

Why Does Automated Testing Fail?

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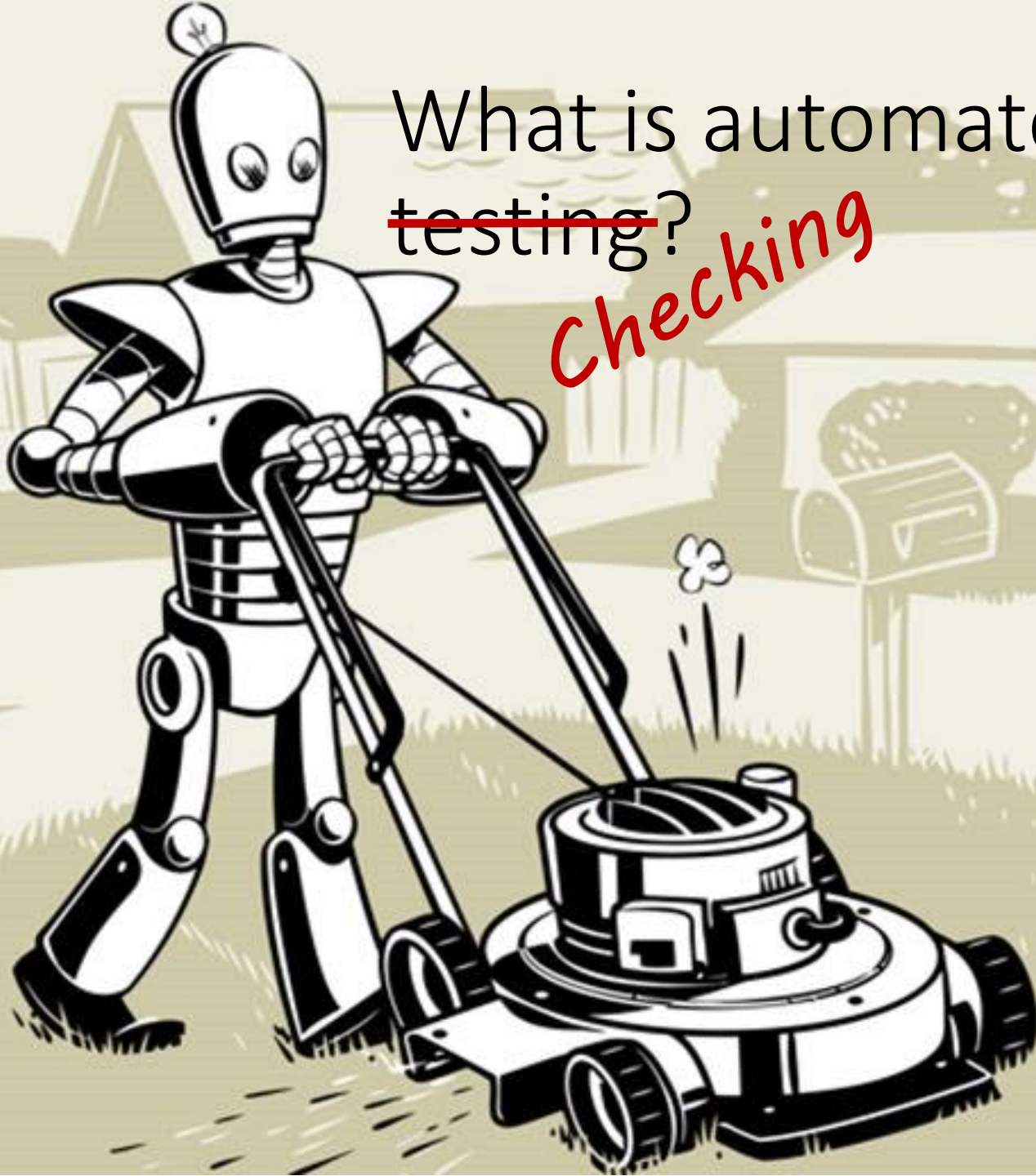
Assumptions:

- 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



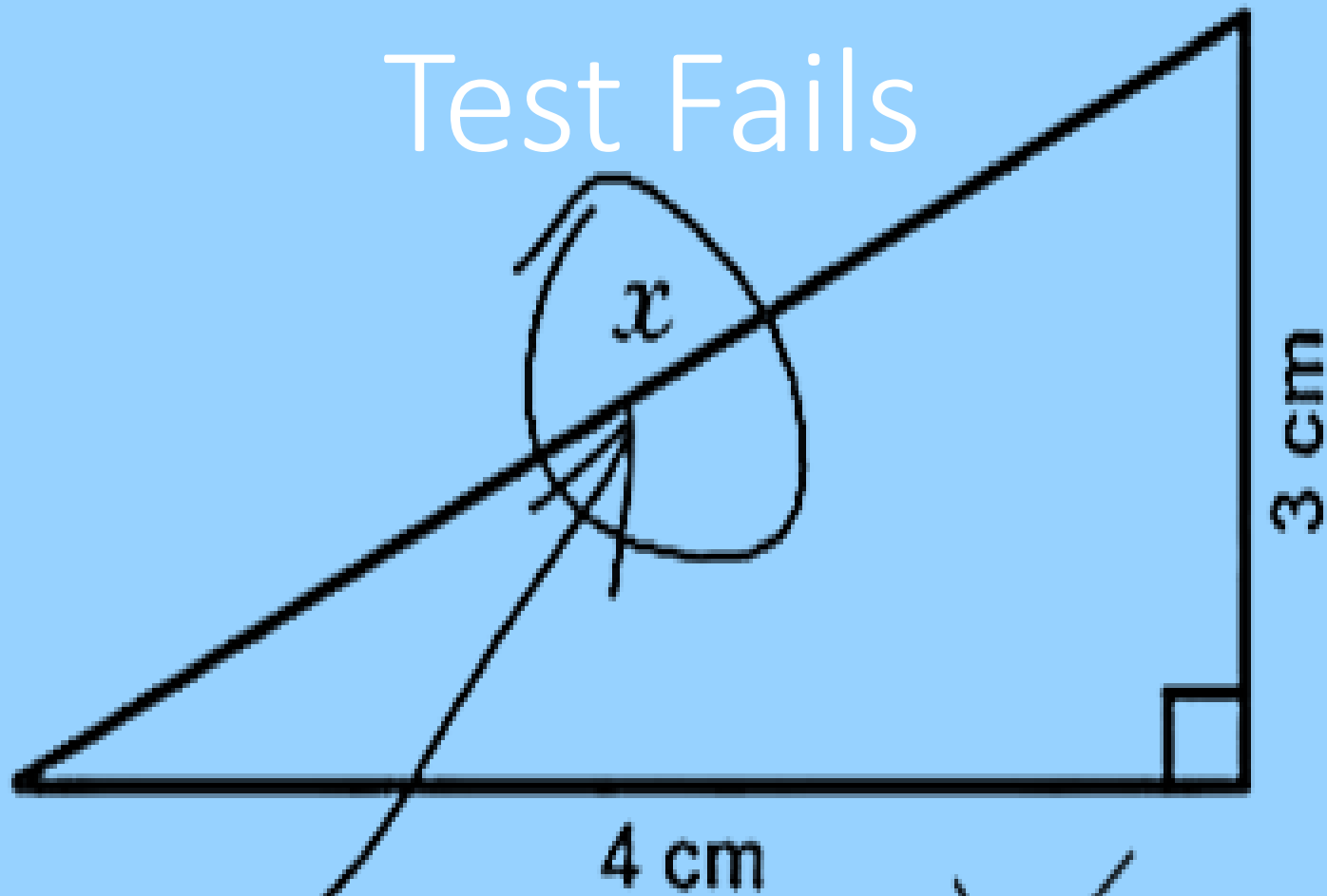
What is automated
~~testing?~~

checking

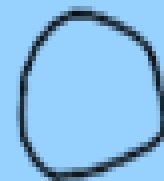


3. Find x .

Test Fails



Here it is



Inconsistent Results



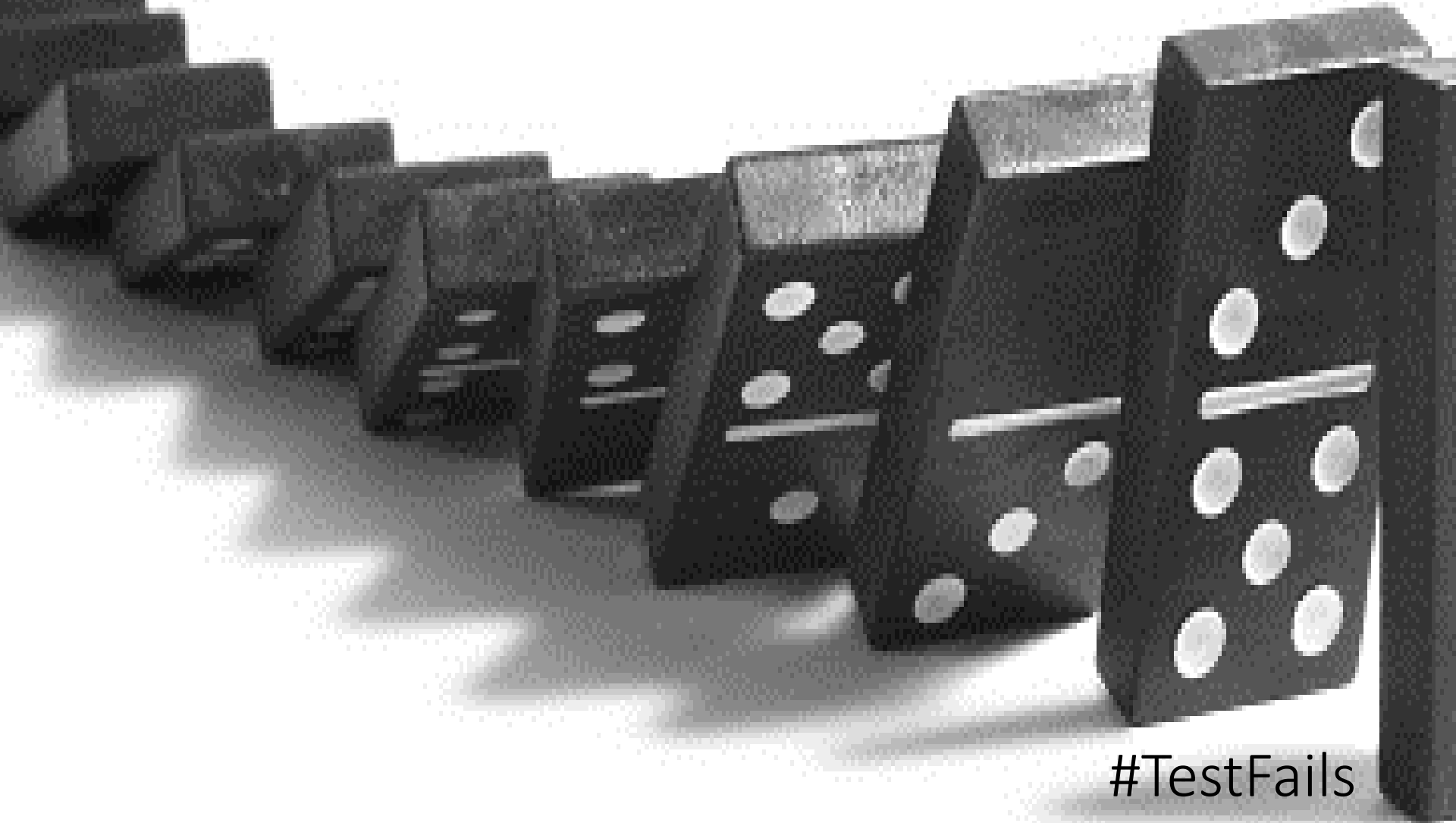
**REPLY
HAZY. TRY
AGAIN LATER.**

#TestFails

Complex Test Code

#TestFails

Dependencies Between Tests



#TestFails

A black and white photograph featuring a human skull in the foreground, resting on a surface. A hand is visible in the lower left, typing on a keyboard. In the background, a screen displays the text "waiting for reply...". The overall scene suggests a long-running test or a system failure.

waiting for reply...

Long Running Tests

#TestFails

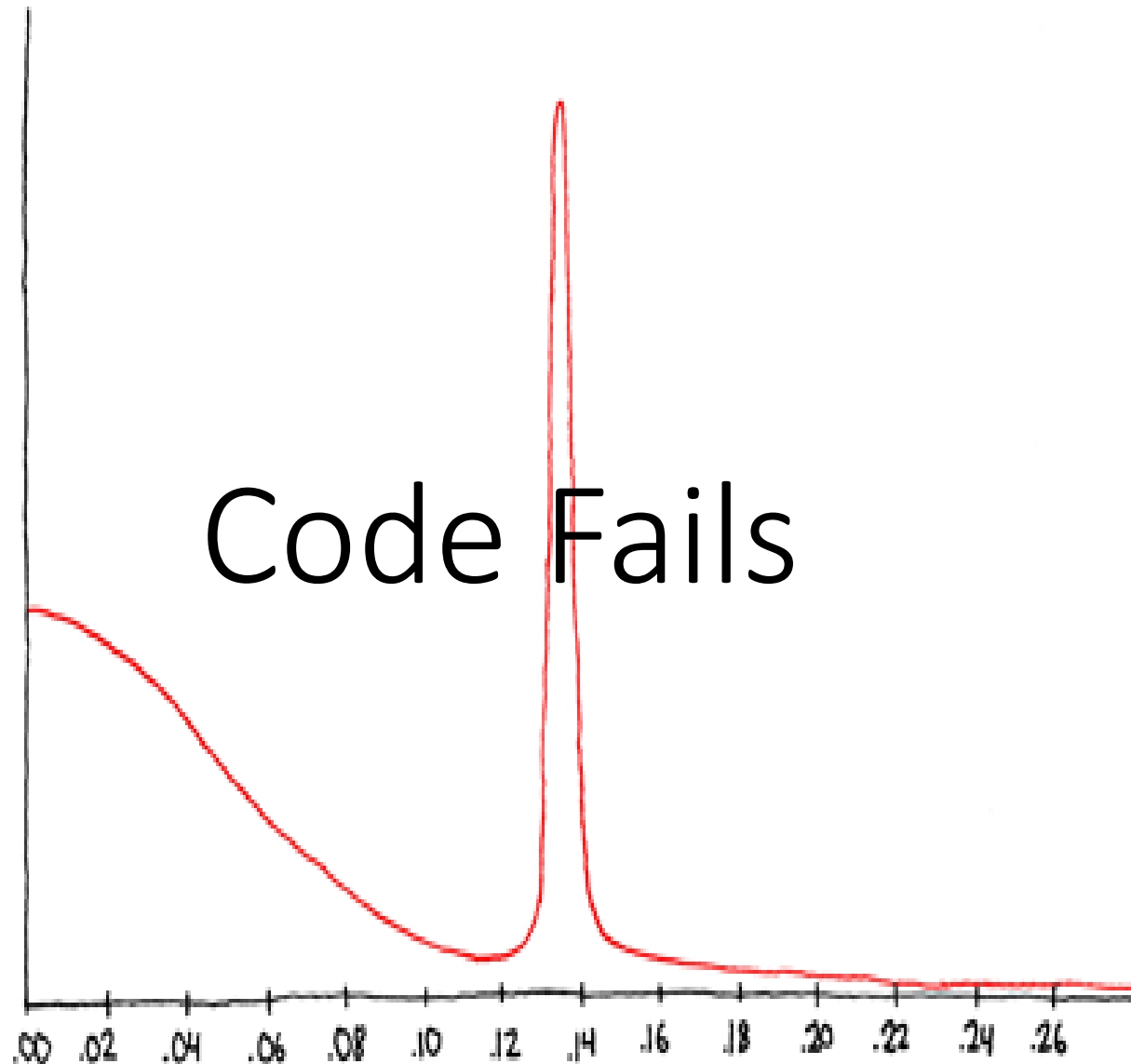


Test Hoarding

#TestFails

PROGRAMMING
SKILL

Code Fails



BLOOD ALCOHOL CONCENTRATION (%)

Big Ball of Mud Design

#CodeFails

Business Logic at the Boundaries

#CodeFails

A photograph showing a red rectangular block standing on a white surface. A hammer with a black head and a wooden handle is positioned to strike the block. Several small, jagged red fragments are scattered on the white surface around the base of the block, suggesting it has been broken or is about to be broken. The background is a plain, light-colored surface.

Making Async Systems Synchronous is Hard

#CodeFails

Organizational Fails



A chalk-drawn illustration on a dark background. On the left, a stick figure with a large oval head, a wide smile, and a short-sleeved shirt with shorts. On the right, a stick figure with a large oval head, a frown, and a long-sleeved shirt with a skirt. They are both holding a megaphone that is positioned between them, with the text overlaid on it.

Having an Automated Testing Team

#OrgFails

Test it Later Mentality



#OrgFails

Manual == Automated

#OrgFails

Tool Fails



A Person Running the Tests



#ToolFails

Specialized Testing Tools



gettyimages

Matej Divizna

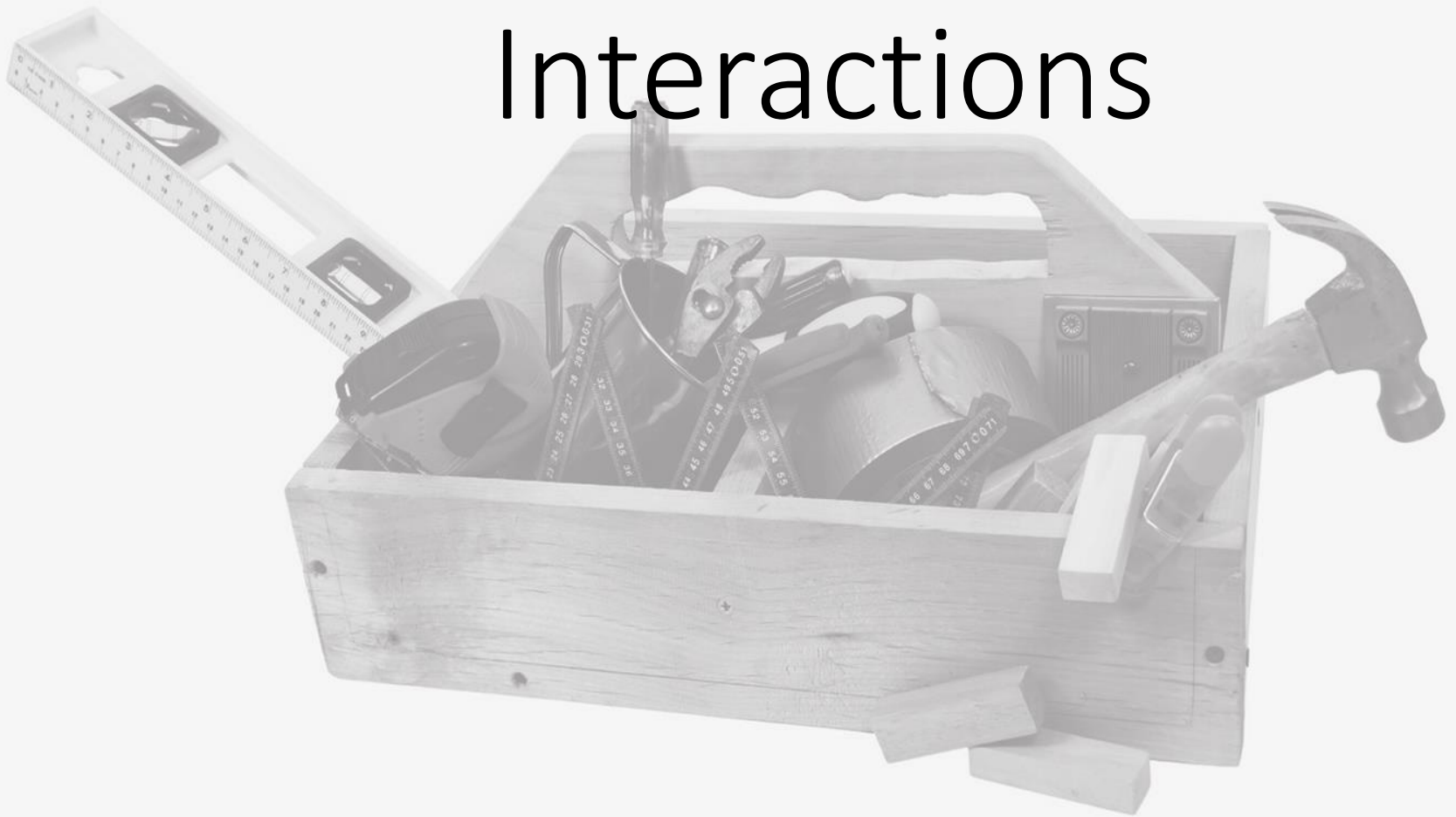
#ToolFails

Recordable Tools

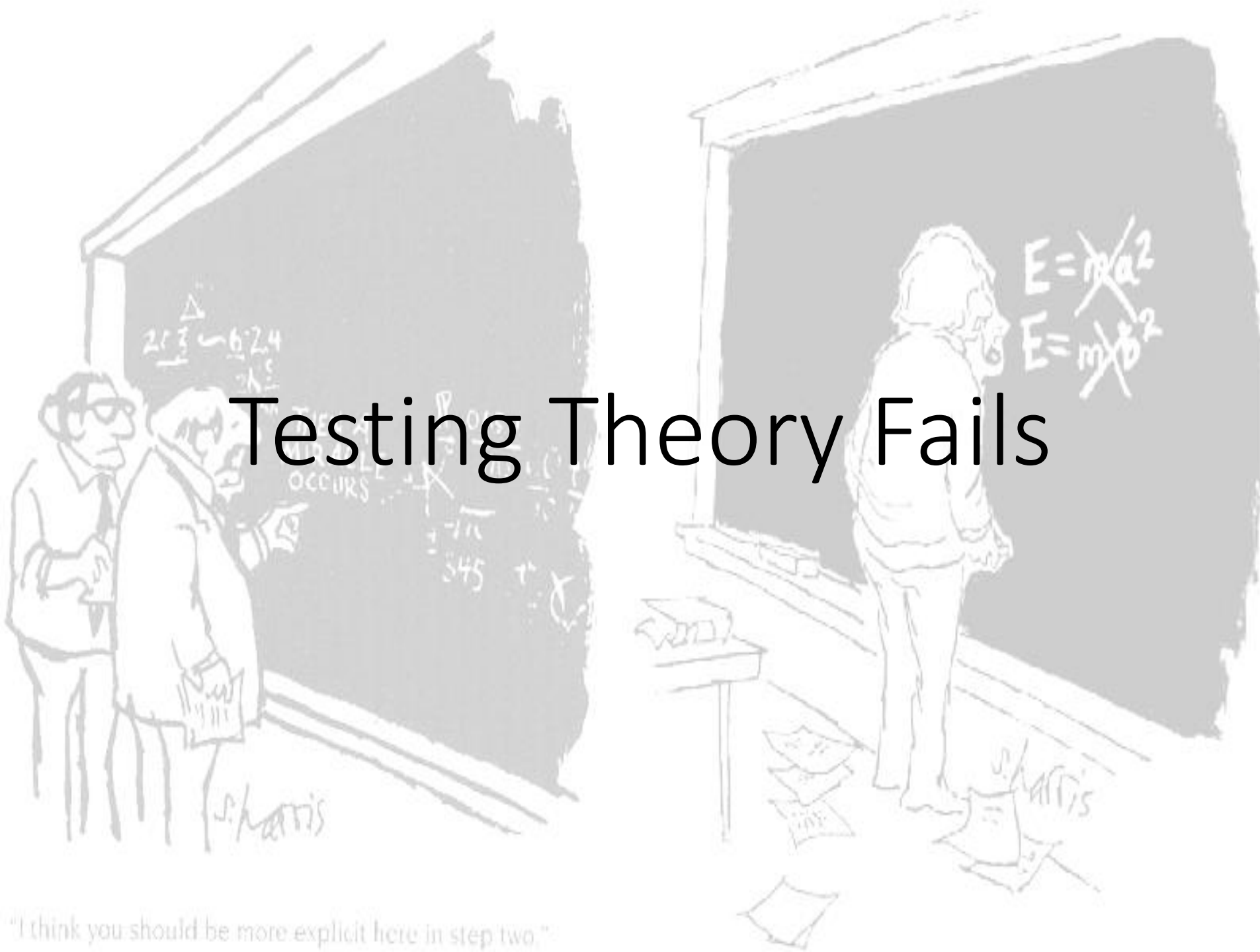


#ToolFails

Tools > Individuals and Interactions



#ToolFails



Testing Theory Fails

"I think you should be more explicit here in step two."

A large, round hay bale sits in a grassy field under a blue sky. A small black and white cow stands to the left of the bale, looking towards it. The text "E2E Tests are the Only Valid Tests" is overlaid in white on the left side of the image.

E2E Tests are the Only Valid Tests

#TheoryFails



Chasing a Metric

#TheoryFails




Automating the Wrong Stuff

#TheoryFails

A 3D perspective view of a sign. The top part of the sign is a dark rectangular block with the word 'FAILURE' in large, light-colored, sans-serif capital letters. To the left of the word is a light-colored arrow pointing left. The bottom part of the sign is another dark rectangular block, slightly offset to the right and below the first one. It features the word 'SUCCESS' in large, light-colored, sans-serif capital letters. To the right of the word is a light-colored arrow pointing right. The background is a plain, light gray.

How Do You Not Fail?



Test Small, All the Time

#AutomationWin

Continuously Integrate and Continuously Test

#AutomationWin

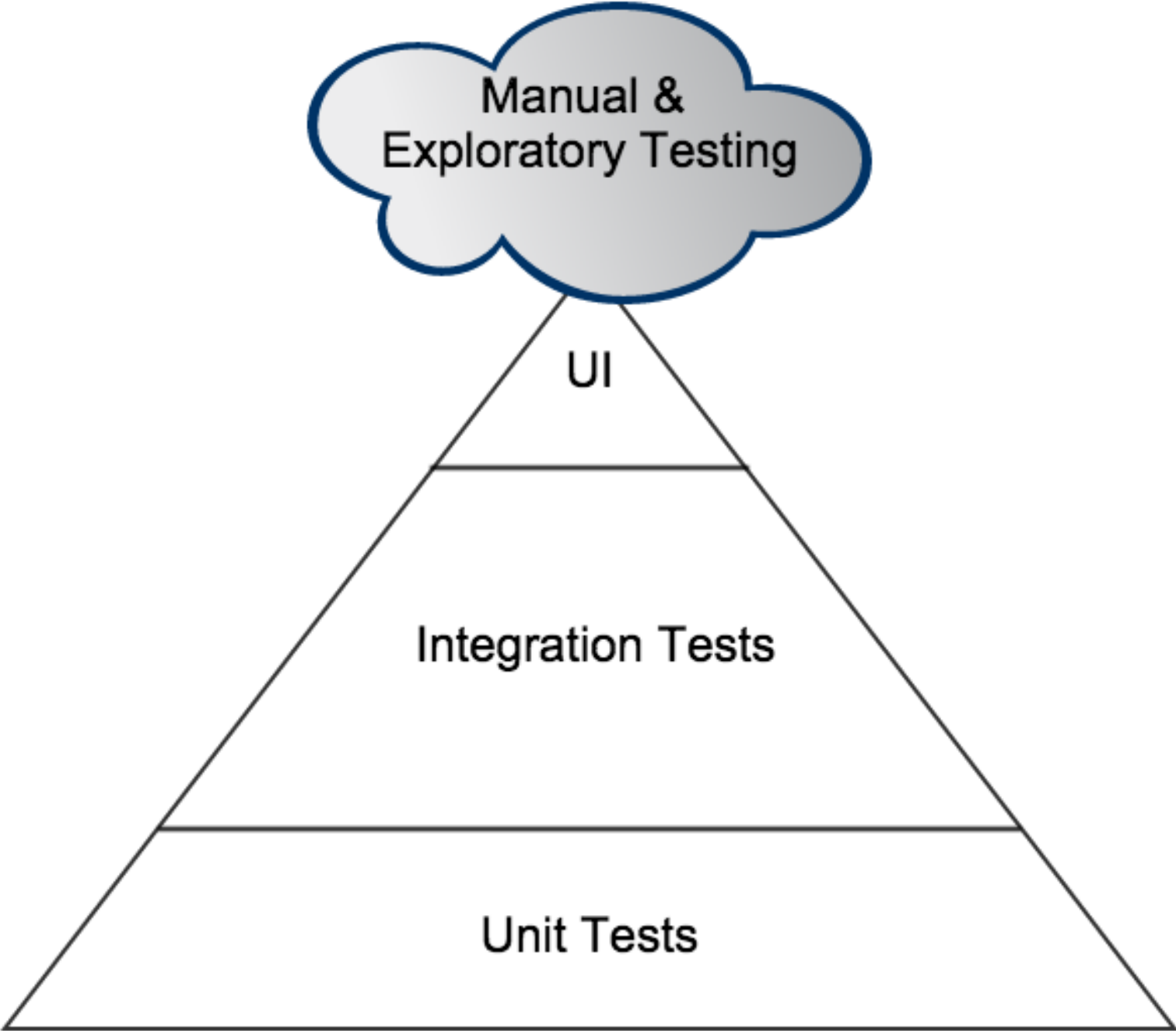
“I get paid for code that works,
not for tests, so my philosophy is
to test as little as possible to
reach a given level of confidence”
—Kent Beck

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)



A pyramid diagram illustrating the hierarchy of testing. The pyramid is divided into three horizontal sections. The top section is labeled 'UI' and is connected to a cloud shape above it containing the text 'Manual & Exploratory Testing'. The middle section is labeled 'Integration Tests'. The bottom section is labeled 'Unit Tests'.

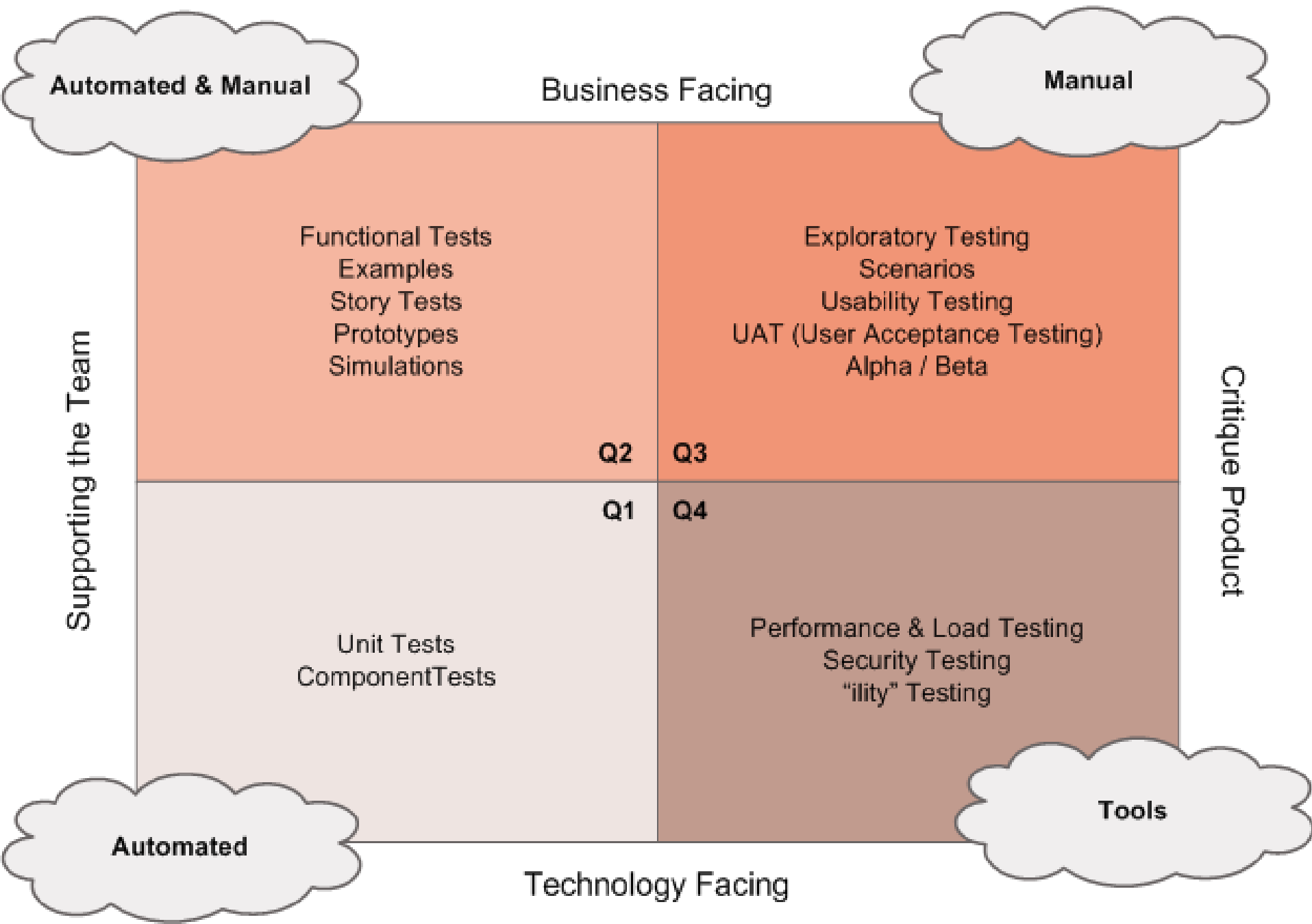
Manual &
Exploratory Testing

UI

Integration Tests

Unit Tests

Agile Testing Quadrants



A high-angle, top-down photograph of a group of people, likely a team, gathered around a table in a meeting. The image is dark and has a grainy, textured appearance. A dark, semi-transparent grid pattern is overlaid on the entire image, creating a sense of structure and focus. The text is overlaid on the image in a clean, white, sans-serif font.

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

A pair of hands, one at the top and one at the bottom, gently cradles a small green seedling with four leaves. The seedling is growing out of a mound of dark, rich soil. The background is a dark, textured surface, possibly more soil or a dark cloth. The lighting is soft, highlighting the texture of the soil and the vibrant green of the leaves.

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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