



Lean-Agile Test Practices for Enterprise Solutions Development

Stoyan Kanev & Nikolai Dokovski





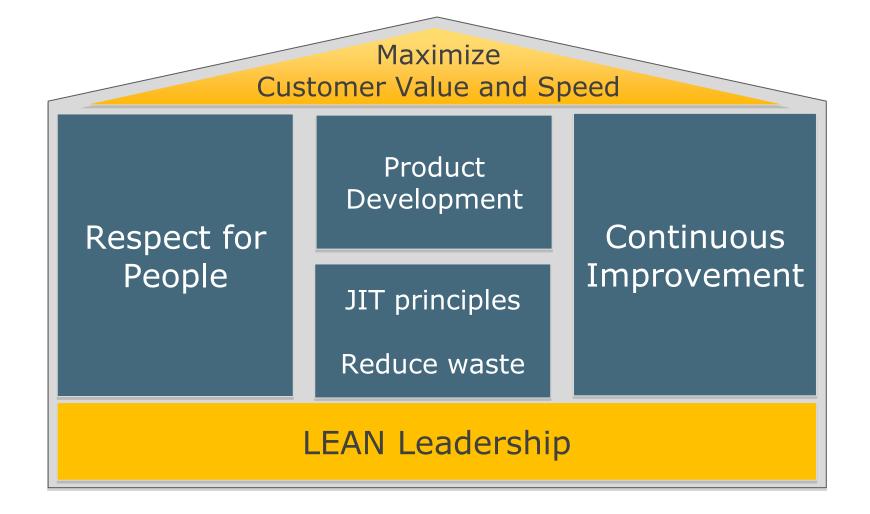






Lean Thinking House

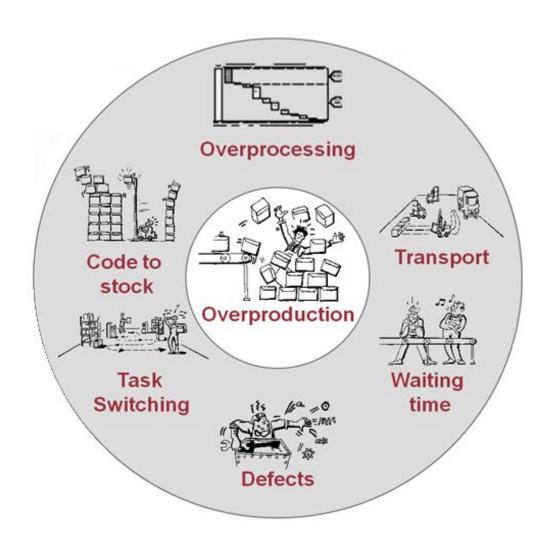






Waste in Development











- Iterative and incremental
- Clear roles
- Simple process
- Simple set of rules





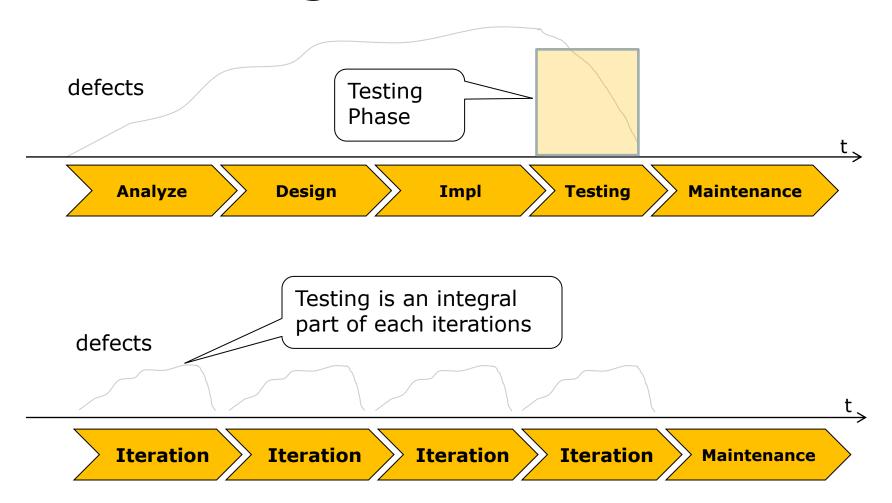
Collective Responsibility ISTO





Testing is NOT a Phase







Continuous Integration



- Automated build process
- Tests on submit
- Rapid feedback
- Increased predictability
- Reduced risk

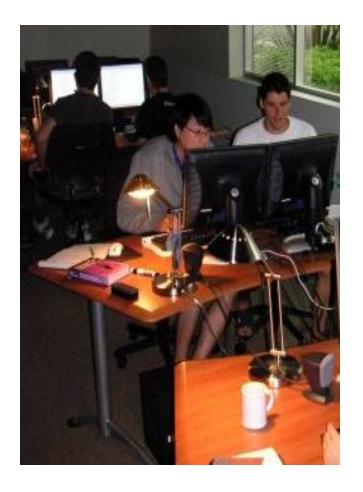




Pair Programming



- Continuous code review
- Distributed knowledge
- Discipline





Refactoring & Clean Code Stulian

Leave the place cleaner than it was when you got there...

(Boy Scout Rule)

- Improve code quality
- Clean up "Code Smells"
- Clean up "Design Smells"





Agile Testing Quadrants



Business facing

Supporting the team

Are we building the right product? What?

Are we building the product right?

Technology facing

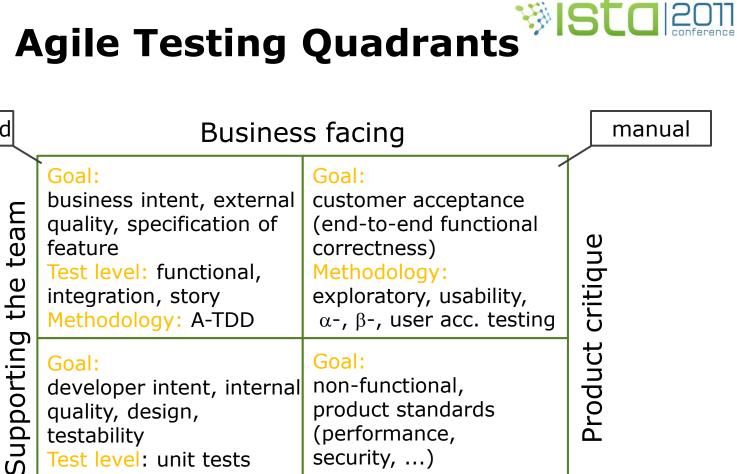
Product critique

Source: Brian Marick



automated

Agile Testing Quadrants



automated

Technology facing

Methodology: TDD

Quadrants do NOT replace each other!

Source: Brian Marick

tool based*



Agile Testing Quadrants ISTU 2011



Benefits:

- Team can go faster, do more
- Team is more confident
- Customer collaboration
- Evaluation through real usage

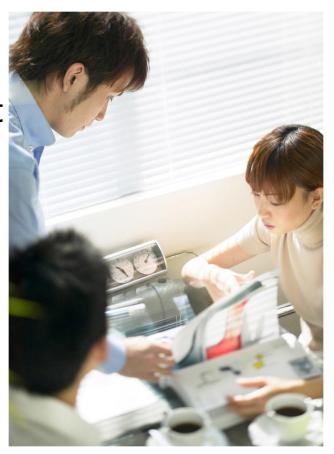




Quality Principles



- Empowered teams
- Fast feedback cycles
- Testing is part of development
- Prevention over detection







Stoyan Kanev

E-mail:

stoyan.kanev@sap.com

Nikolai Dokovski

E-mail:

nikolai.dokovski@sap.com





Thank you!





Q & A



Reference Materials



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- Toyota Production System: Beyond Large-Scale Production, Ohno
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