

CONTEXT-DRIVEN
TESTING

IN AN AGILE
CONTEXT

... A HAPPY MARRIAGE ?

Topics

- Testing
- Context-driven testing
- Agile testing
- Test automation
- Great testers
- Happy Marriage?



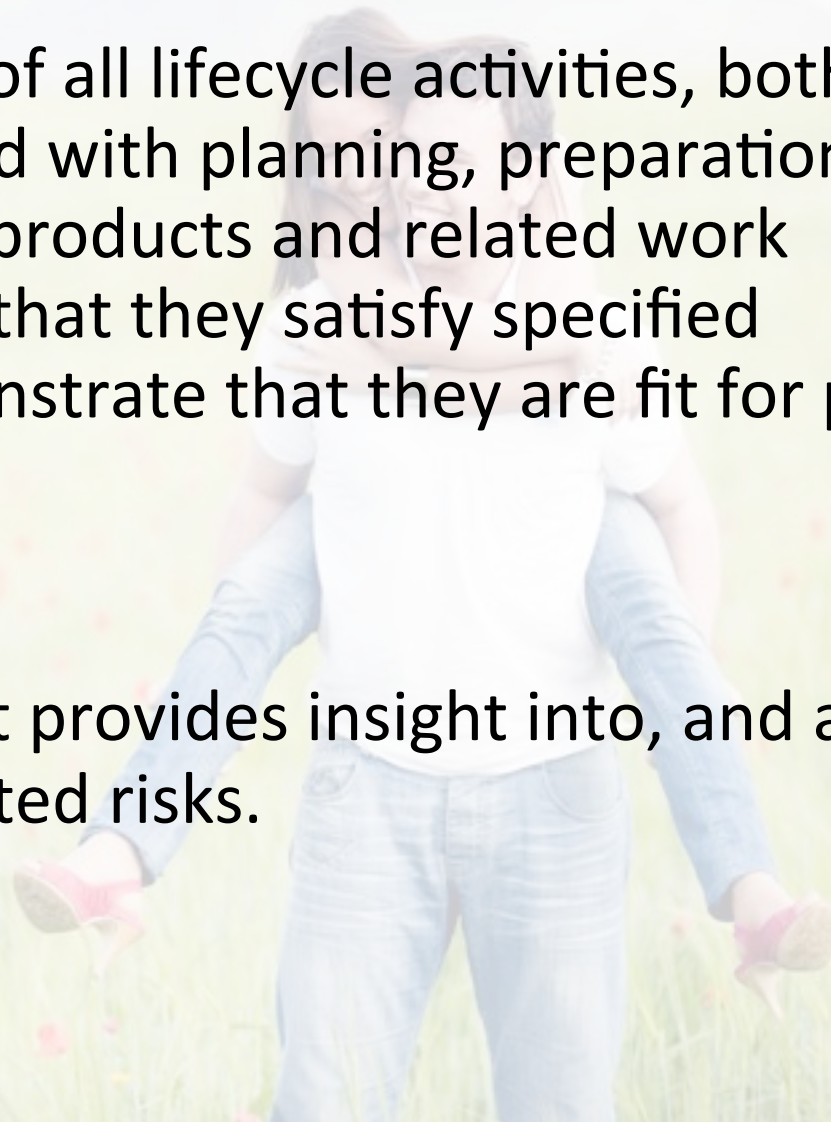
What is testing?

The process consisting of all lifecycle activities, both static and dynamic, concerned with planning, preparation and evaluation of software products and related work products to determine that they satisfy specified requirements, to demonstrate that they are fit for purpose and to detect defects.

(ISTQB)

Testing is a process that provides insight into, and advice on, quality and the related risks.

(TMap)



What is testing?

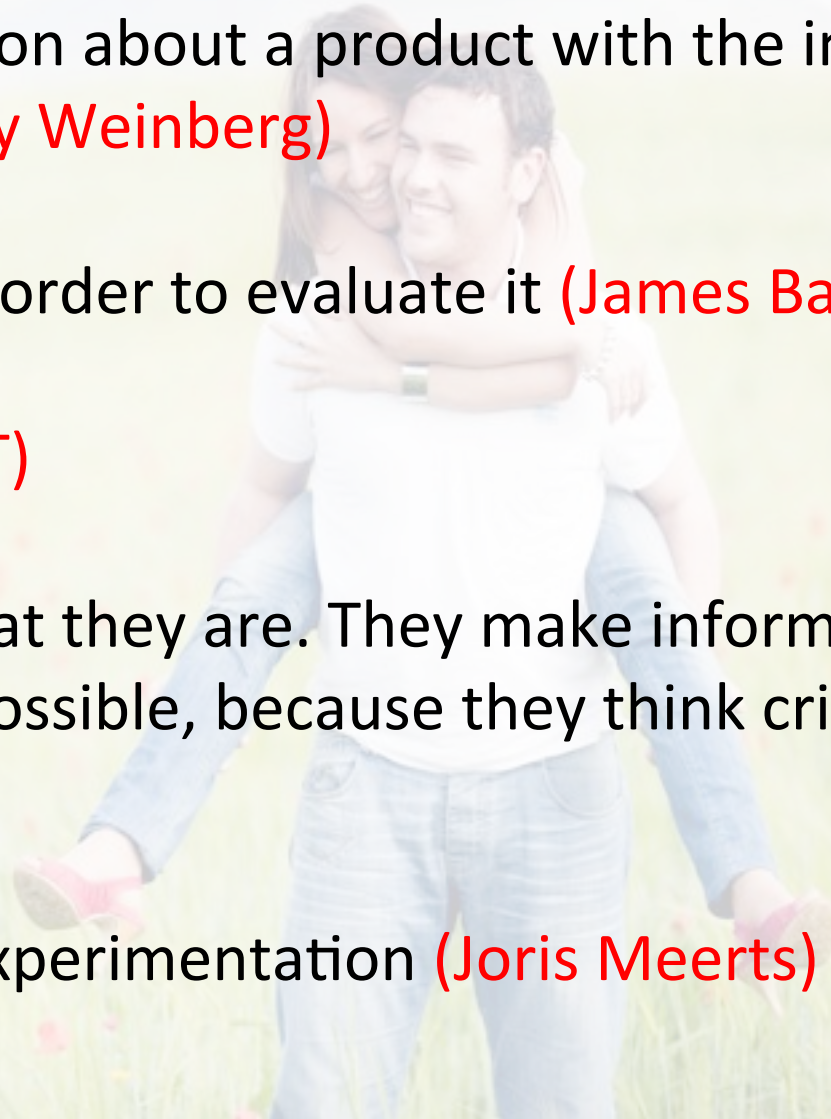
Testing gathers information about a product with the intention to inform a decision (Jerry Weinberg)

Questioning a product in order to evaluate it (James Bach)

Testers light the way (RST)

Testers see things for what they are. They make informed decisions about quality possible, because they think critically about software (RST)

Skillful investigation by experimentation (Joris Meerts)



Testing and checking

- **Testing** is the process of evaluating a product by learning about it through experimentation, which includes to some degree: questioning, study, modeling, observation and inference.
- **Checking** is the process of making evaluations by applying algorithmic decision rules to specific observations of a product.

Testing and checking

Testing

Learning by experimenting, including study, questioning, modeling, observation, interference, etc.

Human
checking

Human/machine
checking

Machine
checking

What is context-driven testing?

- A paradigm

The model by which I understand, experience, value, explain and categorize good testing.

- A community

A group of people who consider testing as a human activity to solve a complex and difficult problem that requires a lot of skill. Therefore they continuously study their craft seriously, practice a lot and refuse to do bad work.

- An approach

Context-driven testing means that to be effective, testing must consider context first and continuously.



The 7 principles of Context-driven Testing

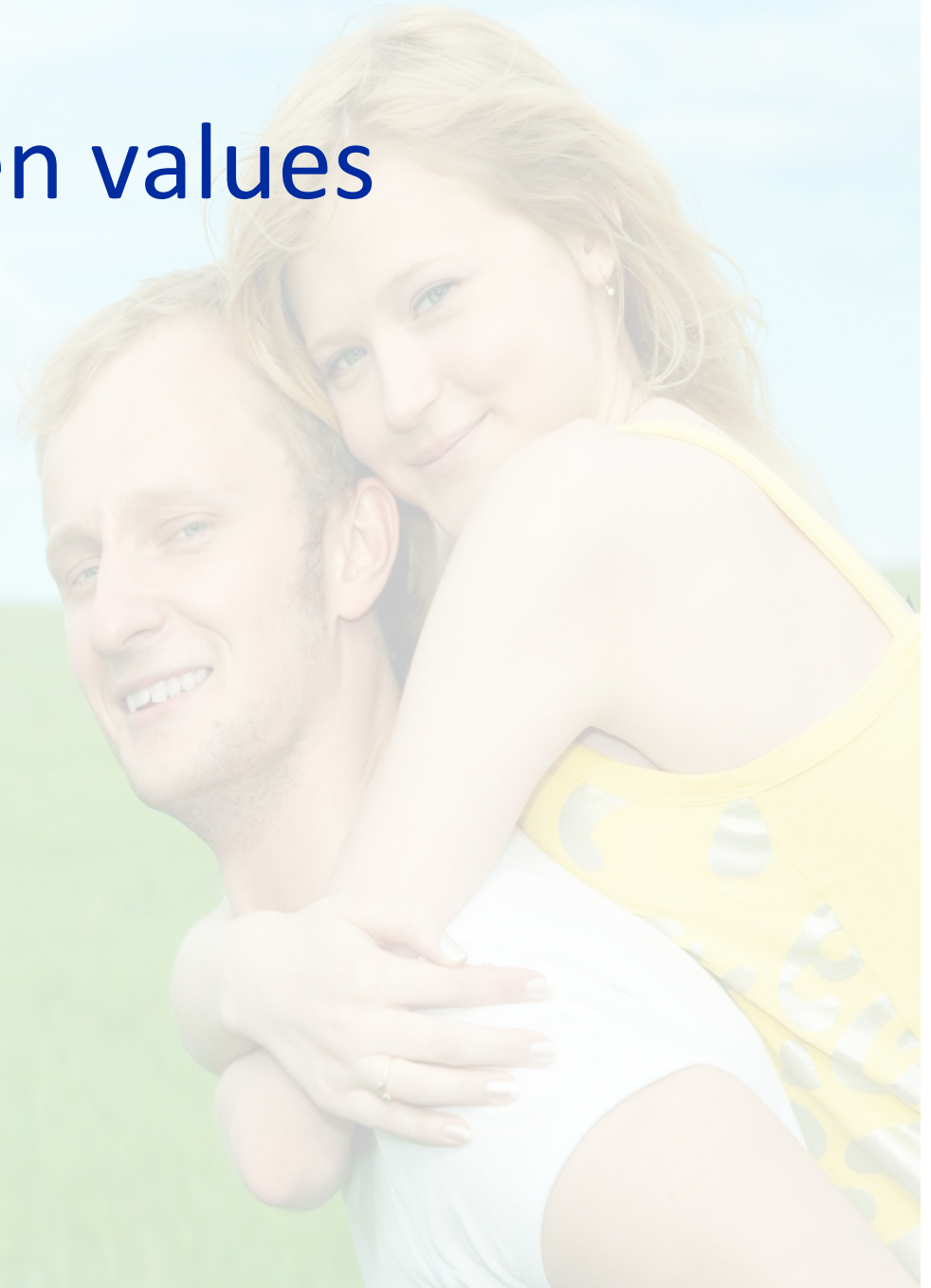
1. The value of any practice depends on its context.
2. There are good practices in context, but there are no best practices.
3. People, working together, are the most important part of any project's context.
4. Projects unfold over time in ways that are often not predictable.
5. The product is a solution. If the problem isn't solved, the product doesn't work.
6. Good software testing is a challenging intellectual process.
7. Only through judgment and skill, exercised cooperatively throughout the entire project, are we able to do the right things at the right times to effectively test our products.

Source: <http://context-driven-testing.com/>

The context-driven values

- Humanist
- Skeptical
- Empiricist
- Adaptable
- Diversified
- Heuristic
- Ethical
- Personal

Source: Keynote presentation by Michael Bolton CopenhagenContext 2014



An example: RST

The Premises of Rapid Testing:

1. Software projects and products are relationships between people, who are creatures both of emotion and rational thought.
2. Each project occurs under conditions of uncertainty and time pressure.
3. Despite our best hopes and intentions, some degree of inexperience, carelessness, and incompetence is normal.
4. A test is an activity; it is performance, not artifacts.
5. Testing's purpose is to discover the status of the product and any threats to its value, so that our clients can make informed decisions about it.
6. We commit to performing credible, cost-effective testing, and we will inform our clients of anything that threatens that commitment.
7. We will not knowingly or negligently mislead our clients and colleagues.
8. Testers accept responsibility for the quality of their work, although they cannot control the quality of the product.

Agile testing?

- What makes testing agile?

The testing itself is not so much different, it is the context in which you do the testing is different!

We explained how agile testing, with its focus on business value and delivering the quality customers require, is different from traditional testing, which focuses on conformance to requirements.

(Agile Testing - A Practical Guide for Testers and Agile Teams - Lisa Crispin, Janet Gregory)

Some differences...

- Less time to prepare, execute and report
- Iterative and incremental approach
- Focus on test automation
- Role change: less testing, more coaching
- Less certainty: change is common
- Team work
- Continuous critical thinking

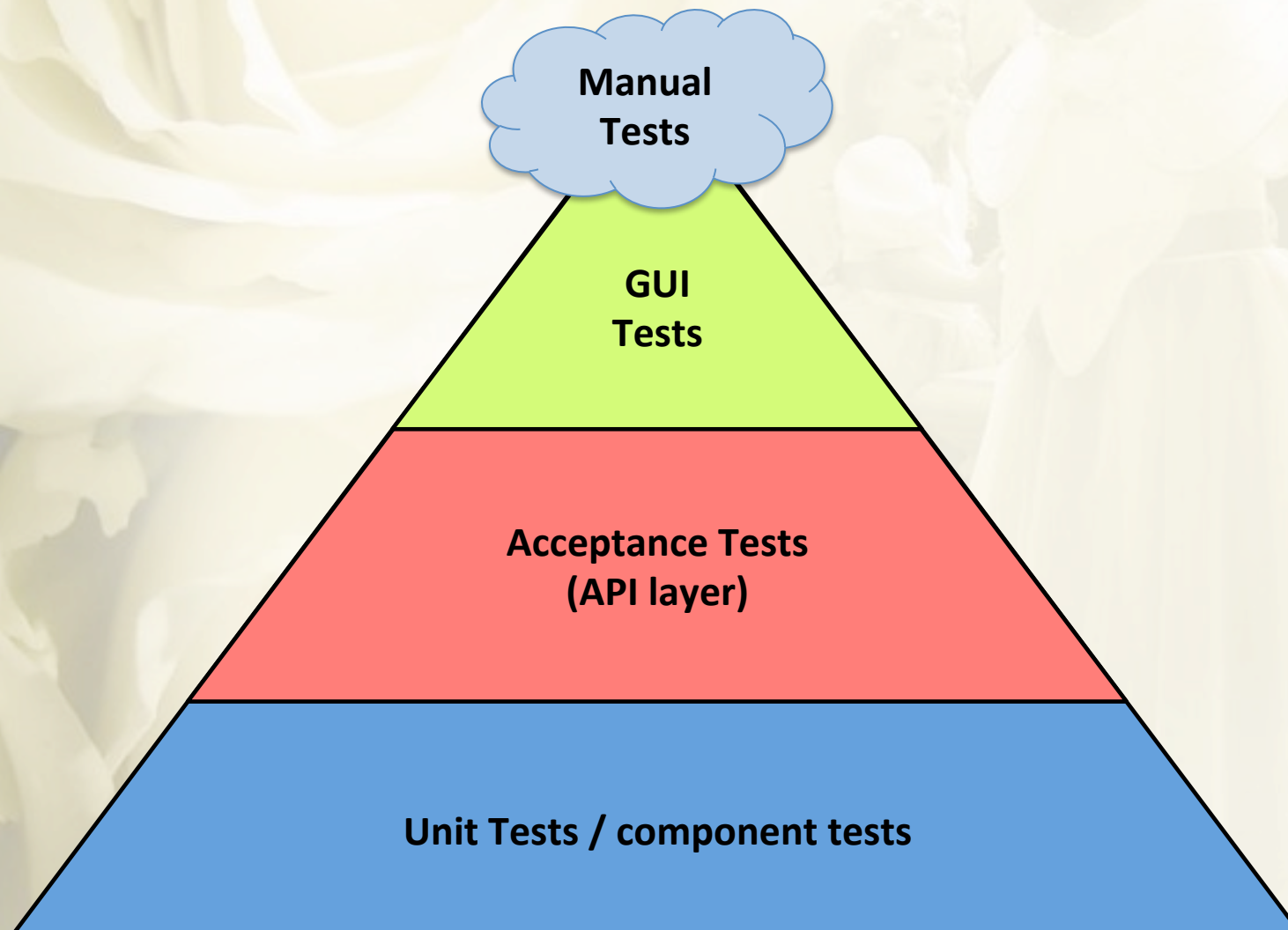
Agile testing to some...

- TDD
- ATDD, BDD, Specification by example
- 100% test automation
- No more testers
- Built-in quality
- Faster, shorter, better!

Individuals and interactions over processes and tools



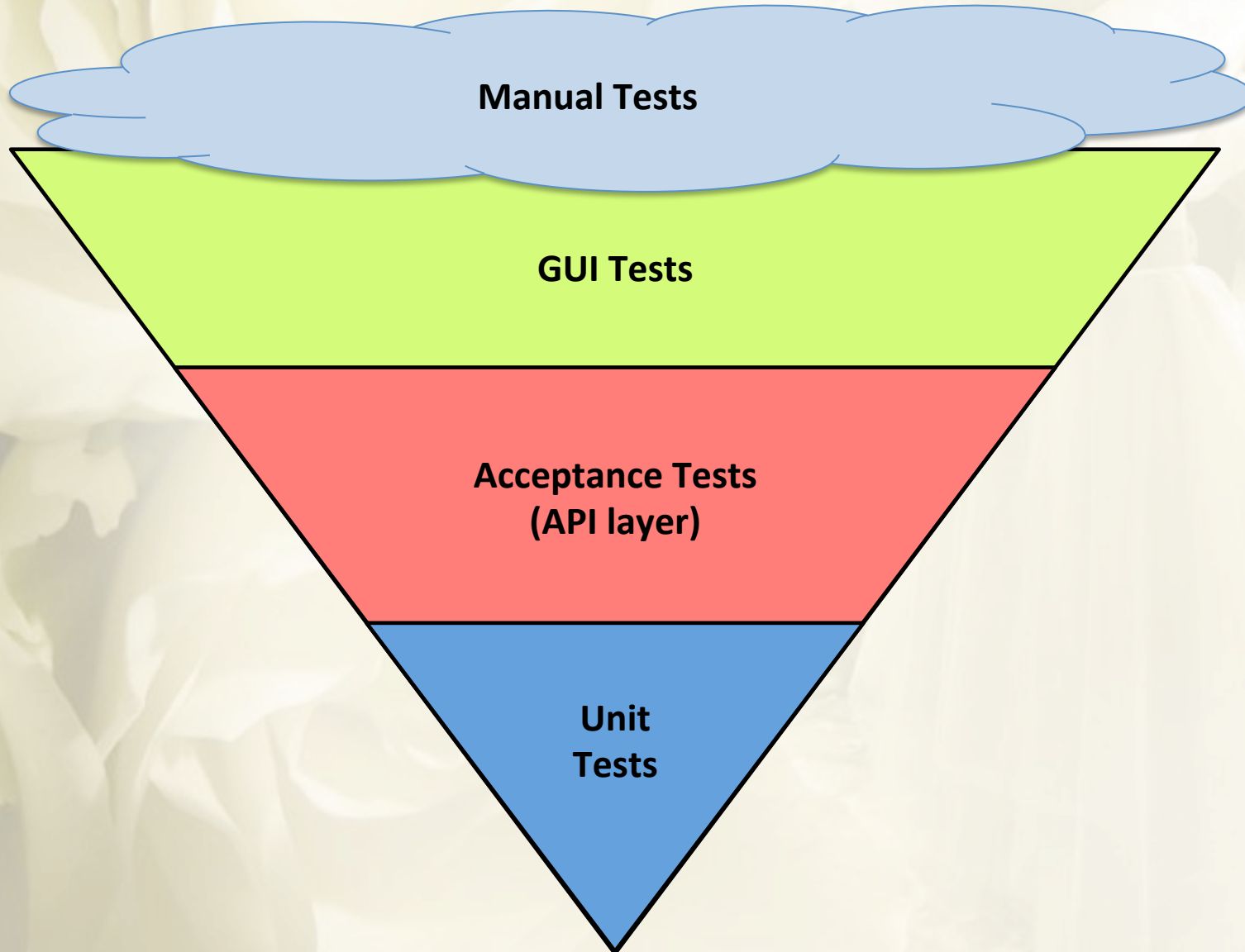
Testing pyramid



Checking ~~Test~~ automation

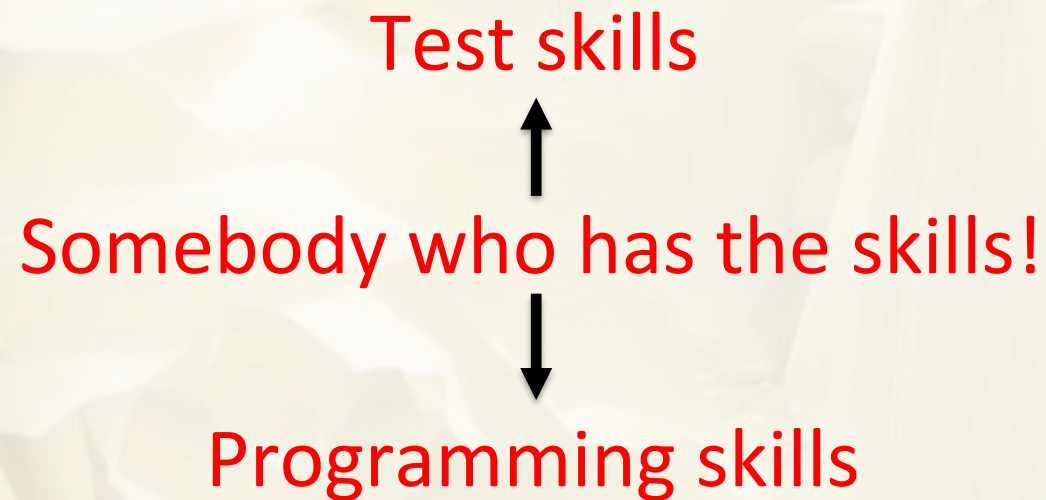
- You can only automate a check
- Expected results are needed
- What about unexpected stuff?
- No learning, only fact checking...

Gone wrong: testing ice cone!



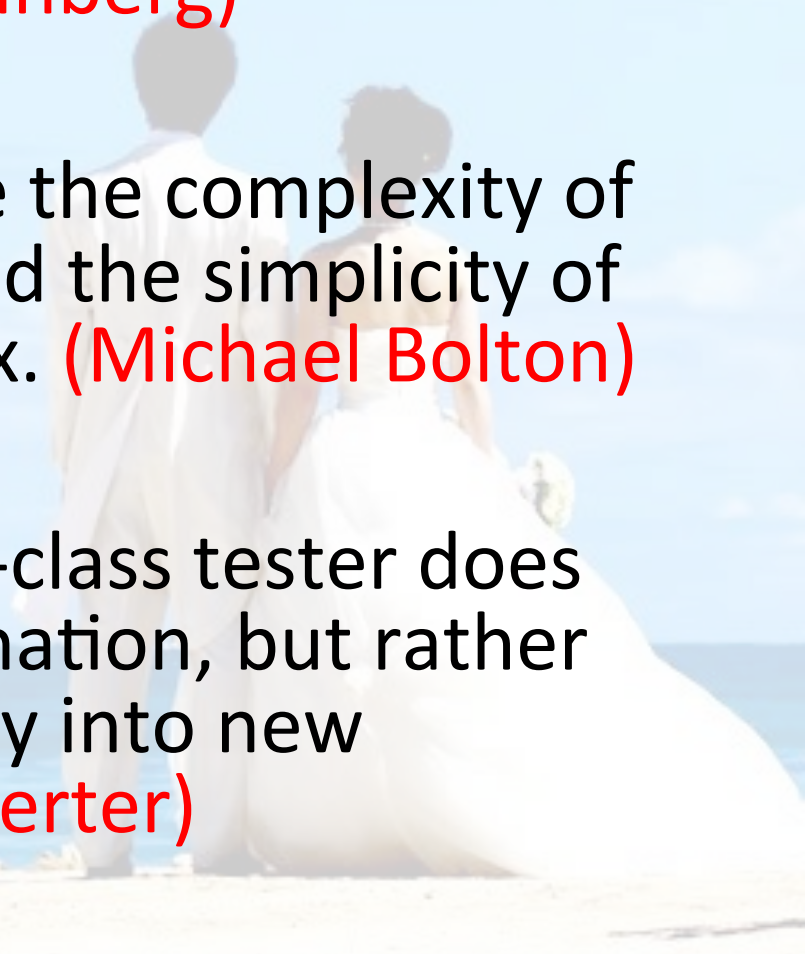
checking Who should do the ~~test~~ automation?

- Testers?
- Programmers?
- Both?



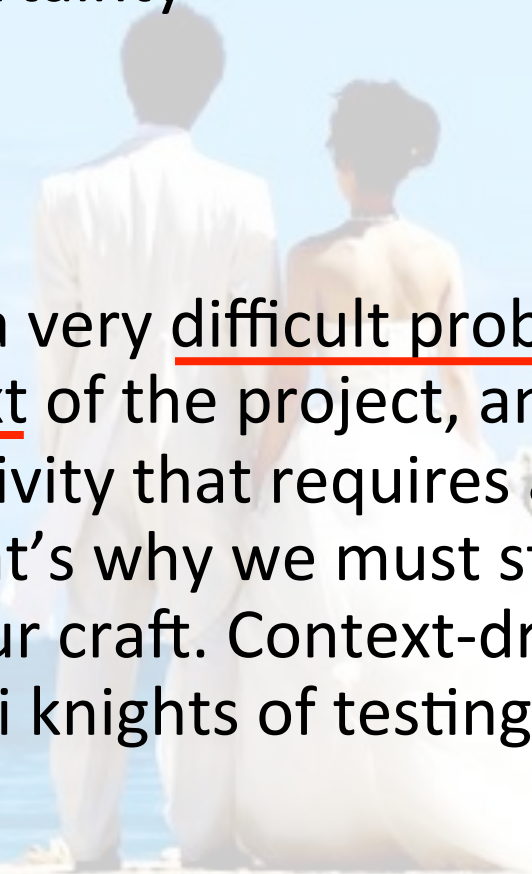
Great testers

- A tester is somebody who knows that things can be different. (Jerry Weinberg)
- A good tester is able to see the complexity of things that seem simple and the simplicity of things that appear complex. (Michael Bolton)
- Aiming to become a world-class tester does not mean reaching a destination, but rather being on a constant journey into new territories. (Ilari Henrik Aegerter)



Great testers

- Testing is about questioning and learning under conditions of fundamental uncertainty
- Testing is a performance
- Because testing is a solution to a very difficult problem, it must be tailored to the context of the project, and therefore testing is a human activity that requires a great deal of skill to do well. That's why we must study it seriously. We must practice our craft. Context-driven testers strive to become the Jedi knights of testing.



Become a great tester...

1. Adapt to the context
2. Collaborate
3. Learn & practice
4. Passion
5. Have courage
6. Be curious & sceptical

Content

Attitude



Steve Jobs' 2005 Stanford Commencement Address



<http://news.stanford.edu/news/2005/june15/jobs-061505.html>

How I became better...

- I really love what I do: testing is fun!
- I refuse to do bad work and stand up for what I believe
- Rapid Software Testing
- BBST
- Skype Coaching
- Become part of the community
- Twitter
- Conferences: Let's Test, CAST, TestBash and many more
- Learn, practice, explore
- Testing dojos, weekend testing, Miagi-Do
- Read blogs (<http://www.huibschouts.nl/wordpress/?p=1450>)
- Read books (<http://www.huibschouts.nl/wordpress/?p=1361>)





Context-driven testing
in an agile context
... A happy marriage ?

Happy marriage?

- **Focus on humans**

Individuals and interactions over processes and tools

People, working together, are the most important part of any project's context

- **Projects are uncertain**

Responding to change over following a plan

Projects unfold over time in ways that are often not predictable

- **Problem solving**

Working software over comprehensive documentation

The product is a solution. If the problem isn't solved, the product doesn't work

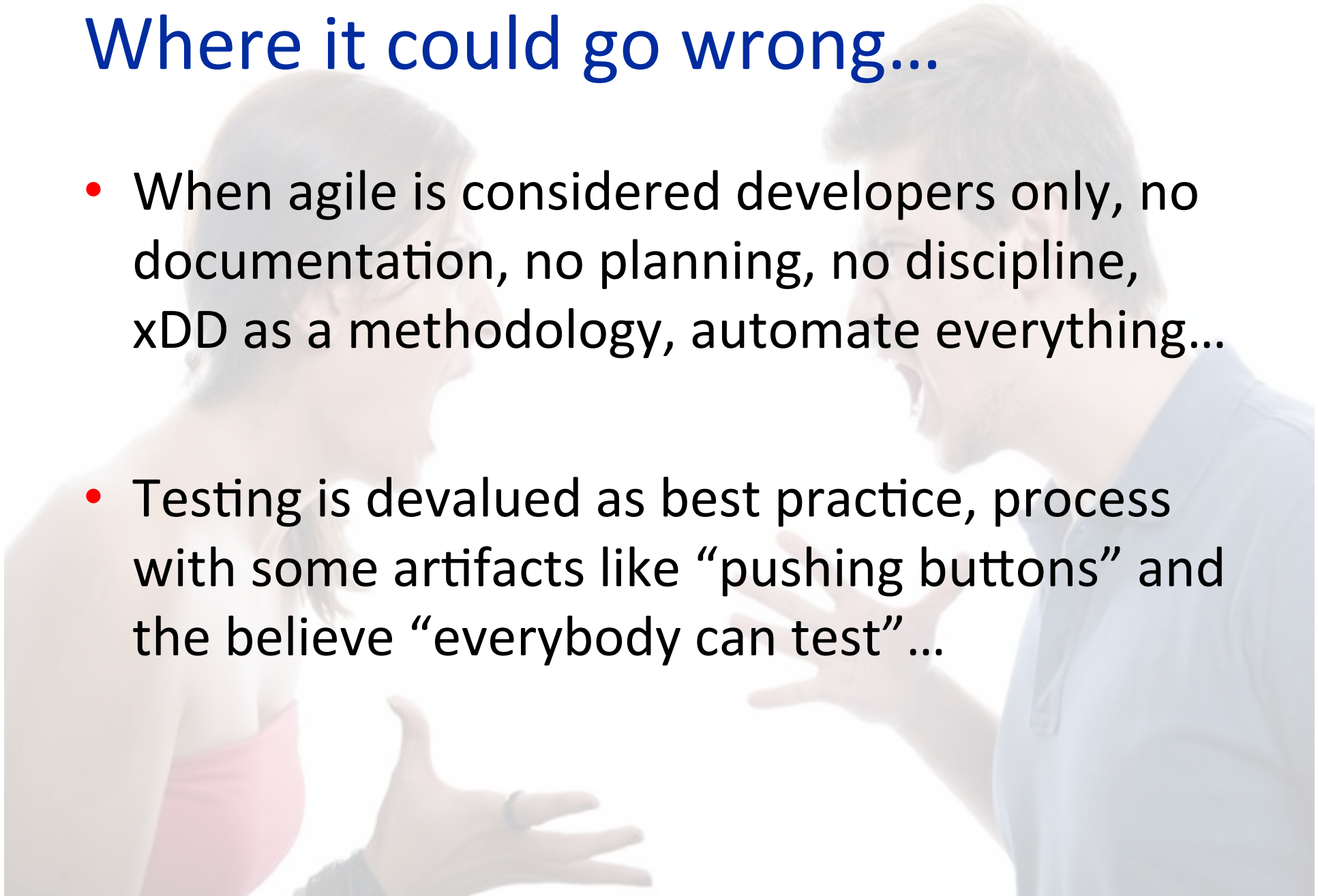
- **Collaboration**

Customer collaboration over contract negotiation

Only through judgment and skill, exercised cooperatively throughout the entire project, are we able to do the right things at the right times to effectively test our products

Where it could go wrong...

- When agile is considered developers only, no documentation, no planning, no discipline, xDD as a methodology, automate everything...
- Testing is devalued as best practice, process with some artifacts like “pushing buttons” and the believe “everybody can test”...



Read more

- Open Letter to EuroSTAR organizers – testing introduction - <http://thetesteye.com/blog/2013/03/open-letter-to-eurostar-organizers-testing-introduction/> (Testing)
- Misconceptions about testing - <http://www.huibschoots.nl/wordpress/?p=1118> (Testing)
- Quality: Not Merely The Absence Of Bugs - <http://www.developsense.com/blog/2009/02/quality-not-merely-absence-of-bugs/> (Testing)
- Testing & Checking - <http://www.satisfice.com/blog/archives/856> (Testing and checking)
- Test Cases Are Not Testing: Toward a Culture of Test Performance” by James Bach & Aaron Hodder - <http://www.testingcircus.com/documents/TestingTrapeze-2014-February.pdf> (Testing is a performance)
- A test is a performance - <http://www.satisfice.com/blog/archives/1346> (Testing is a performance)
- Context-driven Testing - <http://www.developsense.com/presentations/2011-08-CAST-ContextDrivenTesting.pdf> (Context-driven testing)
- What is context-driven testing? - <http://kaner.com/?p=49> (Context-driven testing)
- What being a Context-Driven Tester means to me - <http://testingreflections.com/node/8657> (Context-driven testing)
- What makes agile testing different? - <http://www.huibschoots.nl/wordpress/?p=1072> (Agile testing)
- Becoming a World-Class Tester - www.ebaytechblog.com/2013/01/31/becoming-a-world-class-tester/ (Great testers)
- You can learn testing - <http://www.huibschoots.nl/wordpress/?p=373> (Great testers)
- The Dual Nature of Context-Driven Testing - <http://www.satisfice.com/blog/archives/565> (Great testers)
- How to become a great tester - My talk at CopenhagenContext 2014: goo.gl/V5kknu (Attitude)
- So you think you can test - My talk at Let's Test 2012: goo.gl/CYgBxR (Learning & practice)
- A tester's syllabus by James Bach - <http://www.satisfice.com/images/testsyllabus.pdf> (Skills)
- Agile Test Automation by James Bach - www.satisfice.com/articles/agileauto-paper.pdf (Agile Test Automation)
- The Forgotten Layer of the Test Automation Pyramid - <http://www.mountangoatsoftware.com/blog/the-forgotten-layer-of-the-test-automation-pyramid> (Test Automation Pyramid)
- Can Exploratory Testing Be Automated? - <http://www.developsense.com/blog/2010/09/can-exploratory-testing-be-automated/> (Test automation & exploratory testing)
- Man and machine - http://www.kohl.ca/articles/ManandMachine_BetterSoftware_Dec2007.pdf (Test Automation)
- Is Unit Testing Automated? - <http://www.developsense.com/blog/2010/06/questions-from-listeners-2-is-unit-testing-automated/> (Test Automation)
- Manual and automated testing - <http://www.developsense.com/blog/2013/02/manual-and-automated-testing/> (Test Automation)
- More great resources: <http://www.huibschoots.nl/links> (More links)

huib.schoots@improveqs.nl
@huibschoots
www.huibschoots.nl/blog

IMPROVE

Quality Services

Laan van Diepenvoorde 1
5582 LA Waalre
The Netherlands
Tel: +31 40 2021803

