

ThoughtWorks®

Behavior Driven Development
Chris Kozak



Definitions:

Quality:

- ✦ The characteristics of a product or service that bear on its ability to satisfy stated or implied needs
- ✦ A product or service free of deficiencies.

Quality Assurance:

- ✦ A planned and systematic pattern of all actions necessary to provide adequate confidence that the product optimally fulfills customers' expectations

Dimensions of Software Quality

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* Code - Level



Dimensions of Software Quality

- * Code - Level
- * Functional



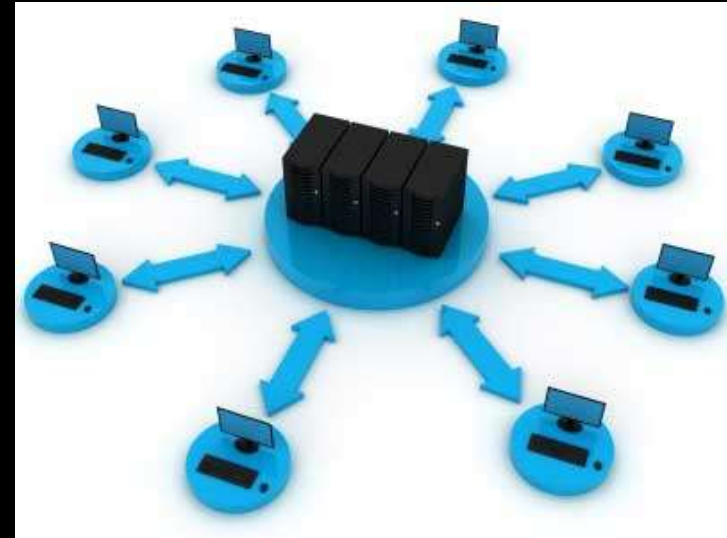
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- * Scalability
- * Operational
- * User Experience
- * Security



Dimensions of Software Quality

In my experience, most companies conflate “quality” with functionality.

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This means getting involved before the code is written

Context is everything

“Rain Check”

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The better the business understands the scope of the problem and its solution, the more effective they'll be at prioritizing and budgeting for it

Baking Quality into Delivery

* Business Analyst: Understands the needs of the business

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Baking Quality into Delivery

- * Business Analyst: Understands the needs of the business
- * Developer: Focuses on happy-path implementation
- * Quality Analyst: Thinks about boundary conditions

Baking Quality into Delivery

* Business Analyst:

- “We want users to be able to store credit cards”

* Developer:

- “What information needs to be stored?”
- “What level of encryption do we need for this?”

* Quality Analyst:

- “How many can be stored?”
- “The card number should be obfuscated when displayed”

Baking Quality into Delivery

Siloing teams by responsibility kills this dynamic!

Baking Quality into Delivery

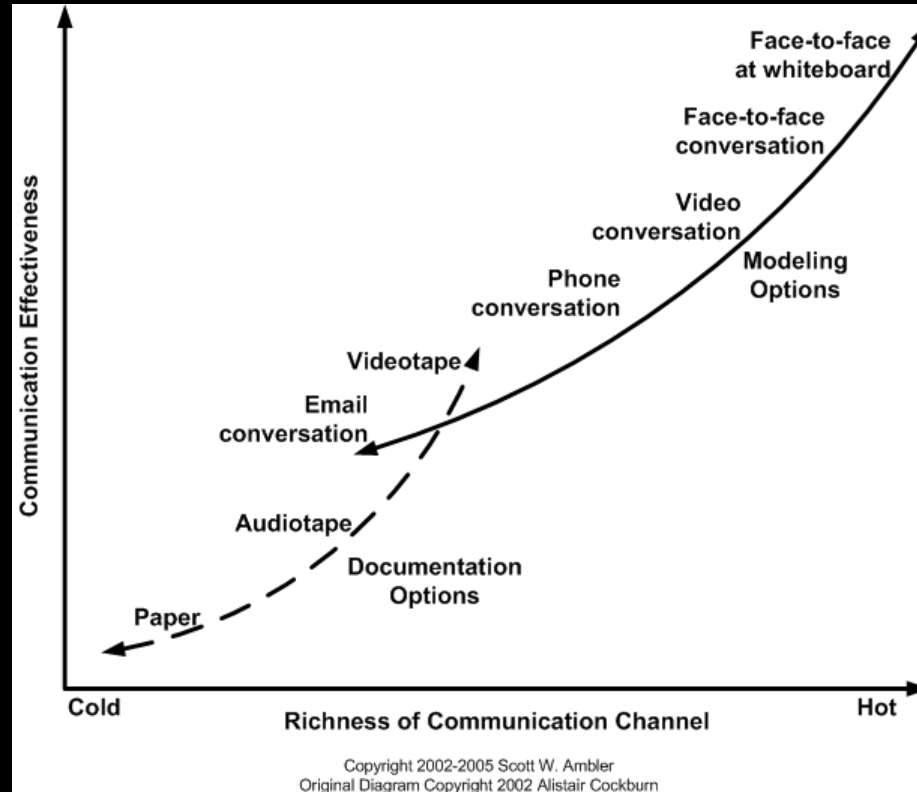
“Companies are experimenting with war-rooms, hoping for some productivity enhancement... Teams in these war-rooms showed a doubling of productivity”

Teasley, S., Covi, L., Krishnan, M.S., Olson, J.S. "How Does Radical Collocation Help a Team Succeed?," CSCW'00, December 2-6, 2000, Philadelphia, PA.

“One key finding is that distributed work items appear to take about two and one-half times as long to complete as similar items where all the work is colocated”

James D. Herbsleb, Audris Mockus, "An Empirical Study of Speed and Communication in Globally Distributed Software Development," *IEEE Transactions on Software Engineering*, vol. 29, no. 6, pp. 481-494, June 2003, doi:10.1109/TSE.2003.1205177

Baking Quality into Delivery



User Story as a “Promise for Conversation”

As a ...
I want to ...
So that ...

User Story as a “Promise for Conversation”

As an account holder

I want to securely login

So that my credit card information is protected

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Break Time

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Testing is there to provide information about the state of software under development so as *to inform decisions*.

-Bret Pettichord

Test strategy

* Manual Testing

- Exploratory
- Pretty
- User Experience
- Targeted to areas in flux

* Automated (Functional) Testing

- Business Critical Flows
- Repetitious tasks

Scripting

Clear database
Load database from "sample-data.sql"
Start webserver
Open URL: http://localhost:8080/myapp
Enter username: admin
Enter password: admin1
Click the "Login" button
Click the "User Administration" link
Click the "Create User" button:
Enter name: John Smith
Enter username: john
Enter password: john99
Click the "OK" button
Click the "Logout" link
Enter username: john
Enter password: john99
Click the "Login" button
Check page contains text: Hello John!

Scripting

Specifying

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Load database from "sample-data.sql"
Start webserver
Open URL: http://localhost:8080/myapp
Enter username: admin
Enter password: admin1
Click the "Login" button
Click the "User Administration" link
Click the "Create User" button:
Enter name: John Smith
Enter username: john
Enter password: john99
Click the "OK" button
Click the "Logout" link
Enter username: john
Enter password: john99
Click the "Login" button
Check page contains text: Hello John!

When John logs in, a greeting "Hello John!" is displayed.

Demo

<https://github.com/ChrisKozak/jbehave-test-skeleton>

What to look for in tooling

- * Tests should be versioned with code
- * Tests should be written in non-vendor-specific languages
- * Tests should be accessible by team
- * Test results should be comprehensible to all
- * Tests should be able to integrate with Continuous Integration

Tools to look at

* BDD Frameworks

- Cucumber
- JBehave
- Twist

* Browser Drivers

- Selenium
- Sahi
- Watir

* Performance

- Jmeter

* Code Quality

- Sonar

Questions and Comments

How can we help?

ThoughtWorks is a global custom software solutions consultancy trusted by many of the world's leading businesses with their most complex and critical systems. We deliver consulting grounded in delivery expertise, build custom applications and help organisations across all market sectors to drive IT efficiency – working to an exceptionally high standard.

Contact us

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