Why Does Automated Testing Fail?

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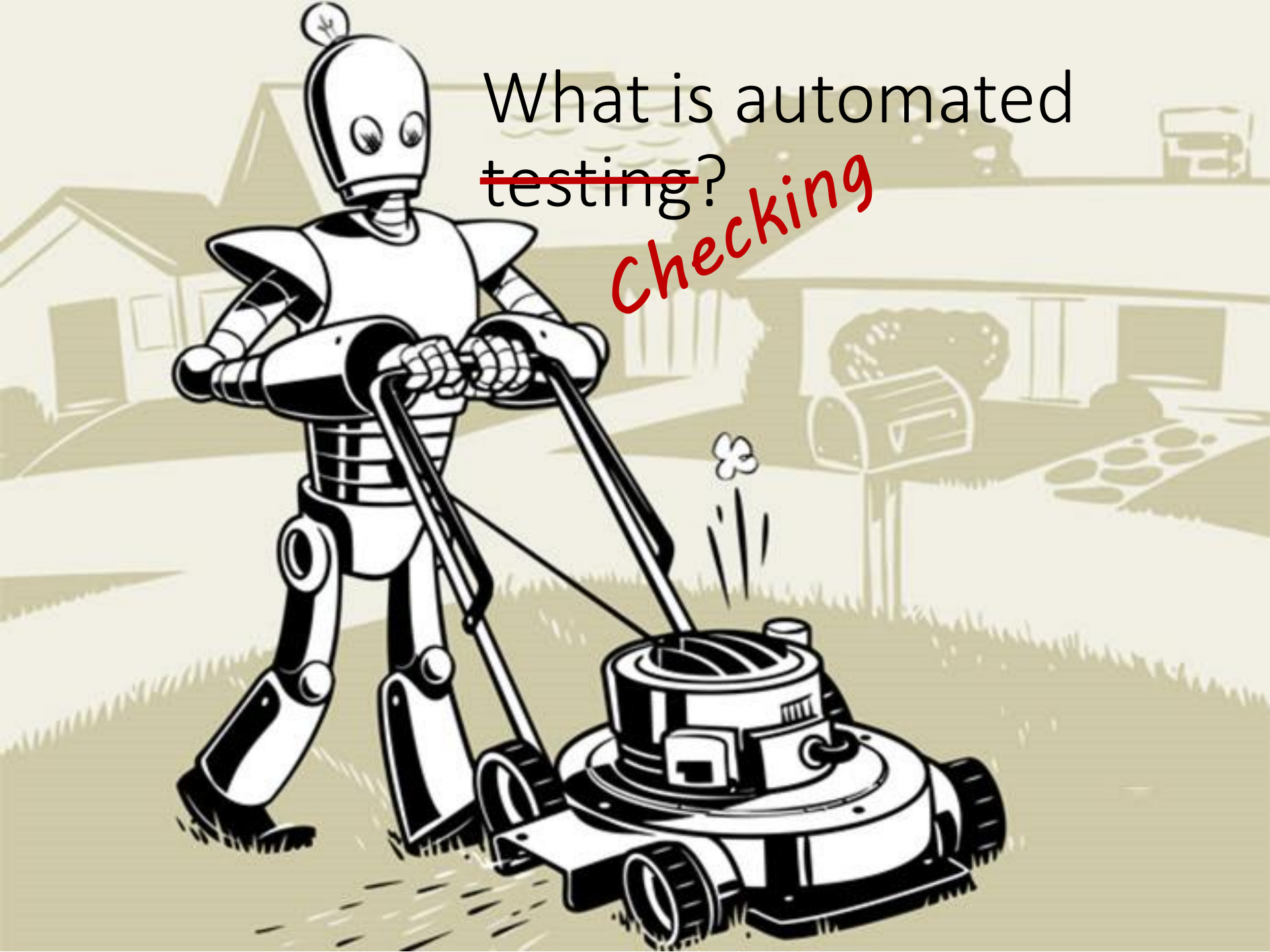
Assumptions:

- Fail Fast
- I Have Failed at Most of These
- If I discuss something that you are doing – please, consider that a good thing!
- No such thing as one size fits all—so let's focus on principles

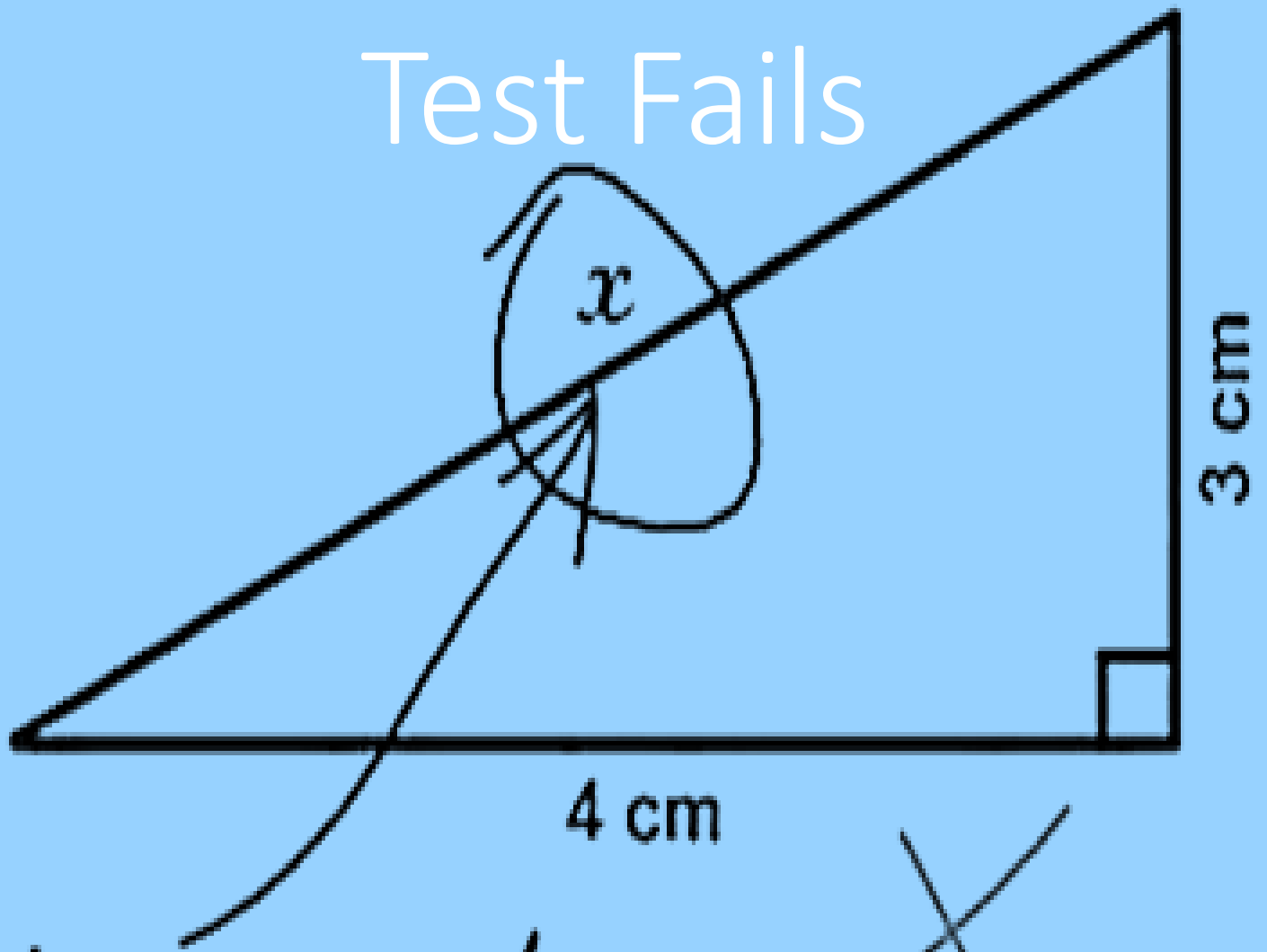
What is automated ~~testing~~?

Checking



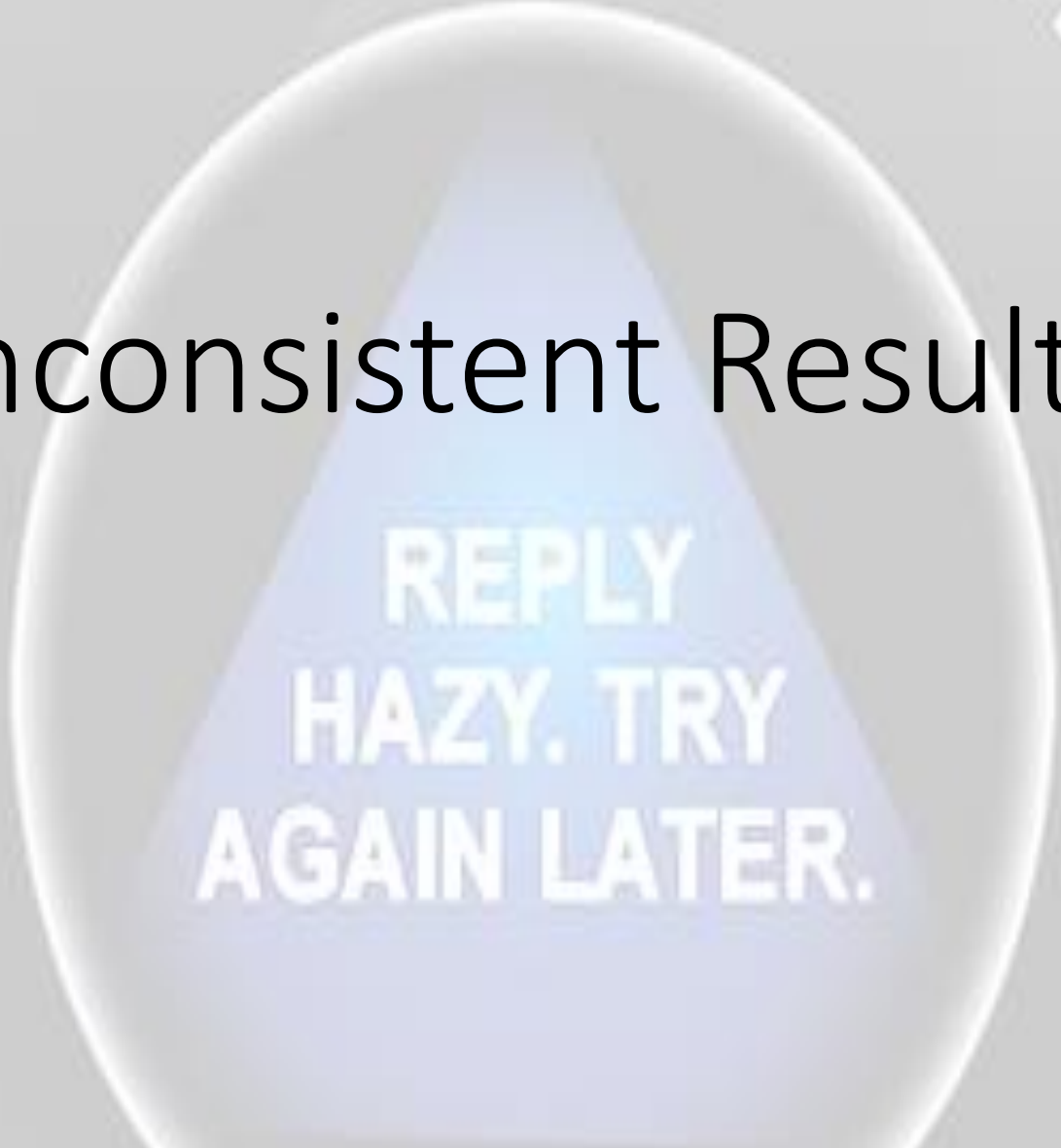
3. Find x.

Test Fails



Here it is

Inconsistent Results

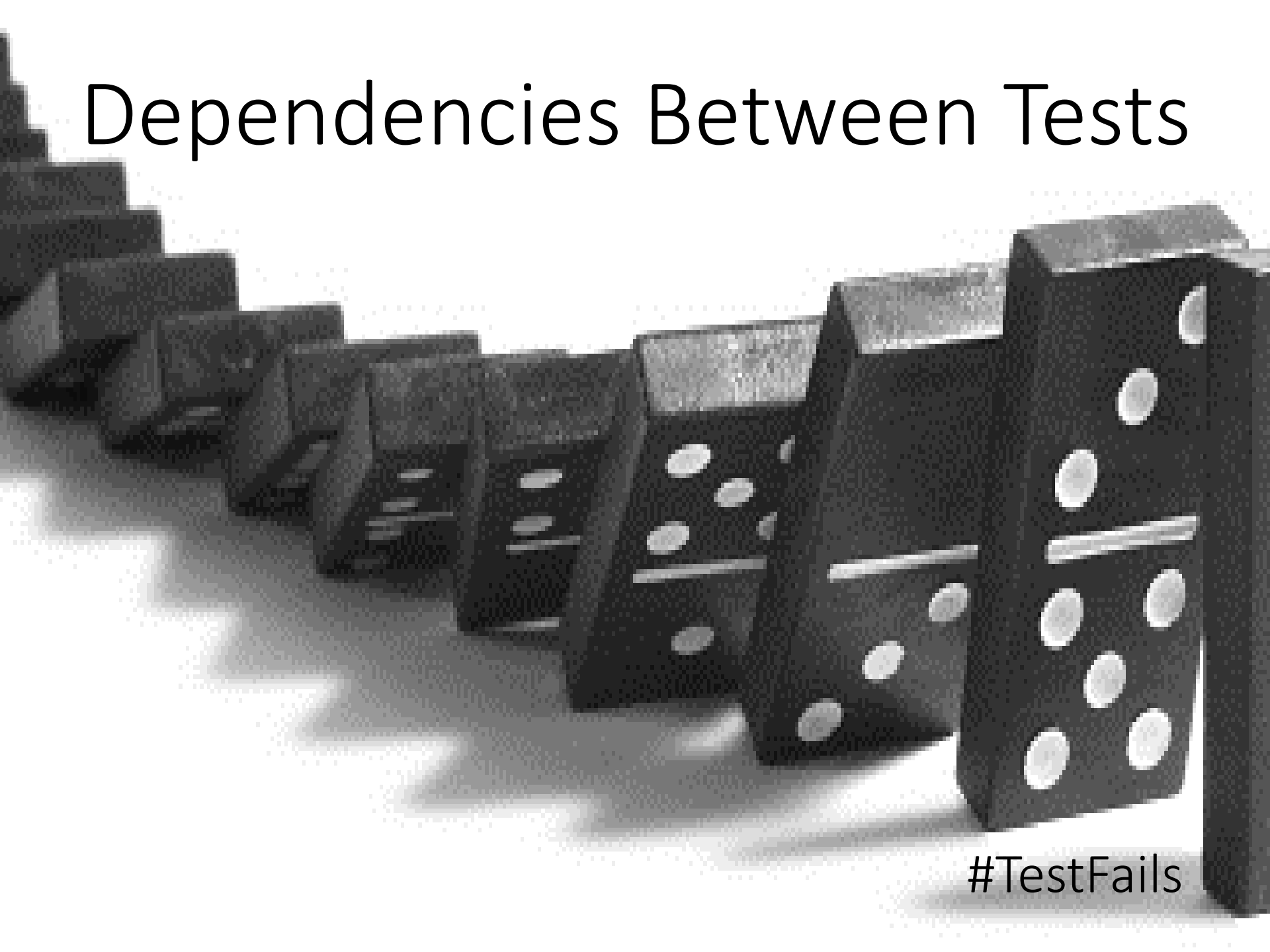


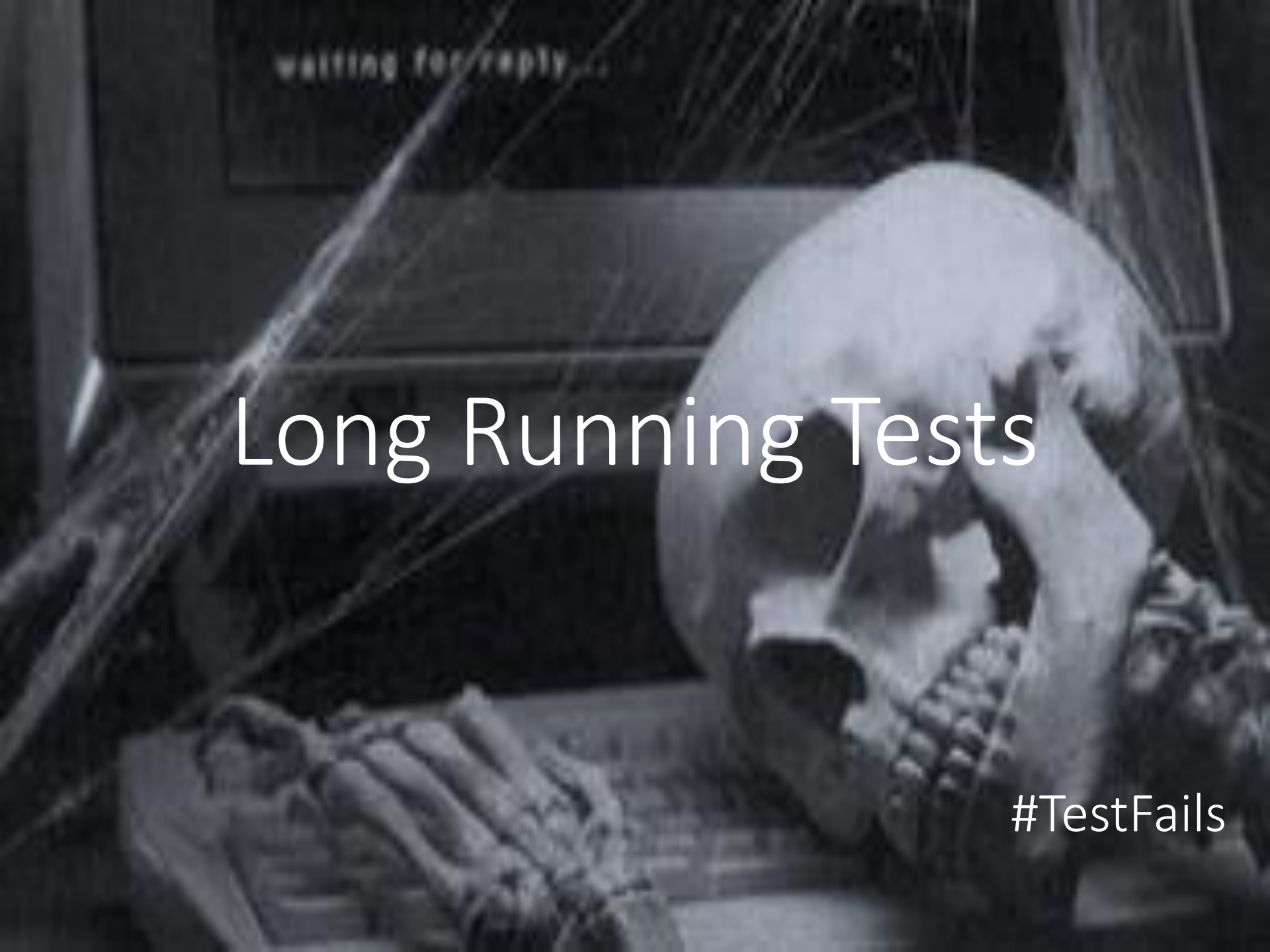
#TestFails

Complex Test Code

#TestFails

Dependencies Between Tests



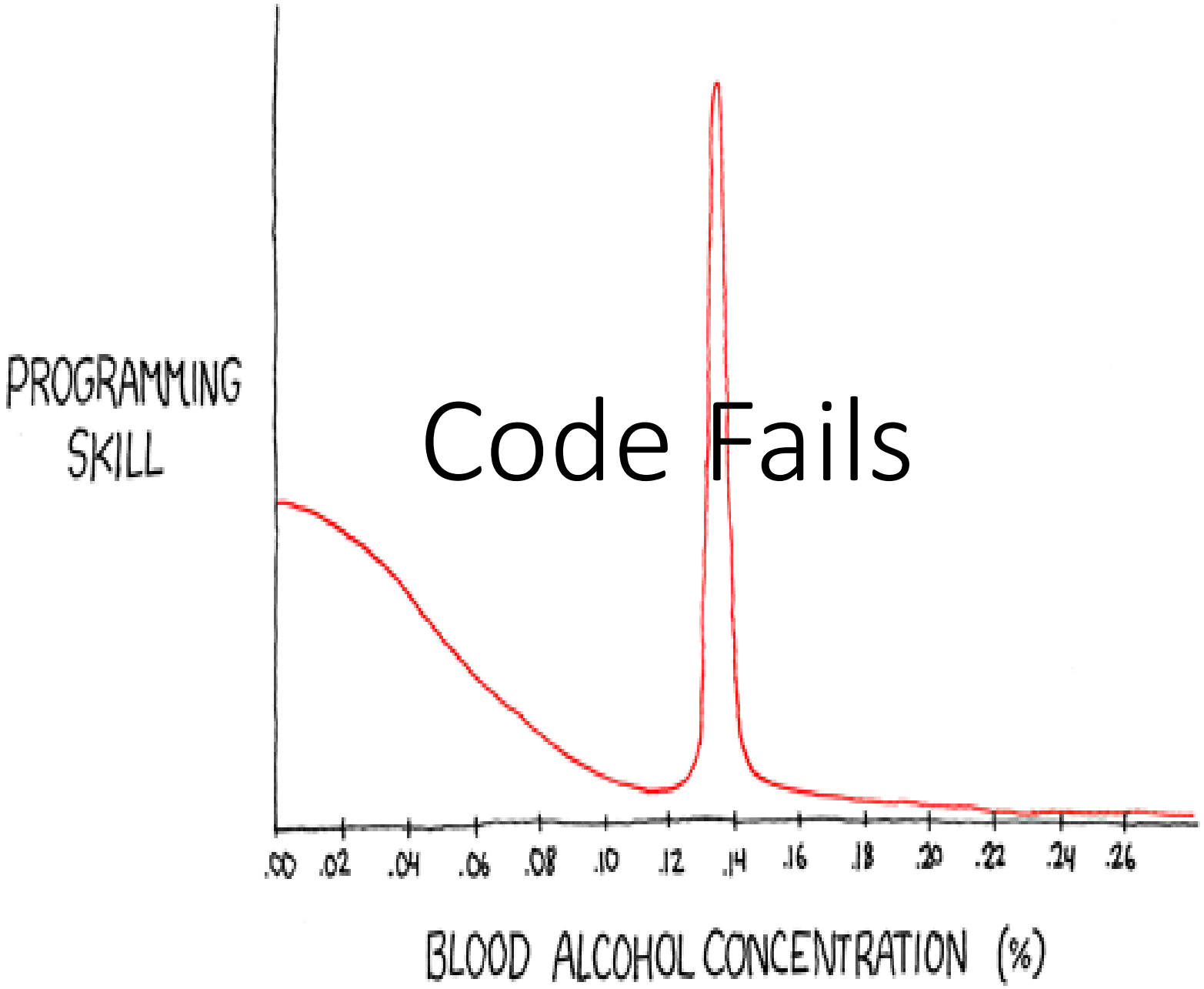


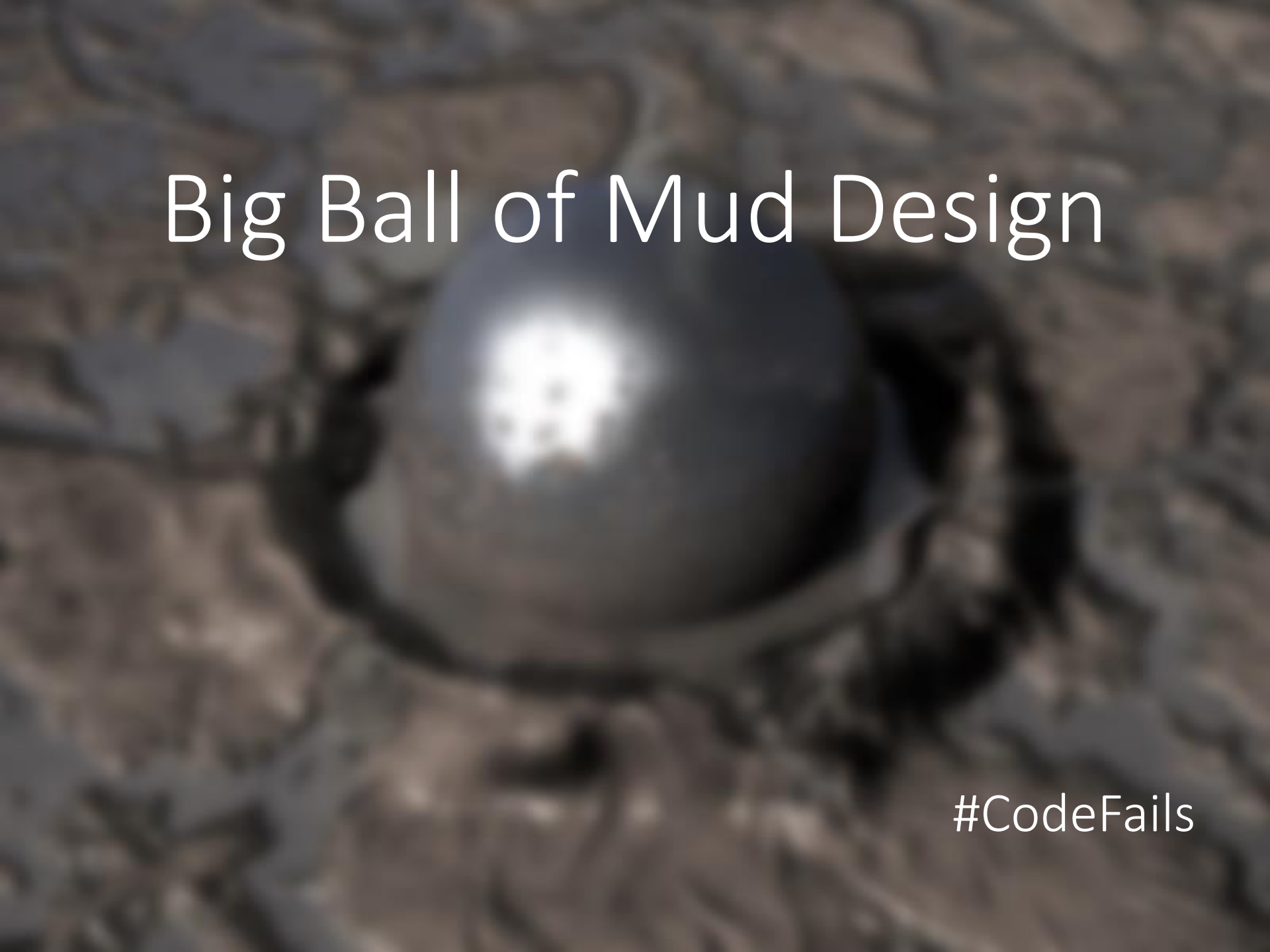
Long Running Tests

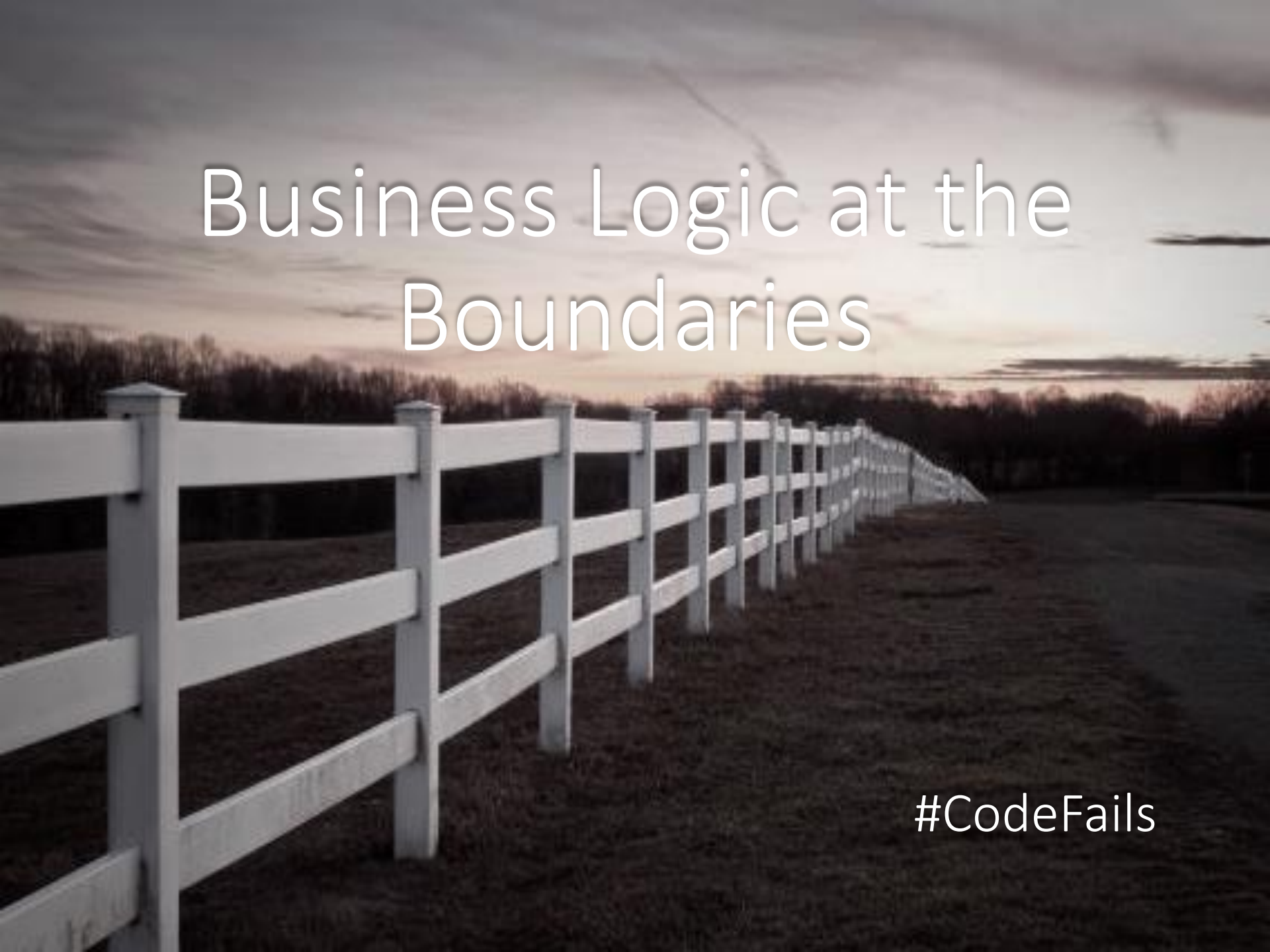
#TestFails

Test Hoarding

#TestFails


PROGRAMMING SKILL
Code Fails
.00 .02 .04 .06 .08 .10 .12 .14 .16 .18 .20 .22 .24 .26
BLOOD ALCOHOL CONCENTRATION (%)

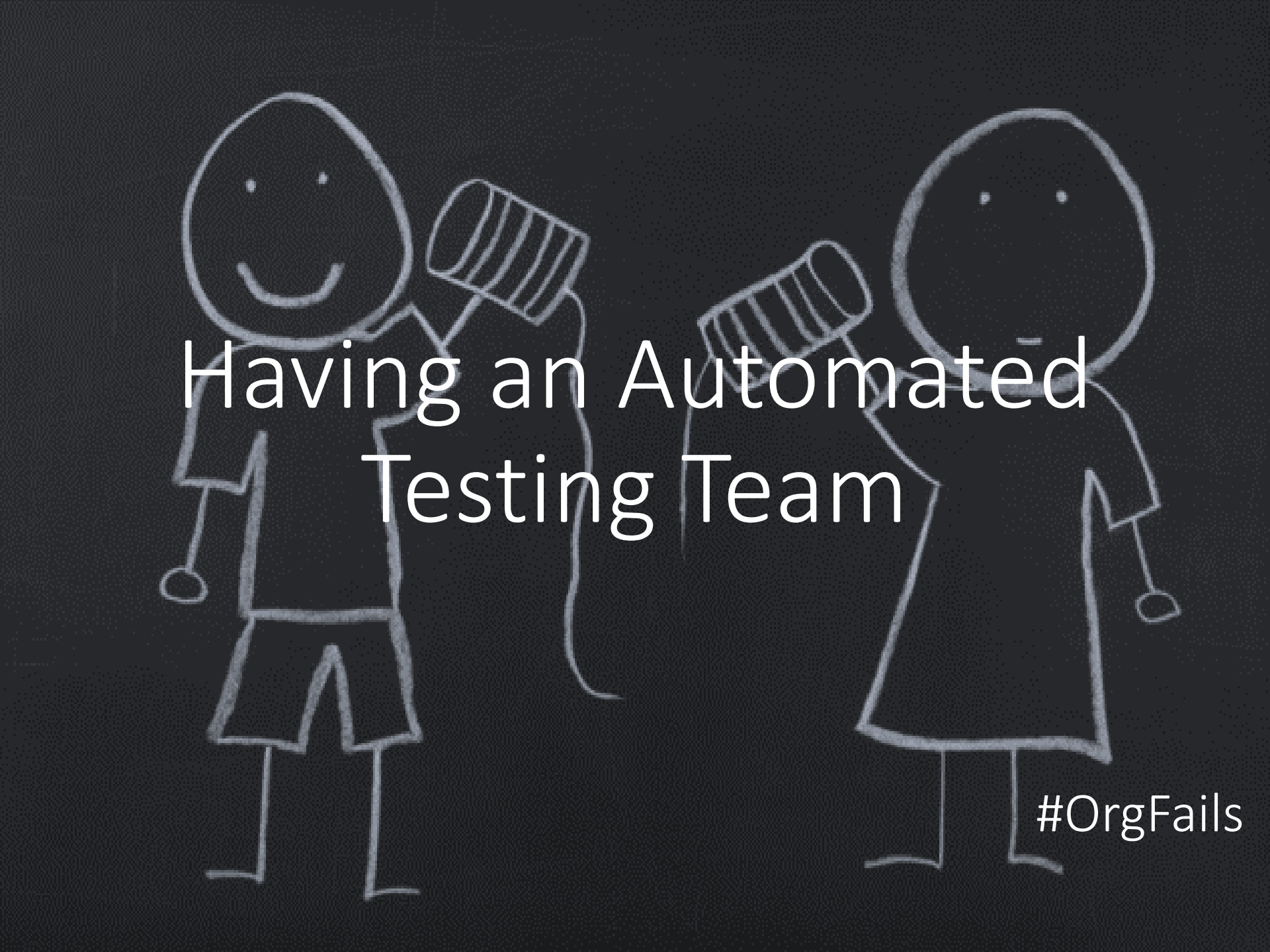

Big Ball of Mud Design
#CodeFails


Business Logic at the Boundaries
#CodeFails

Making Async Systems Synchronous is Hard

#CodeFails

Organizational Fails


Having an Automated Testing Team
#OrgFails

Test it Later Mentality

#OrgFails

Manual == Automated

#OrgFails

Tool Fails

A Person Running the Tests

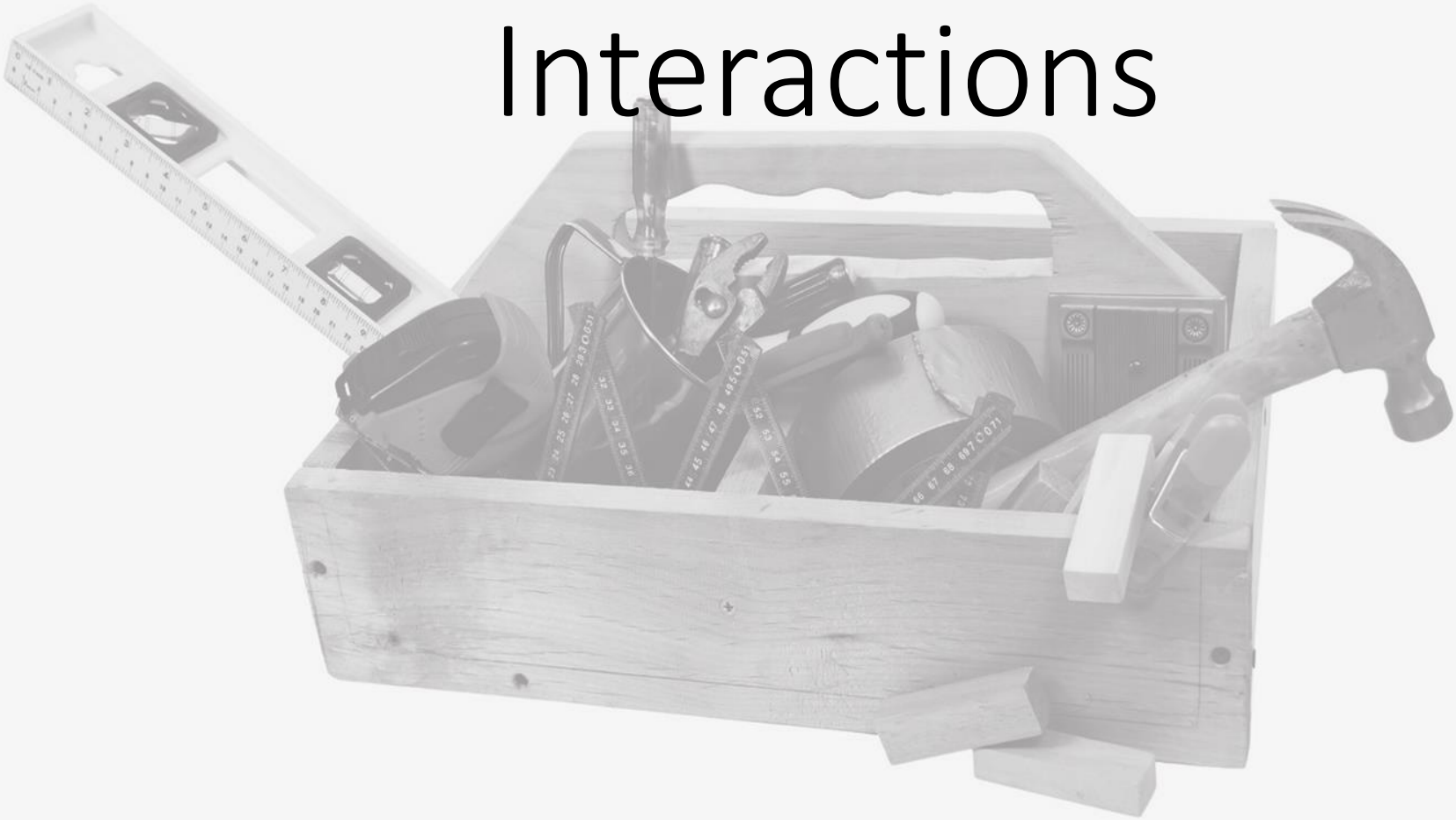
Specialized Testing Tools

#ToolFails

Recordable Tools

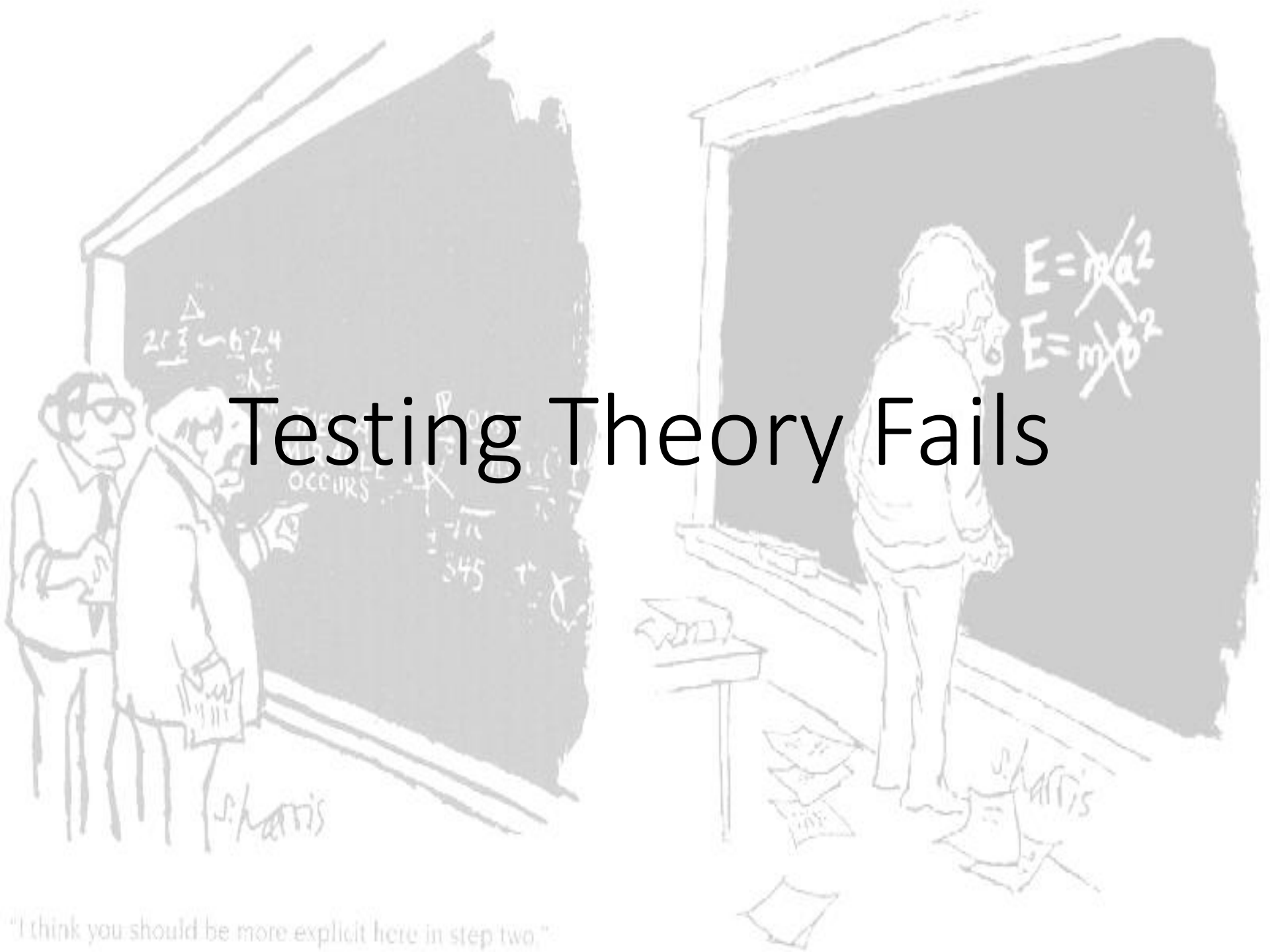
#ToolFails

Tools > Individuals and Interactions

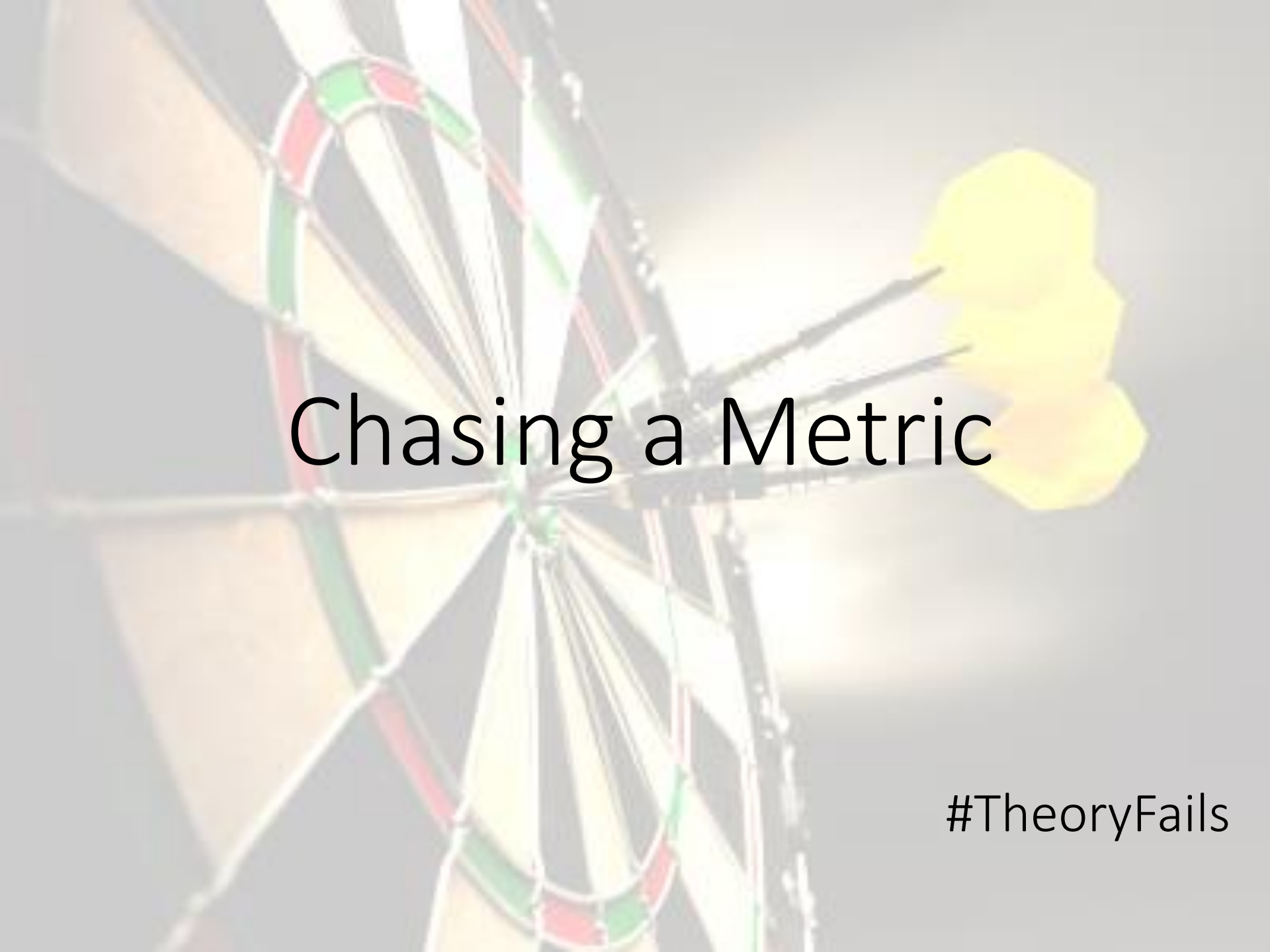


#ToolFails

Testing Theory Fails

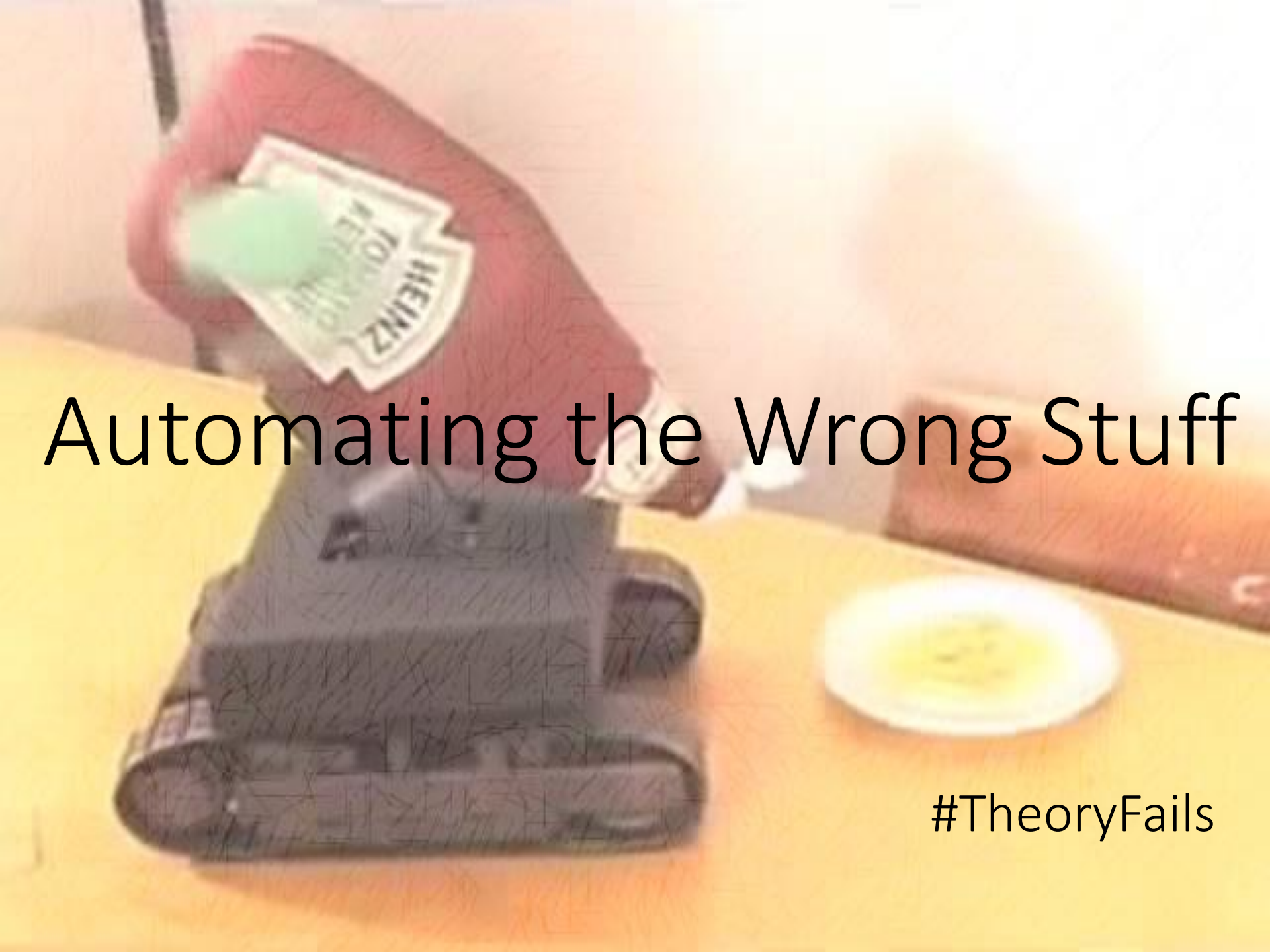


E2E Tests are the Only Valid Tests
#TheoryFails



Chasing a Metric

#TheoryFails



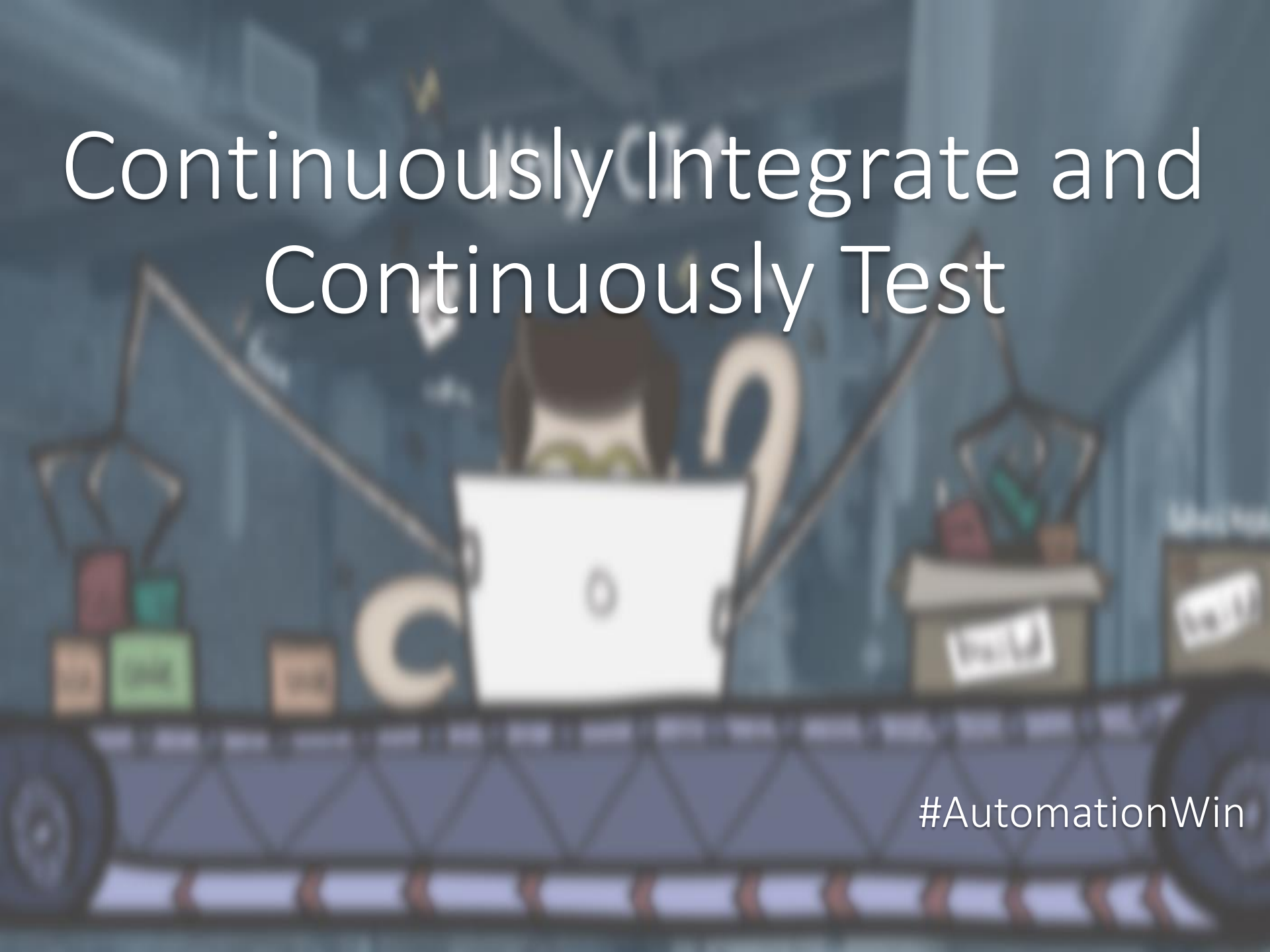
Automating the Wrong Stuff

#TheoryFails

How Do You Not Fail?

Test Small, All the Time

#AutomationWin


Continuously Integrate and Continuously Test
#AutomationWin

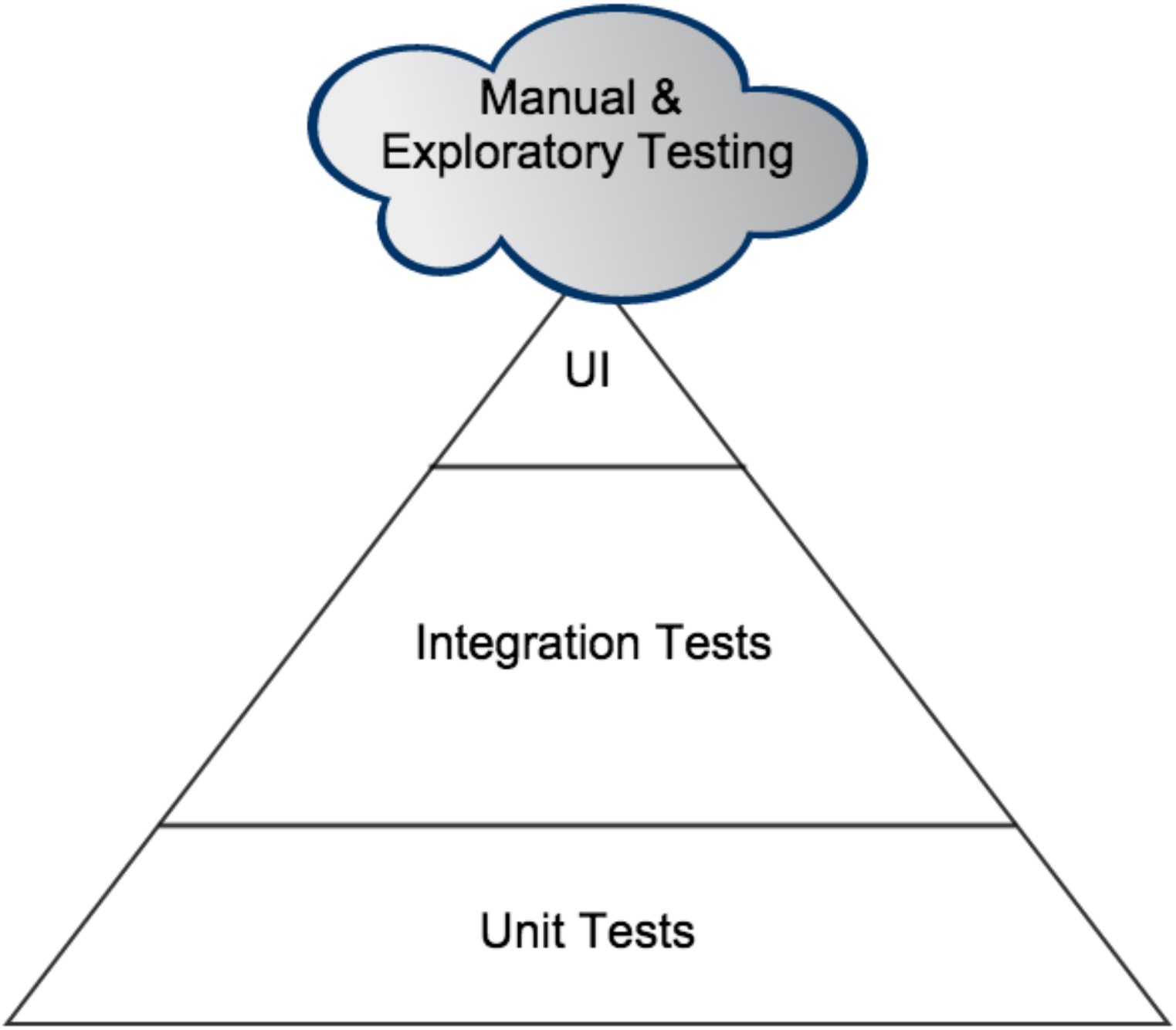
“I get paid for code that works, not for tests, so my philosophy is to test as little as possible to reach a given level of confidence”
–Kent Beck

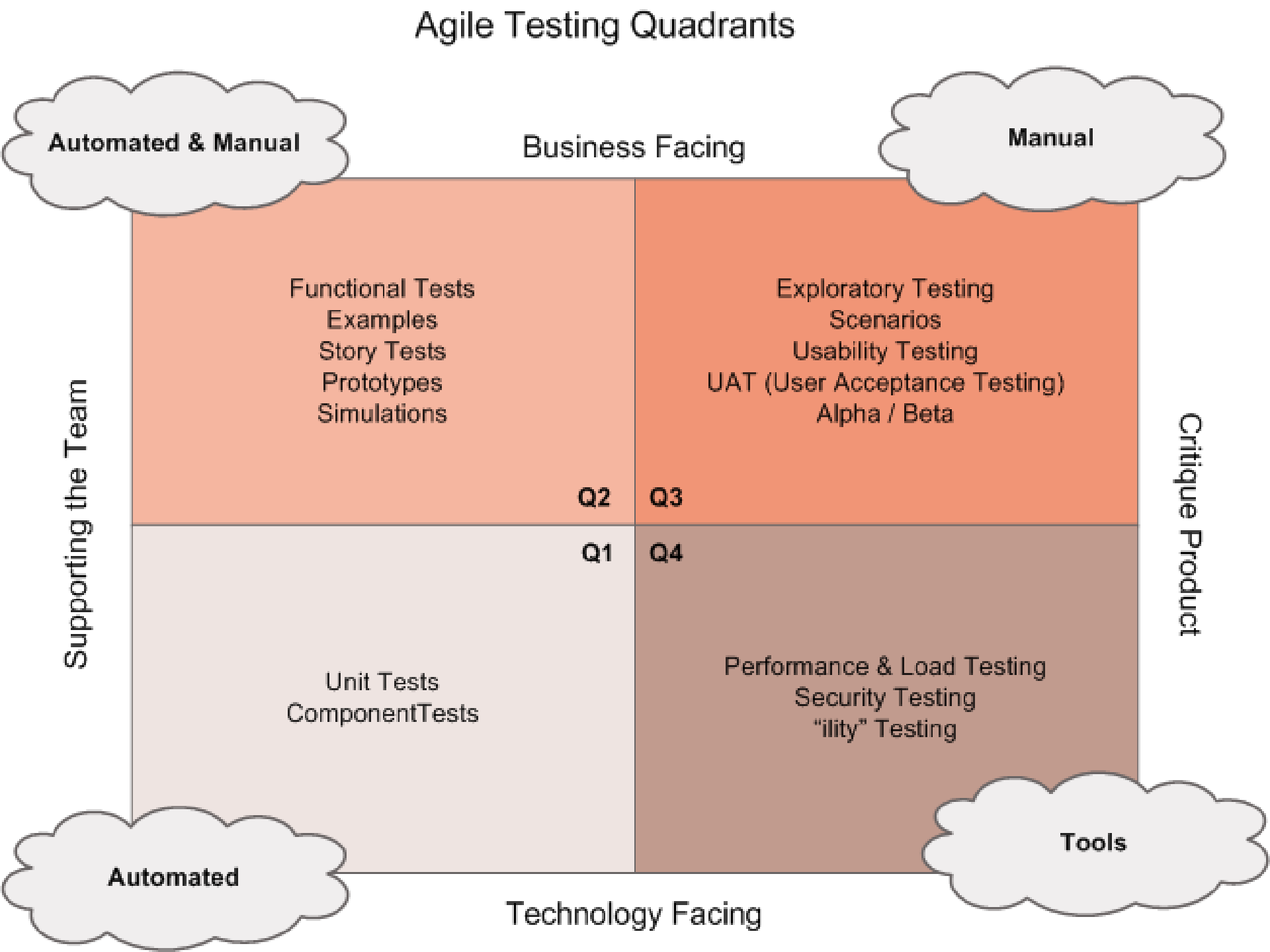
Is it worth automating? (ROI)

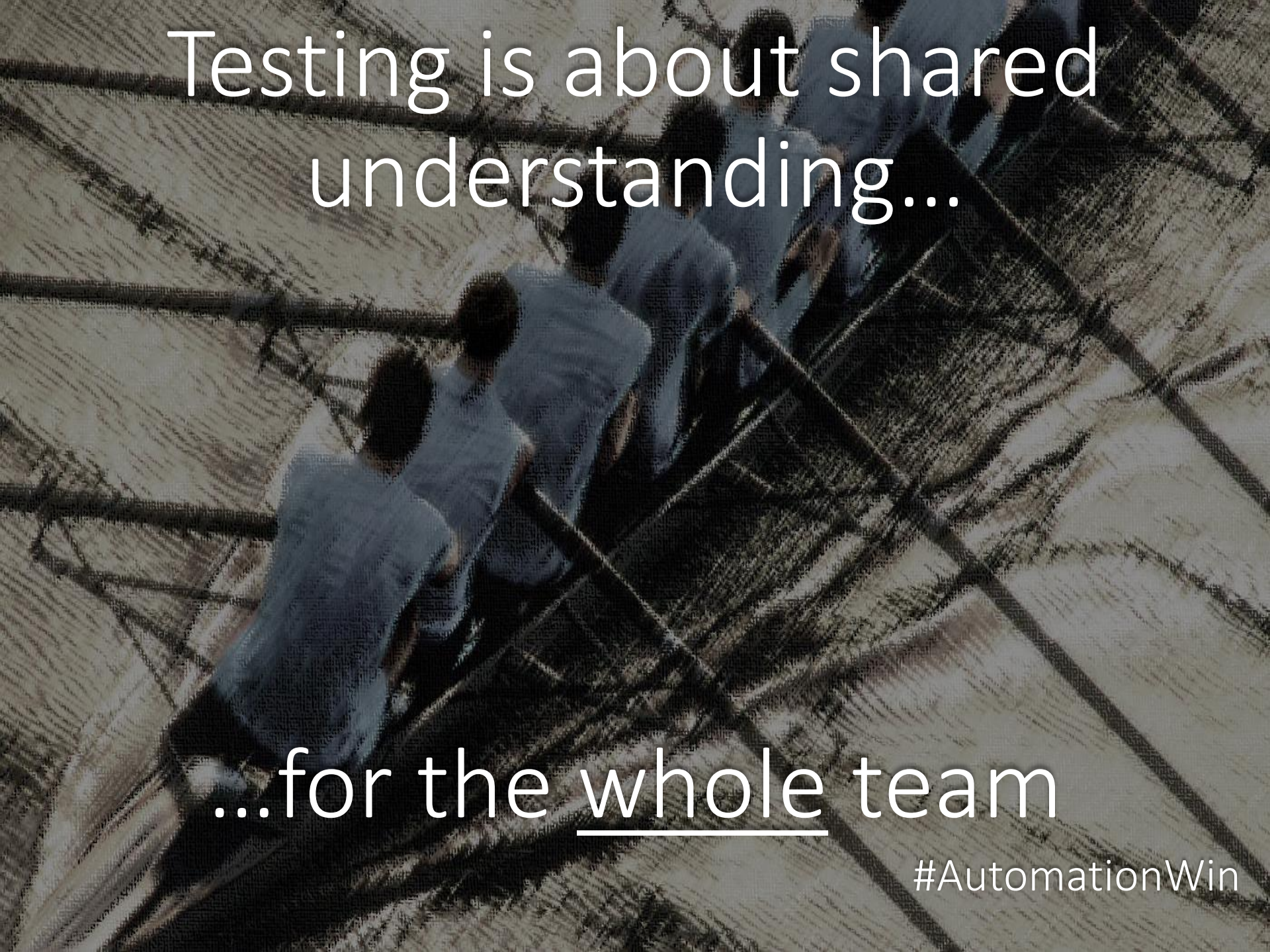
How hard is it to test? (Cost)

Hard	No	No	Maybe
Moderate	No	Maybe	Yes
Easy	Maybe	Yes	Yes
	Not	Moderately	Extremely

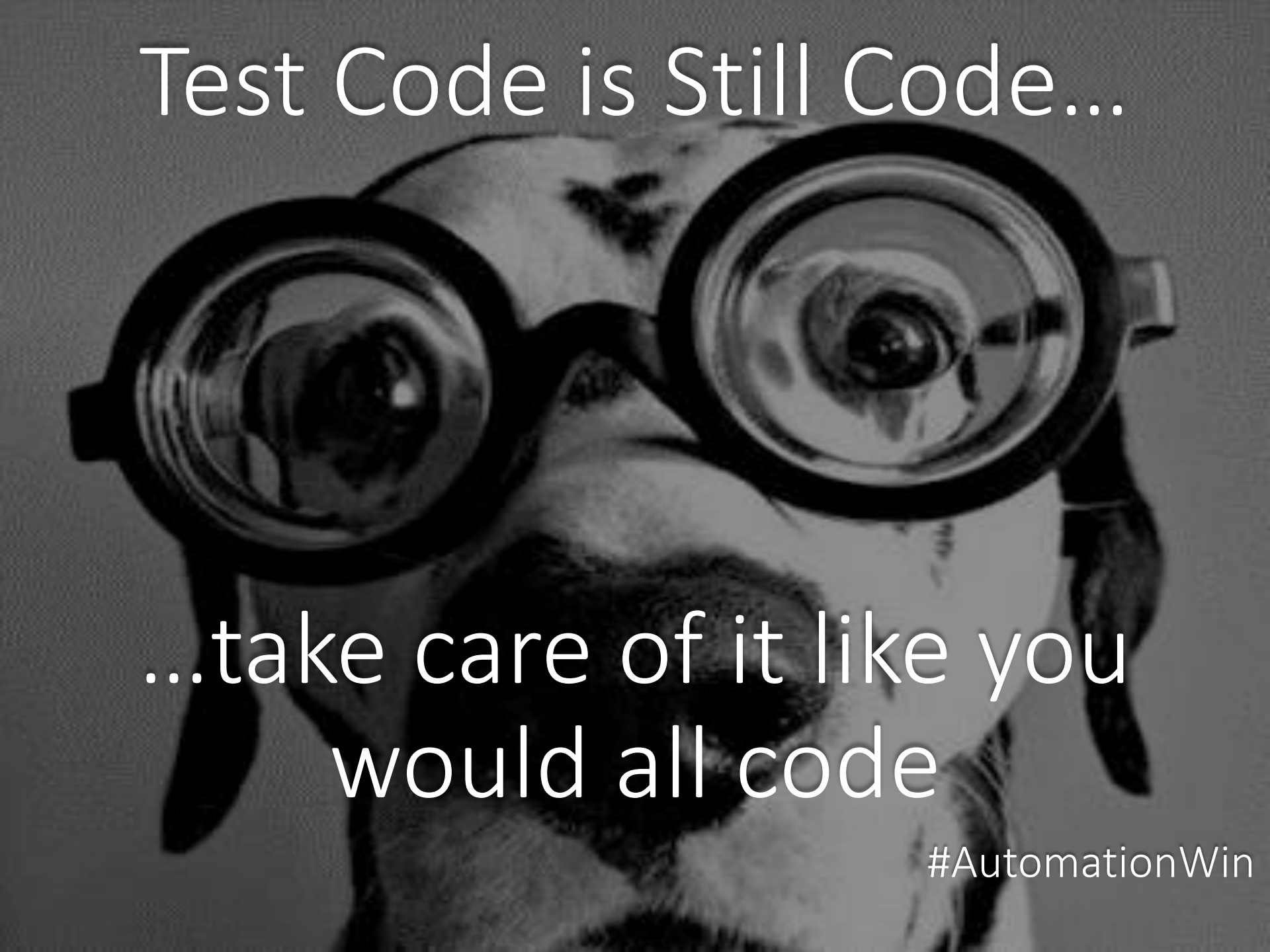
How critical is the test? (Benefit)


Manual &
Exploratory Testing
UI
Integration Tests
Unit Tests


Agile Testing Quadrants
Automated & Manual
Business Facing
Manual
Functional Tests
Examples
Story Tests
Prototypes
Simulations
Exploratory Testing
Scenarios
Usability Testing
UAT (User Acceptance Testing)
Alpha / Beta
Q2
Q3
Supporting the Team
Critique Product
Q1
Q4
Unit Tests
ComponentTests
Performance & Load Testing
Security Testing
"ility" Testing
Automated
Tools
Technology Facing


Testing is about shared understanding...
...for the whole team
#AutomationWin

Test Code is Still Code…



…take care of it like you would all code

#AutomationWin

Don’t keep all your tests…

…just keep the “best of breed”

#AutomationWin

Automated testing is not about the tests…
…it’s about well designed solutions
#AutomationWin

Summary

- Beware of the #Fails
- Test Small
- Continuous Integration
- Maximize the tests you don't write
- Test at the right layer
- Maintain your code and tests
- Use testability to drive your design

Further Reading

- A Context Driven Approach to Automation in Testing – (Bach and Bolton)
- BDD Kickstart
- Lisa Crispin
- Liz Keogh
- Janet Gregory

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