Root Cause Analysis in Software Testing

Practical methods to solve the underlying problems, and improve efficiently

Abstract

In many cases, we pick solutions to problems without sufficient analysis. This results in implementing a cover-up of the symptom rather than a solution to the ‘real problem underneath’. When this is done, the problem will most likely to surface again in one disguise or another, and we may mishandle it, just as we mishandled it initially.

Getting into the bottom of problems, is the right way to both save money (from things to happen again in the future) and to solve the problem (which we are facing now).

In this workshop, Alon Linetzki describes and identifies a few root cause analysis techniques that are widely used in the industry (manufacturing and software alike), gives examples on how to use them, run an exercise to demonstrate how to implement them, and discuss how to connect them to our day to day testing context. Alon illustrates this method with data from experience in real life projects.

- Which common root cause analysis models/techniques are widely used (not necessarily in testing)
- How to use these techniques in our day to day testing work
- How to use the root cause analysis techniques and results as an effective tool for recommending prevention and corrective actions in the organization

Through presentation, discussion, debate, brainstorming and questioning, we shall go through terminology, methodology, concepts and methods to learn how to analyze underlying problems, and root causes.

Relevant exercises are integrated into the course in order to close the gap between methodology and actual field implementation and enable participants realize what they need to be doing in their designated projects as testers from now on.

Audience

Testers, testing team leaders and test managers, developers, development leaders and development managers who would like to use new RCA techniques to be able to investigate problems in their day to day test operation, and to direct and focus their improvement efforts to solve real problems.
Pre-requisites

Participants should have senior level knowledge about testing processes, lifecycle and defect management.

Coach

Mr. Alon Linetzki - is an expert test engineer and a testing consultant with over 20 years in testing, and over 30 years in IT. During his long professional career, Mr. Linetzki have participated and managed various types of testing projects with a huge range of technologies, size and sector orientation.

He is the author of multiple testing workshops, including: Agile testing, TPI in a day, Risk Based Testing, Personal Communication and presentation Skills, Test Automation for Decision Makers, Exploratory Testing, Writing Good Test Requirements, Practical Test Automation and more.

Mr. Linetzki is a speaker in many international testing conferences since 1995, he is the co-founder of the Israeli Testing Certification Board (www.itcb.org.il), and the founder and chair of SIGIST Israel (www.sigist.org.il). He is also one of the authors of the ISTQB® Agile Tester Certification.

Duration

1 day.

Workshop Outline

Day 1

- Workshop Introduction
  - Agenda
  - Introduction to participants and coach
  - Introduction to root cause analysis family of techniques
- Root Cause analysis in defect management
  - Challenges and benefits
  - Technique description
  - Case study Example & discussion
- Fishbone Diagram technique
  - Technique description
  - Case study Example & discussion
  - Exercise – preventive and corrective actions
- How to analyze RCA for analyzing critical problems?
  - 5 Whys technique & Cause-effect diagram (technique variation)
    - Technique description
    - Case study Example & discussion
    - Exercise
- Using RCA for test process improvement
- Wrap up

Note: the syllabus outline may vary, and additions or subtractions of topics and subtopics may occur – all in favor of delivering a better workshop content, that is relevant, up-to-date, and adding value.