally attention must be paid to the approach for regression testing.

During the (test)project the risks, either being specification, integral or regression, are used as a basis for test plans, test design & execution and reporting. Of course new risks can be added at any time. The strength of this approach is that is uses a combination of risk analysis techniques: FMECA, brainstorm, PRISMA. Besides it can be used in addition to other risk analysis techniques like PRIMA.

Lessons learned

The identification of three types of product risk is basically the result of lessons learned in practice. Because the three types of risk are in line with the way testers work, it's very practical for testers to use. It's also very appealing to managers and stakeholders because the test process finally becomes transparent to them.

About Jeanne Hofmans

Jeanne Hofmans has studied Software Technology at Utrecht University and now is a test consultant at Improve Quality Services. She has participated in many projects in both the financial and the embedded domain where risk based testing was more or less successful. The suggested solution was implemented by Jeanne at a technical test center and presented at Testnet Spring Event (Nieuwe helden) and at a Supervision session at Rabobank International. Momentarily Jeanne works as a test manager for the Sluiskiltunnel and as an auditor for several other tunnelsprojects.