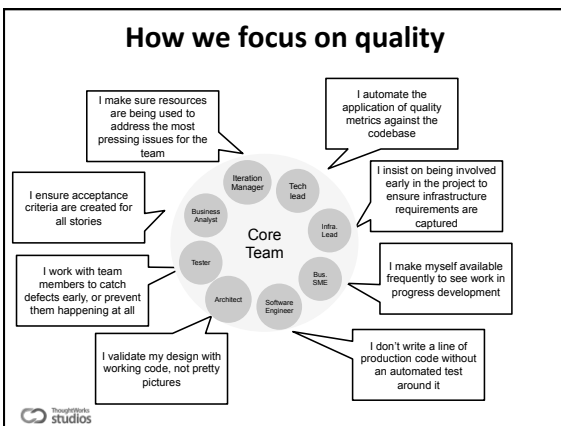**ThoughtWorks studios**

Quality

A Module in Agile Fundamentals

What is Quality?

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How we focus on quality

I make sure resources are being used to address the most pressing issues for the team

I automate the application of quality metrics against the codebase

I ensure acceptance criteria are created for all stories

I insist on being involved early in the project to ensure infrastructure requirements are captured

I work with team members to catch defects early, or prevent them happening at all

I make myself available frequently to see work in progress development

I validate my design with working code, not pretty pictures

I don't write a line of production code without an automated test around it

Iteration Manager — Tech lead — Business Analyst — Infra. Lead — Core Team — Tester — Bus. SME — Architect — Software Engineer

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Types of Testing

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Types of testing

- What types of testing do you do now?
- Why do you do these types of testing?
- Write each type of test on an index card along with a description of this test.
- Be ready to share with the group.

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Types of Testing

- Unit Testing
- Acceptance Testing
- System Integration Testing
- User Acceptance Testing (UAT)
- Regression Testing
- Exploratory Testing

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Collaboration

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Physical separation / Lack of face-to-face communication

What can you do about it?

Integrate all capabilities into single collocated team, using conversation (e.g., standups) and shared storywall to show status of testing

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No shared responsibility towards quality

What can you do about it?

Heavy emphasis on developer testing of stories during development
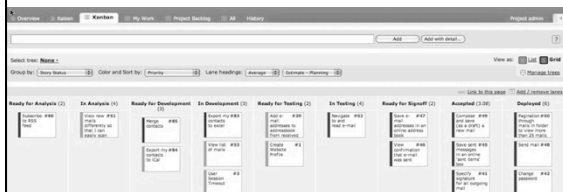

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Misaligned metrics

What can you do about it?

Entire team measured by how effectively stories can be moved through the entire process, not any capability-specific steps

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Timing of testing.
Schedule pressure.

What can you do about it?

Testing runs in parallel with development for the entire duration of development

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Tips for collaboration

- NOT Us versus Them
- NO excuses
- Testing not just for testers!
  - Automation support
  - Environment set-up
  - Management support
  - End to end scenario creation

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The Testers Bill of Rights

You have the right to:

And what about the right to suggest and challenge requirements???

- Ask questions of customers and programmers and receive timely answers
- Bring up issues related to quality and process at any time
- Ask for and receive help from anyone on the project team, including programmers, managers, and customers
- The tools you need to do your job in a timely manner

"Testing Extreme Programming" – Lisa Crispin

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Agile Automation

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Why automation is important?

- For faster feedback
- Gives confidence to the development team
- Testing a rapidly changing application manually is next to impossible

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Automation in an Agile team
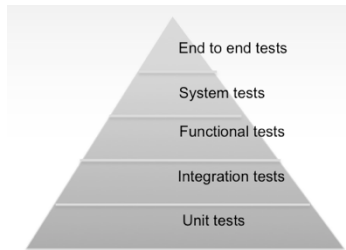
What is different?

- Automation happens parallel to development
- Automate acceptance tests, more than end-to-end tests (in general)
- Automated tests form a regression test suite and is executed in CI to give faster feedback

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How much to automate?

Answer: It depends!

But, what we suggest is -

End to end tests

System tests

Functional tests

Integration tests

Unit tests

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99 Test Balloons

exercise

- Divide into groups of 4 per group
- Create as many balloons that look like the example balloon as you can in 2 minutes

- Have fun!

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Metrics

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Testing Metrics

- Go back to your pair (or triplet) where you described different types of testing.
- On the back of each card, explain or show how you measure this testing method.
- What outcome are you trying to measure?
- Be prepared to share.

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Metrics and reporting: goals

Answer these questions				
How busy is Testing?	What is the quality of the software?	What is the level of risk in the software?	What is our progress?	How good is our testing?

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Metrics and reporting: goals

Answer these questions

How busy is Testing?	What is the quality of the software?	What is the level of risk in the software?	What is our progress?	How good is our testing?

Test cases executed

Stories without test cases

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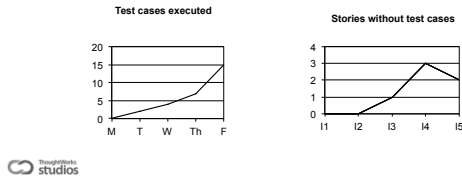## Metrics and reporting: goals

Answer these questions

How busy is Testing?	What is the quality of the software?	What is the level of risk in the software?	What is our progress?	How good is our testing?

Severity

Sev 1, 0% Sev 2, 7%
Sev 4, 48%
Sev 3, 45%

Failed tests

Access Account list Export SMS alerts Transfers

Priority

P4, 33% P1, 15%
P2, 15%
P3, 37%

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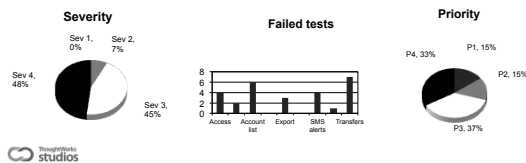## Metrics and reporting: goals

Answer these questions

How busy is Testing?	What is the quality of the software?	What is the level of risk in the software?	What is our progress?	How good is our testing?

Stories bouncing back to development

SC15 SC32 SC78 SC67 SC05

Stories without test cases

I1 I2 I3 I4 I5

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Metrics and reporting: goals
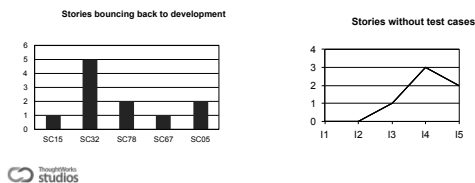
Answer these questions

How busy is Testing?	What is the quality of the software?	What is the level of risk in the software?	What is our progress?	How good is our testing?

Test cases executed

Story points in Testing
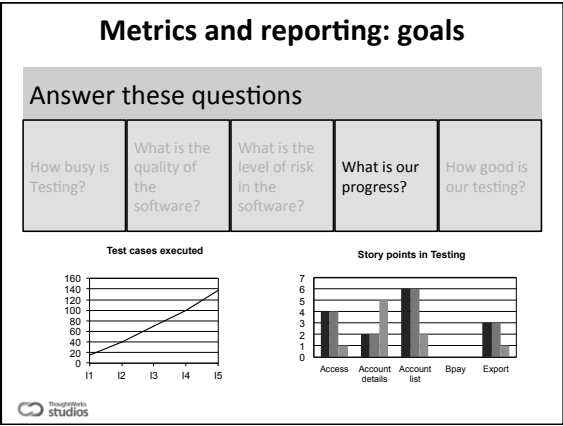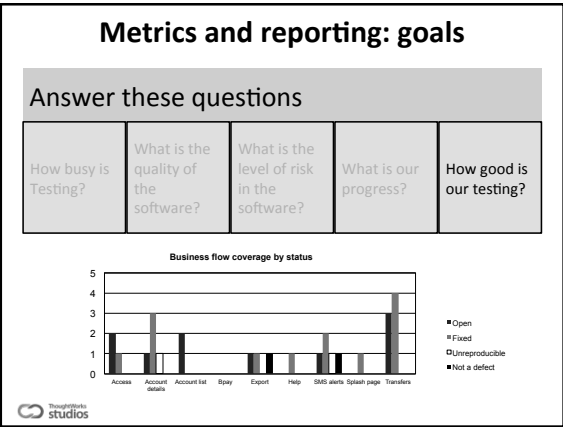

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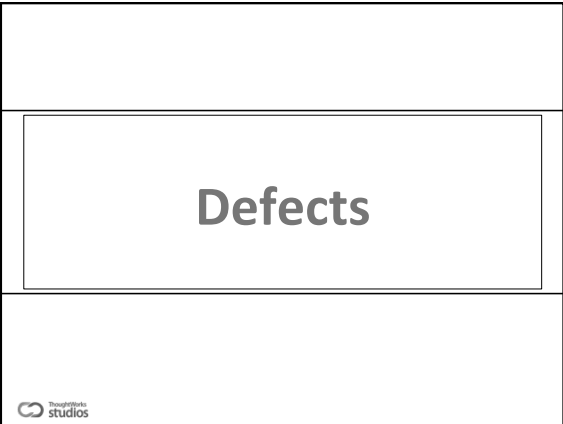

Metrics and reporting: goals

Answer these questions

How busy is Testing?	What is the quality of the software?	What is the level of risk in the software?	What is our progress?	How good is our testing?

Business flow coverage by status

- Open
- Fixed
- Unreproducible
- Not a defect

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Defects

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Defects

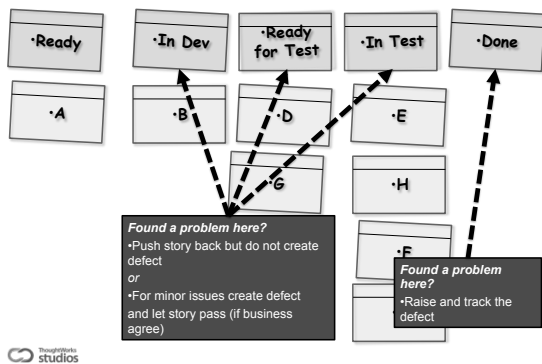"A defect is behavior in a 'Done' story that violates valid expectations of the [Customer]"

Elisabeth Hendrickson

- Not all defects need to be logged.
- Only capture defects if they wont be fixed right away.
- You want developers to feel comfortable showing you something that is not complete to get some guidance.

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When to raise a defect

·Ready	·In Dev	·Ready for Test	·In Test	·Done
·A	·B	·D	·E	

·G

·H

Found a problem here?
•Push story back but do not create defect
or
•For minor issues create defect and let story pass (if business agree)

·F

Found a problem here?
•Raise and track the defect

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Defect management

- Appears on story-wall as separate card
- Prioritized by business over new functionality
- Categorized as per usual

- Should defects be estimated?
- When raising a defect should you associate it with a story?

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Common testing issues/smells

- Is it really a defect?
- Bouncing defects
- Automation failures
- Accepting stories, then raising defects
- Repeating business logic in tests

SNIFF SNIFF

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Questions?

Planning the Project