



Innovate
Comes To You Turkey
19 Kasım 2012 Pazartesi Le Méridien Istanbul

YapıKredi Software Testing Lifecycle with IBM Rational

M.Bariş Sarıalioğlu

Head of Test Management Division

Yapı ve Kredi Bankası A.Ş.

baris.sarialioglu@yapikredi.com.tr





Agenda

- ▶ Illusions & Realities of Software Testing
- ▶ YKB SDLC Methodology
- ▶ YKB Software Testing Lifecycle
- ▶ YKB Software Testing Tools & Integration
- ▶ Retrospection



Testing Illusions

Managers

- What is testing, at all
- Anybody can test
- You can test in quality
- Some products needs no testing
- Automated testing vs. Exploratory Testing

Developers

- My software has no bugs
- The testers will find all bugs anyway
- Thorough unit testing is enough

Testers



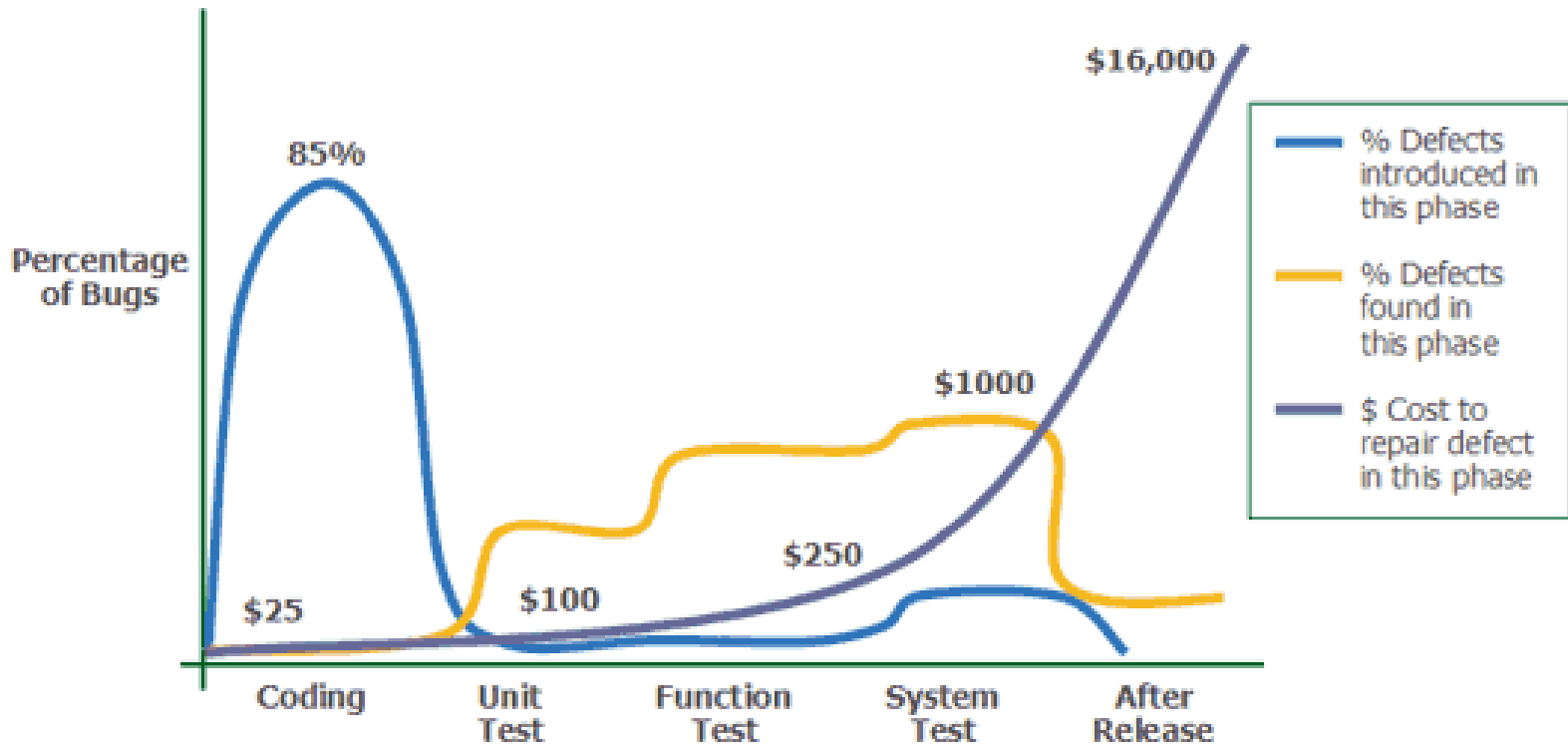
Software Testing Realities



- ▶ It is impossible to test a program completely.
- ▶ Software testing is a risk-based exercise.
- ▶ Testing cannot show the absence of bugs.
- ▶ The more bugs you find, the more bugs there are.
- ▶ Not all bugs found will be fixed.
- ▶ It is difficult to say when a bug is indeed a bug.
- ▶ Specifications are never final.
- ▶ Software testers are not the most popular members of a project.
- ▶ Software testing is a disciplined and technical profession.



Software Testing Realities

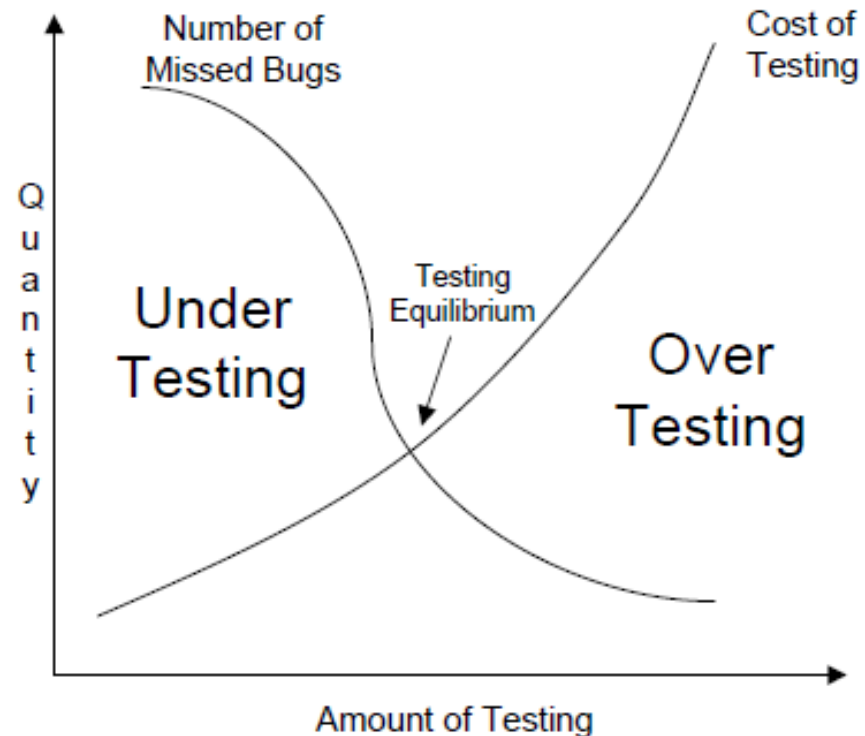


* Source: Bill Graham, 2010(Wind River Blog Network)



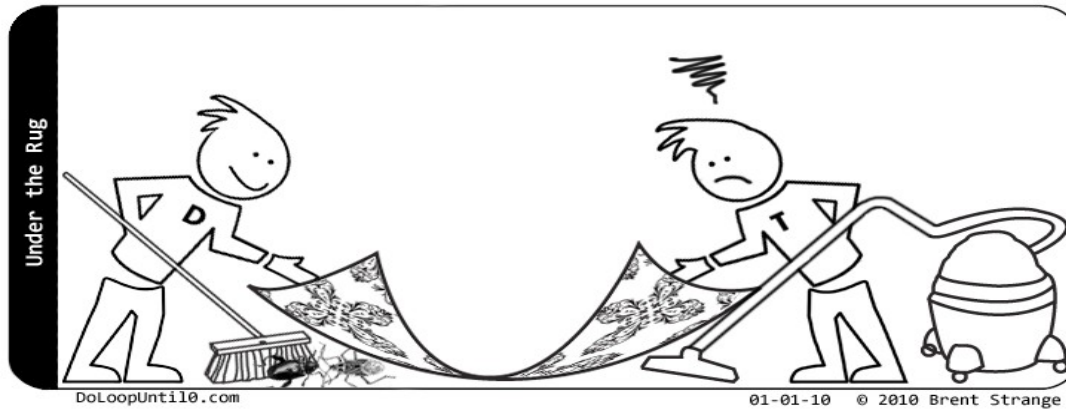
Software Testing Realities

- If you try to test too much, the development cost becomes prohibitive.
- If you test too little, the probability of software failure increases and as we discussed ... software failures can cost us big time!





Nature of Testers !



- **Optimistic Developer:** We are 90% done
- **Pessimistic Tester:** We don't know when we'll be done, if ever

- **Optimistic Developer:** Of course it will work
- **Pessimistic Tester:** It might work, but probably won't

- **Optimistic Developer:** I only changed one line of code
- **Pessimistic Tester:** The entire system must be retested



Who Tests the Software?





Software Testing

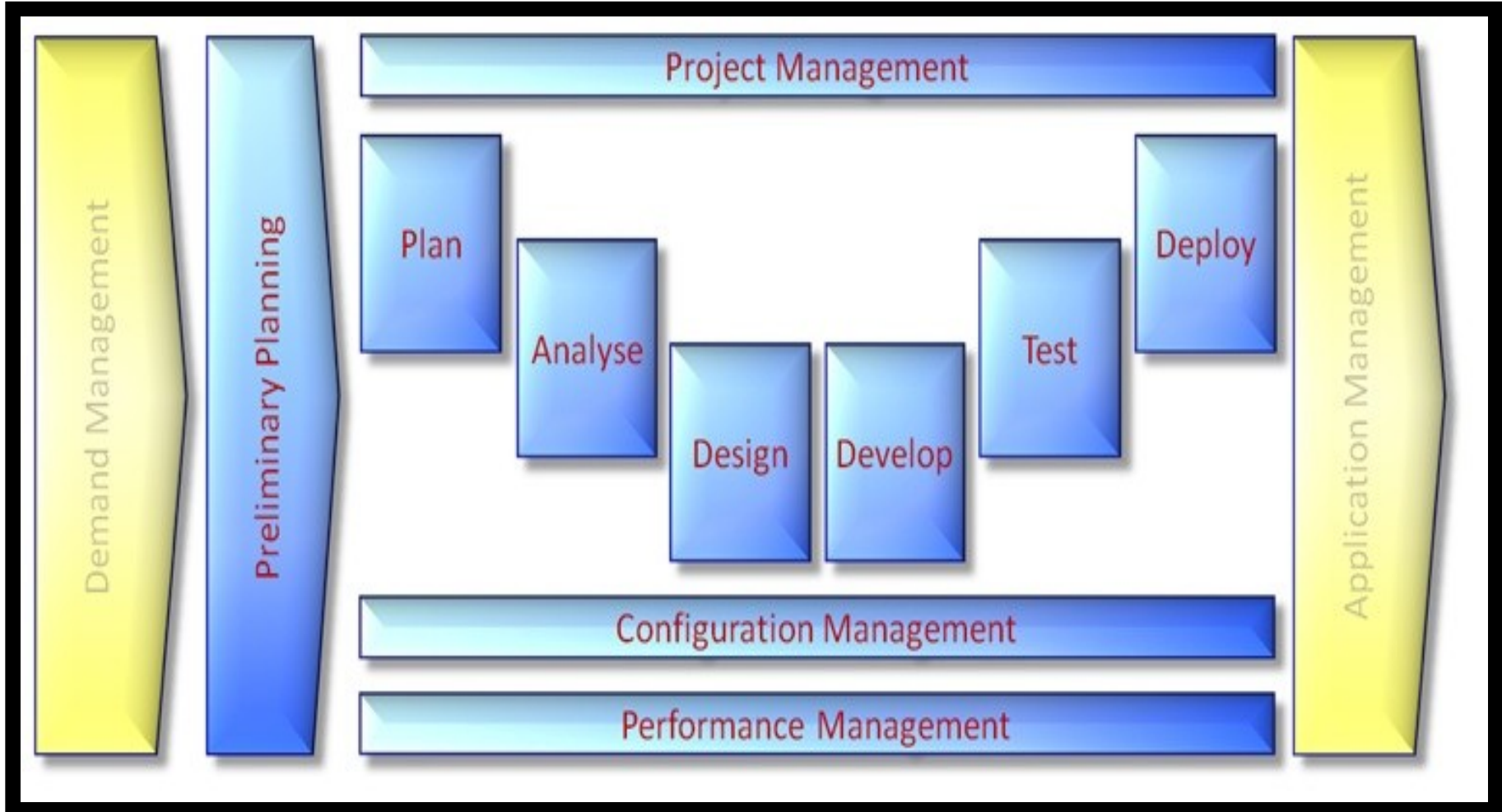
Covers 3 basic dimensions

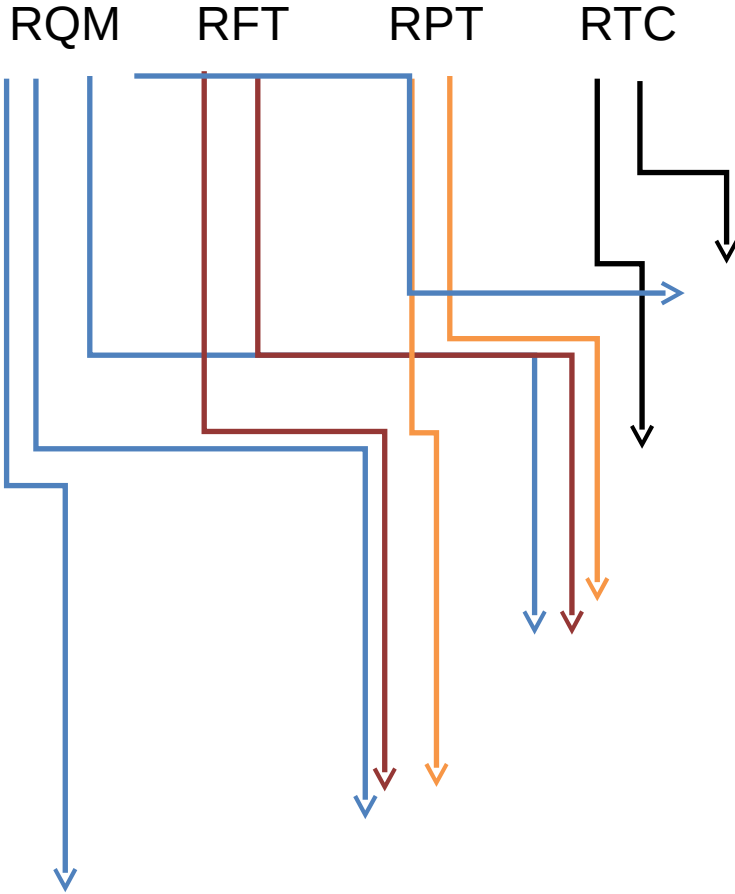
- Process
- People
- Technology





YKB SDLC





Optim

—> Test Closure Report, Metrics

—> Bug Regression, Reporting

—> Bug Detection, Reporting

—> Functional & Non-Functional Testing

—> Test Data / Test Automation/ Test Cases

—> Resource allocation, Test Environment, Test Schedule, Test Functiona



Rational Quality Manager (RQM) – Test Management

- ▶ Structures manual test processes
- ▶ Tracking of bugs, defects and project tasks
- ▶ Links defects and requirements to test objects
- ▶ Defines key metrics and customizing personal dashboards
- ▶ Integrates test automation and performance testing
- ▶ Takes control of test environments



Rational Functional Tester (RFT) – Test Automation

- ▶ Supports a variety of technologies
- ▶ Allows choice of test editing language – Java, Visual Basic .NET
- ▶ Allows test script version control
- ▶ Web interface and recording to create scripts without writing code



Rational Performance Tester (RPT) – Performance Test

- ▶ Detecting performance problems
- ▶ Runs ad-hoc or schedule for specific days or hours
- ▶ Enhanced Performance Reporting (Throughput, Avr. Response Time, Page Health etc.,
- ▶ Web interface and recording to create scripts without writing code
- ▶ RQM Integration



Rational Team Concert (RTC) – Defect Tracking

- ▶ Continuous Defect and Task Management
- ▶ RQM Integration
- ▶ Customizable Work Item Templates (Defect, Activity, CR etc.)





Some Numbers...

- ▶ More than **100 K** test artifacts in RQM
- ▶ Regression Test Automation on **8** applications with more than **500** automated test scripts (RFT)
- ▶ Performance Tests on more than **20** applications with more than **500** distinct performance runs (RPT)
- ▶ Test Data Management with more than **150** distinct demands (OPTIM)
- ▶ More than **50** concurrent users for RQM and **100** for RTC (9.00 – 18.00)
- ▶ Capturing *Defect Turnaround Time, Defect Detection Ratio, Defect Density, Defect Rejection Ratio* and *Defect Reopening Ratio...* (RTC)
- ▶ Prevention of operational blindness
- ▶ Less dependency on domain knowledge, Ease of rotation



Retrospection

Past

- ❌ No SDLC!!
- ❌ No Test Inventory
- ❌ No Defect Tracking Lifecycle
- ❌ No Integrated & Complete Test Process
- ❌ No Test Automation at all
- ❌ Ad-Hoc Performance Testing
- ❌ No Test Data Management Process



Now

- ✅ RRC-RQM-RTC integrated lifecycle
- ✅ Structured Test Inventories
- ✅ Defect Tracking & Reporting
- ✅ Test Automation in several critical applications
- ✅ Performance Testing for critical projects
- ✅ Established Test Data Management





Questions & Answers



www.dilbert.com scottadams@aol.com

7-28-07 © 2007 Scott Adams, Inc./Dist. by UFS, Inc.