

Adventures in Modern Testing

Alan Page

<http://bit.ly/mt-pnsqc>



This is not a future of testing talk



This is a talk about embracing change



It is not the strongest or the most intelligent who will survive but those who can best manage change. --Charles Darwin

A man with a beard and mustache, wearing a red and white checkered button-down shirt, is speaking on a stage. He is holding a small black device in his right hand and gesturing with his left hand. A speech bubble overlay is positioned to his right, containing the text "These are stories about my real world experiences...". The background is dark with some blurred text, including "20" and "EN".

**These are stories about
my real world
experiences...**



IN E

80s rock



SONY®



LOW-NOISE

Compact Cassette

JAPAN

C90

Rewind ~7 years

2011-2013 - Xbox One

Two Year Product Cycle

“Traditional” Org Structure / Test Team

I begin to develop the idea of a test org as a community



2014 - “Project Astoria”

No Testers (ish)

Data is valuable

Data can replace some testing

I realize that developers can be very good at testing

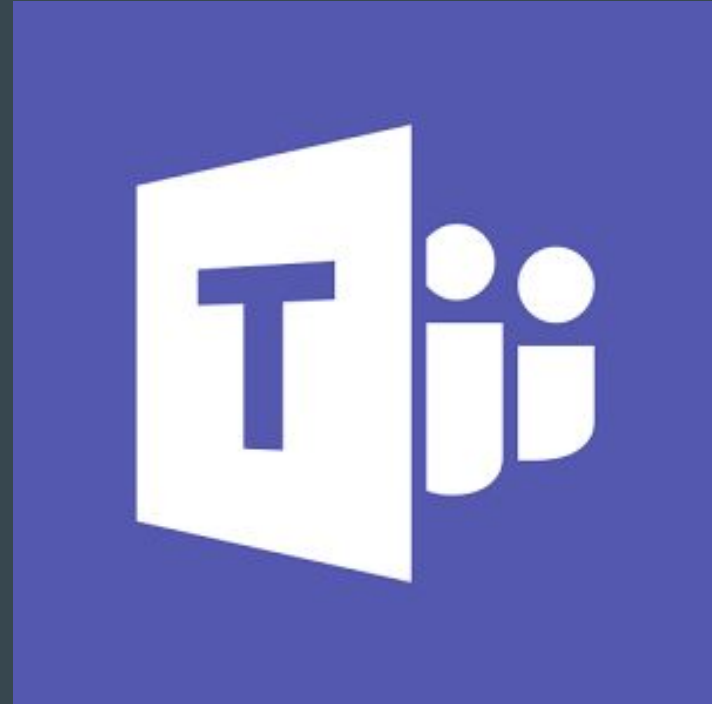


2015 - 2016 - Microsoft Teams

No Testers (ish)

Developers Own Testing (ish)

*I think and talk more about Testing
without Testers*

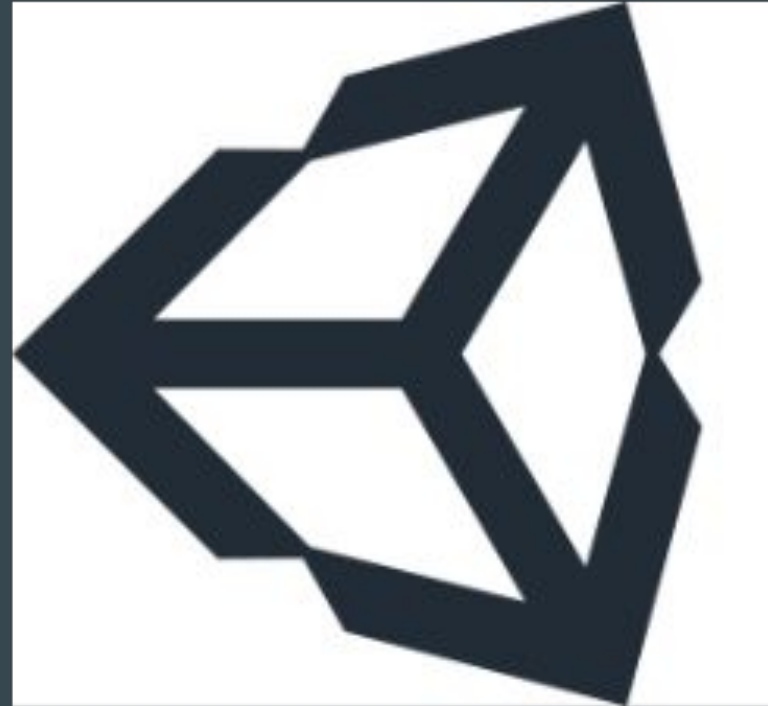


Summary: Lessons Learned

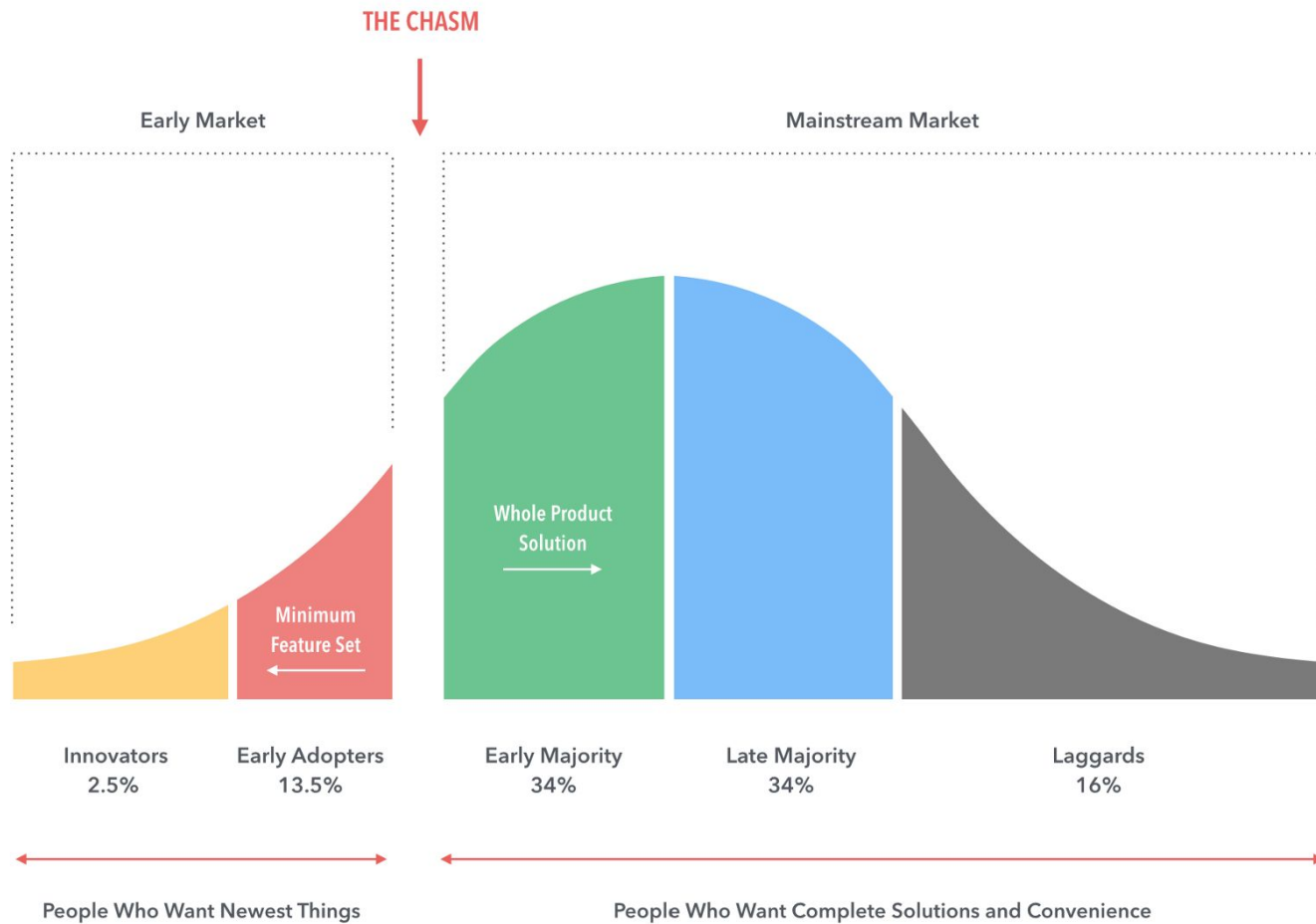
1. Eliminating / Abandoning Test Teams without a plan is a poor business decision
2. Developers can be good testers (and test automators)
3. Helping (and coaching) the *whole* team test and make better software is a great role for many of those currently in a testing role
4. Community plays an important role in all of this

2017-Now: Quality Director (Community Leader) for Unity Services

Modern Testing Applied!
(application in progress)



The inevitable evolution of the Test Role...



Crossing the Chasm

"Transition"

Separate Teams

More SDETs / "Automators"

More "Manual" Testing



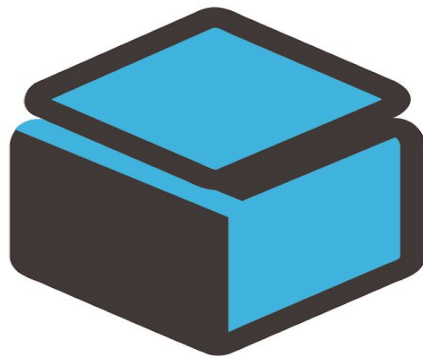
Modern Testing

Agile Testing

Traditional Testing

Low-skilled Trad Testing

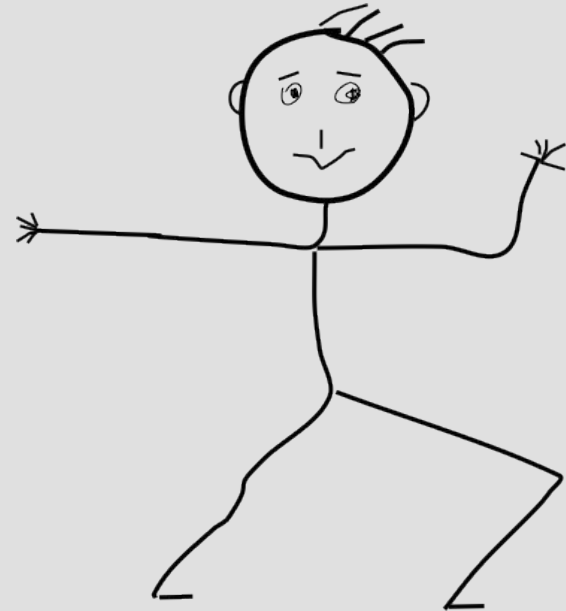
What



Modern
A/B Testing
#OneOfTheThree

Testing?

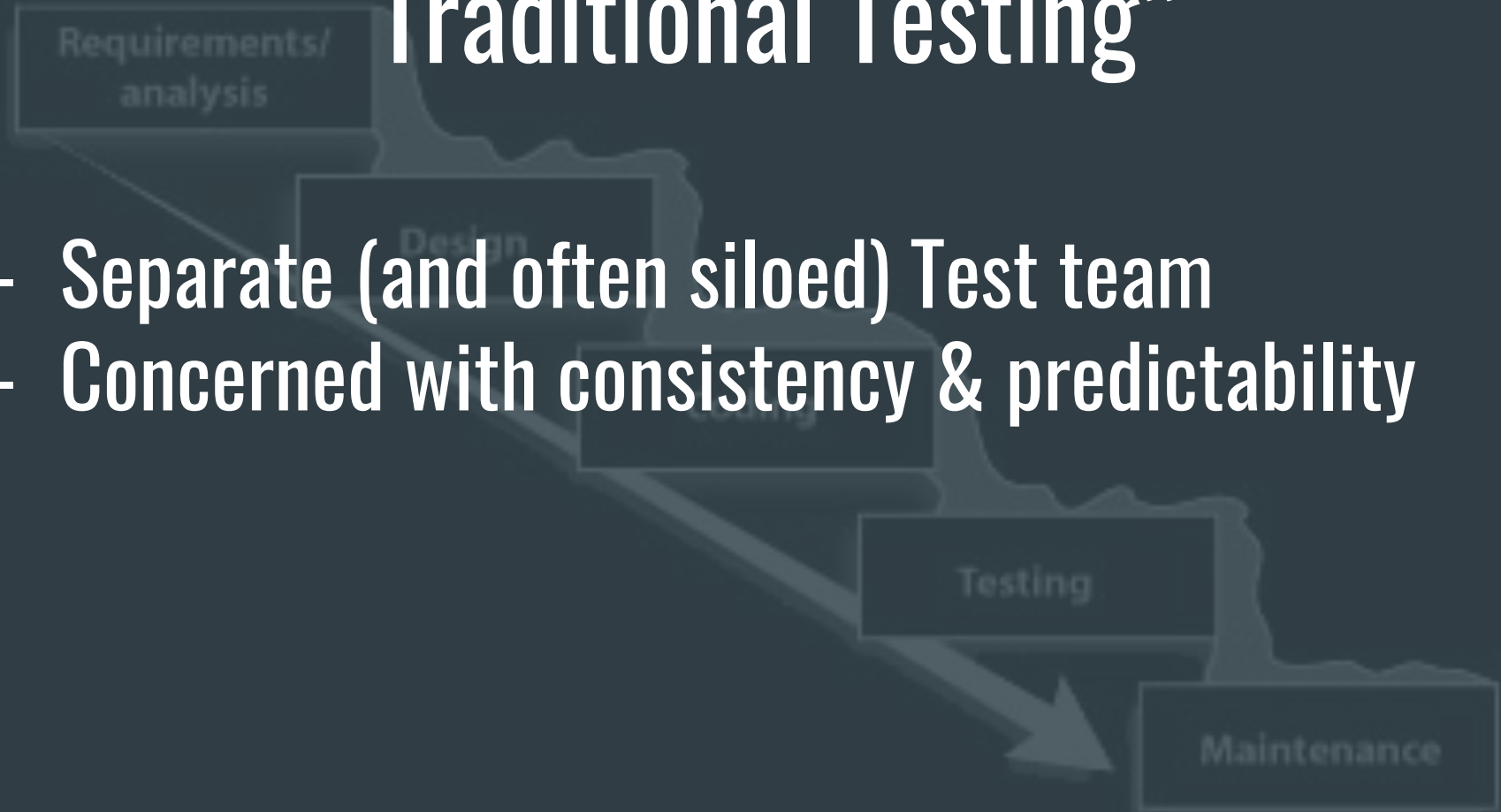
Modern Testing is the Antidote for “Traditional” Testing Methods



The classic waterfall development model

“Traditional Testing”

- Separate (and often siloed) Test team
- Concerned with consistency & predictability

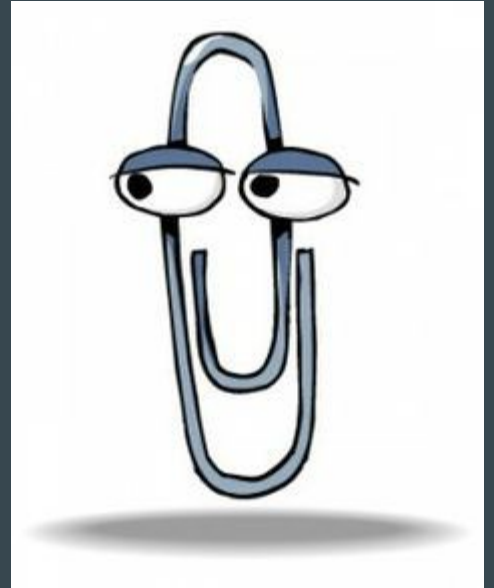
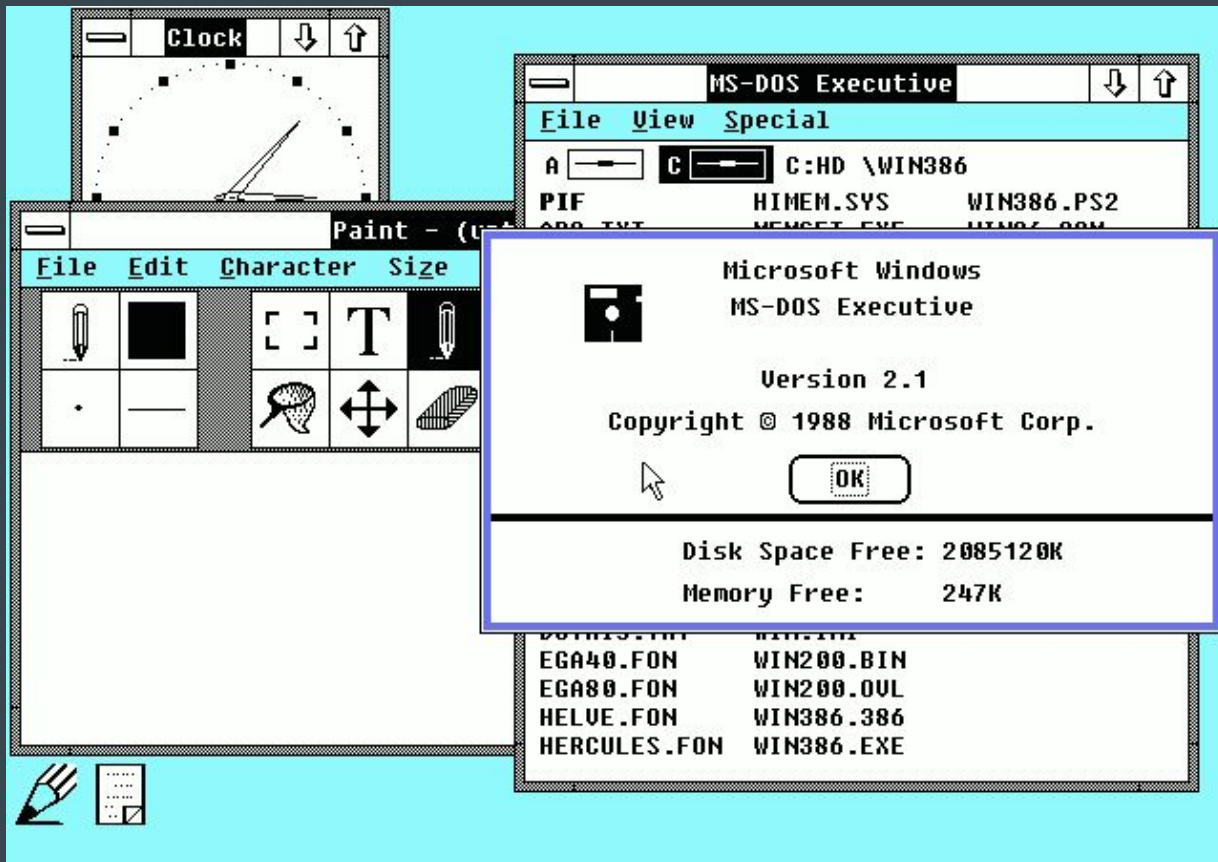


“Agile Testing”

- Test Specialist on Feature Team
- Works *primarily* on testing tasks needed for feature / product quality

“Modern Testing”

- Test Specialist on Feature Team
- Data-driven and customer obsessed
- Passionate about efficiency



Revisiting “Traditional” Testing

I Believe “Traditional” Testing Harms Business Goals By:

- Creating unnecessary delays and costs
- Being focused on code and specification correctness instead of quality
- Enabling a ‘safety net’ culture and failing to deliver on the promise of moving quality upstream
- Treating test activities as an innate specialization that cannot be taught
- Favoring isolationism over community

Introducing the Modern Tester



Focuses on speeding up the Team

Specializing Generalist

Always Learning



Equal member of the Feature Team

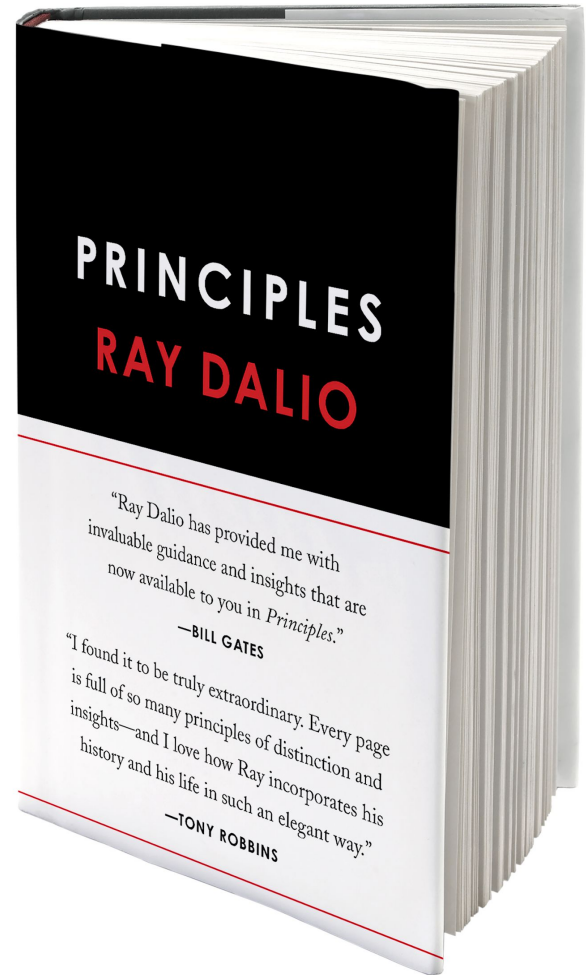
Leverages customer data extensively

Test/Quality Coach

Does *some* testing

Principles

“Principles are what allow you to live a life consistent with those values. Principles connect your values to your actions”



ONE

Our priority is improving the business

Improving the Business



Testing contributes positively to the business by reducing costs *and increasing revenue*

Priority is delivering quality and customer satisfaction (not code / functional correctness)

TWO

We accelerate the team, and use models like Lean Thinking and the Theory of Constraints to help identify, prioritize and mitigate bottlenecks from the system

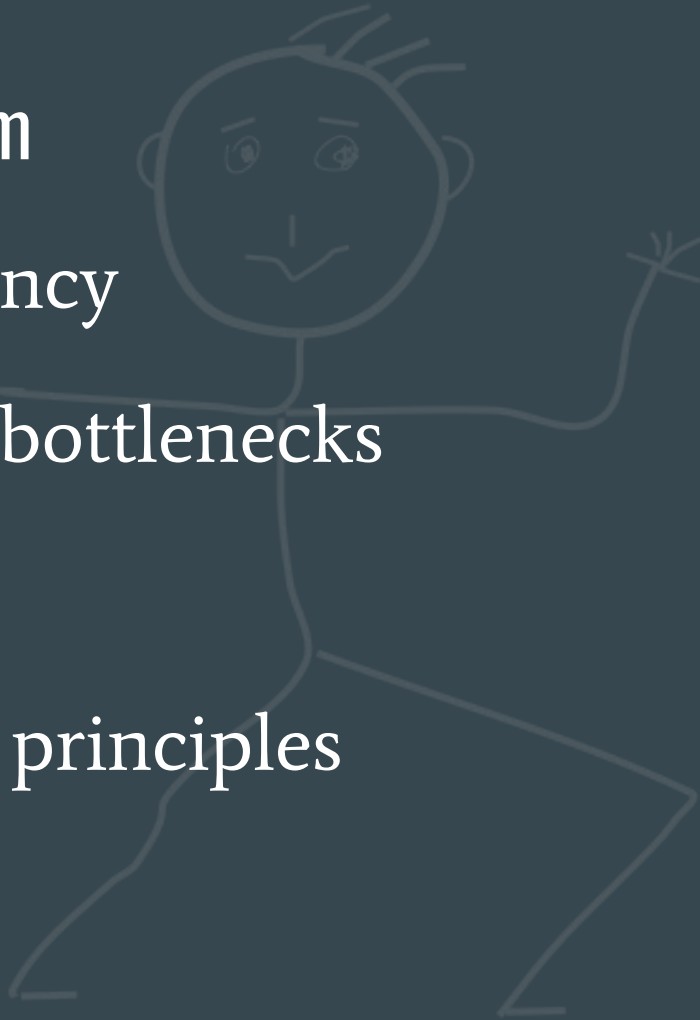
Accelerating the Team

Eliminate inefficiency

Find and mitigate bottlenecks

Removing delays

Know / apply lean principles



Accelerant Shifts

We value:

- **Pairing** over Handoff
- **Team Goals** over Individual ownership
- **Serializing** over Parallelizing
- **Tooling and Infra** over Hiring more people
- ...

Pairing, Coaching and Teaching



THREE

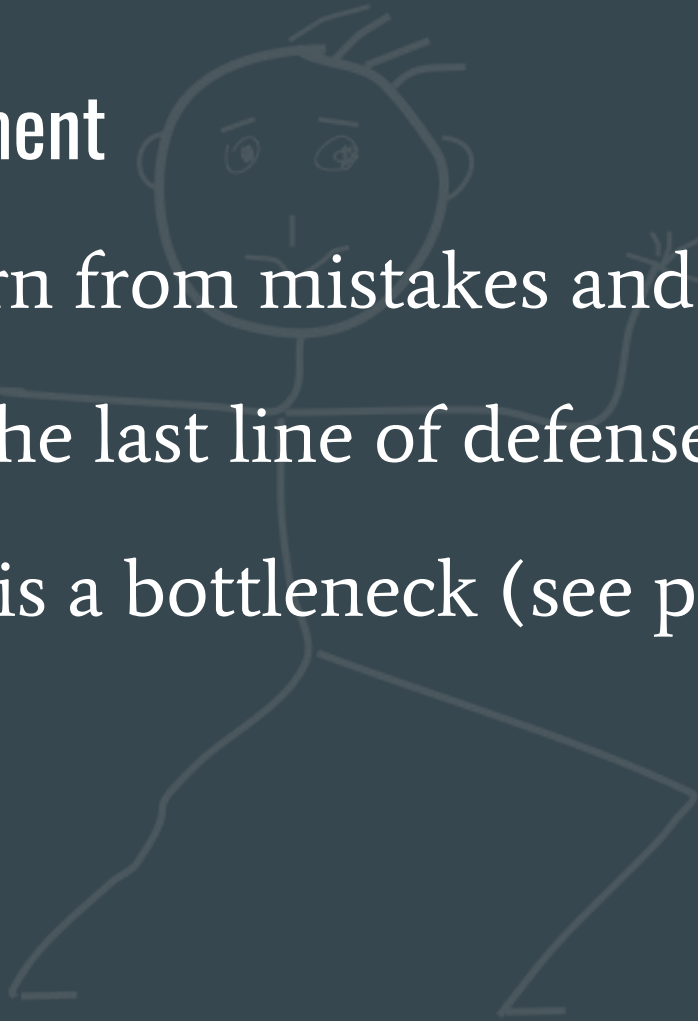
We are a force for continuous improvement, helping the team adapt and optimize in order to succeed, rather than providing a safety net to catch failures

Continuous Improvement

Help the team learn from mistakes and adapt

Testers are **NOT** the last line of defense

Being a safety net is a bottleneck (see principle number 2)



FOUR

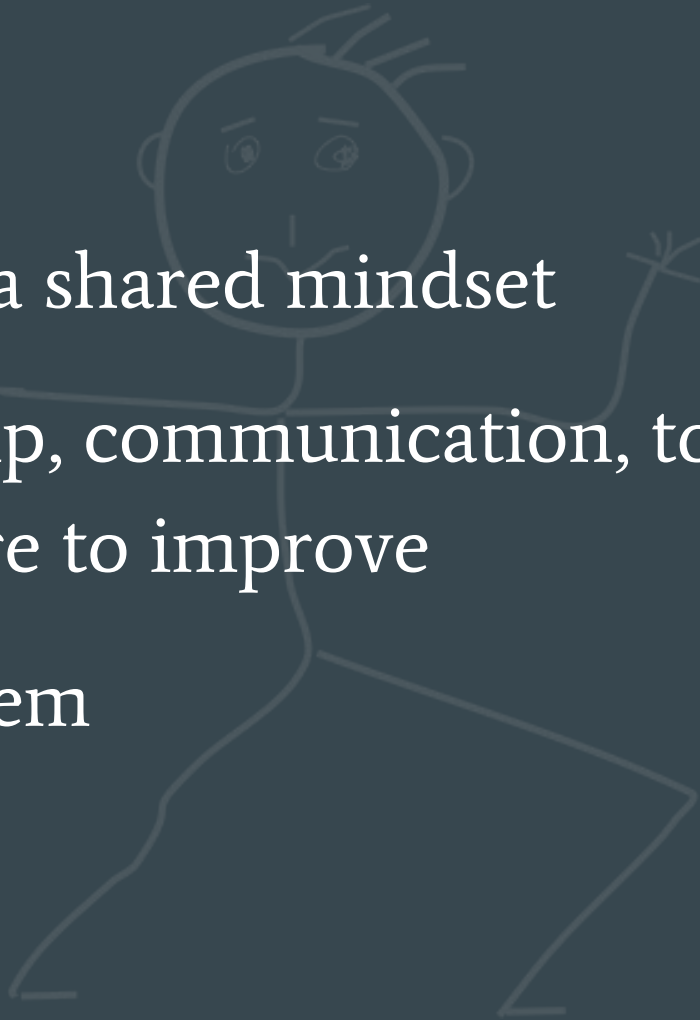
We care deeply about the quality culture of our team, and we coach, lead, and nurture the team towards a more mature quality culture

Quality Culture


Quality culture is a shared mindset

Requires leadership, communication, tools,
learning, and desire to improve

It's a people problem



Quality Culture - Potential Attributes

- Quality Ownership
 - Breadth of Testing
 - Technical Debt and Maintenance
 - Code Quality and Tools
 - Development Approach
 - Data usage
 - Leadership
- 

A photograph of a light-colored dog, possibly a Weimaraner, sniffing a manhole cover on a sidewalk. The dog is in the center of the frame, looking down at the cover. The background is a grey asphalt sidewalk with a circular manhole cover. The text is overlaid on the image.

FIVE

We believe that the customer is the only one
capable to judge and evaluate the quality of
our product

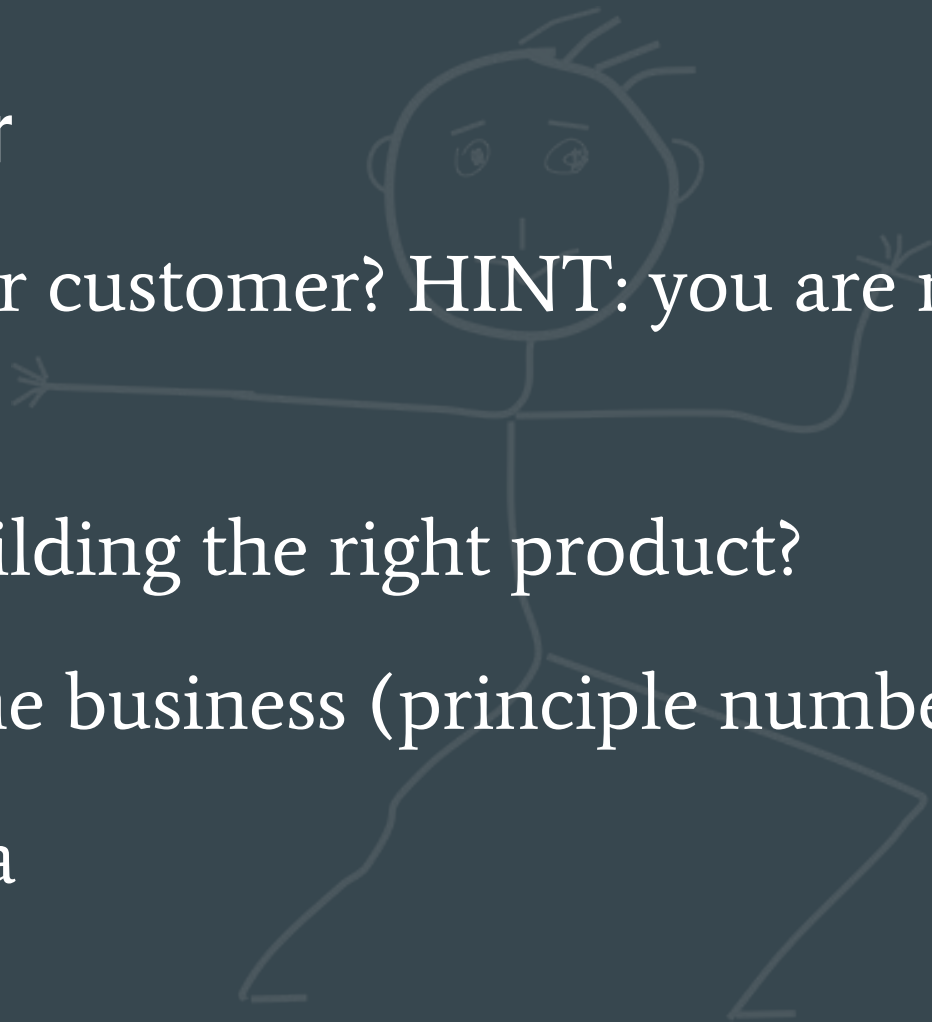
The Customer

Who is your customer? HINT: you are not the customer

Are you building the right product?

Focus on the business (principle number 1)

Collect data



SIX

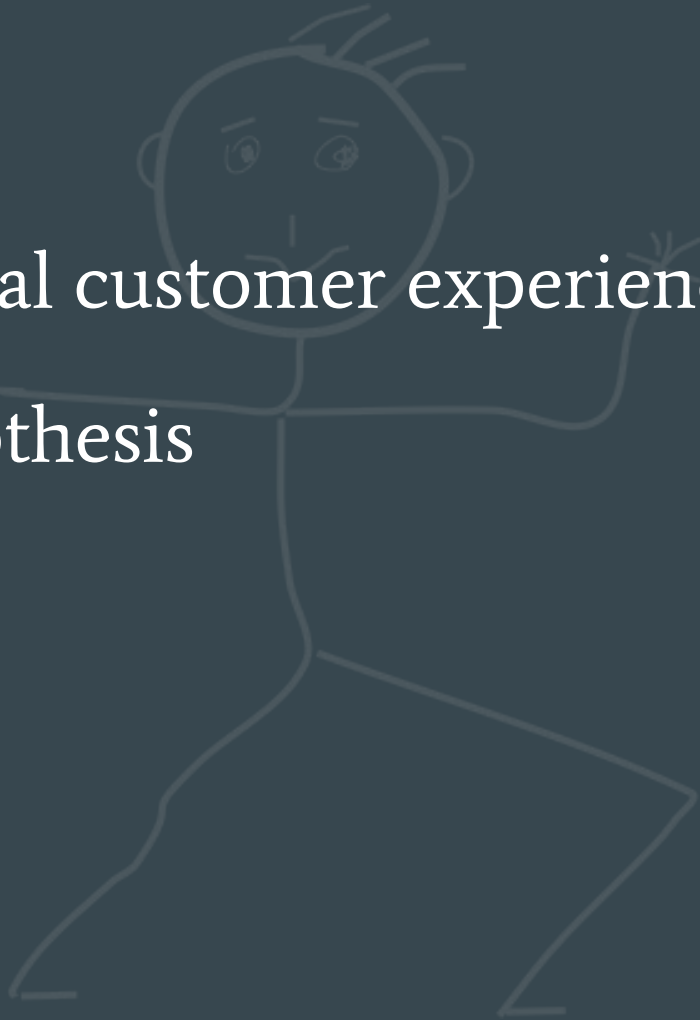
We use data extensively to deeply understand customer usage and then close the gaps between product hypotheses and business impact

Data

Understand the real customer experience

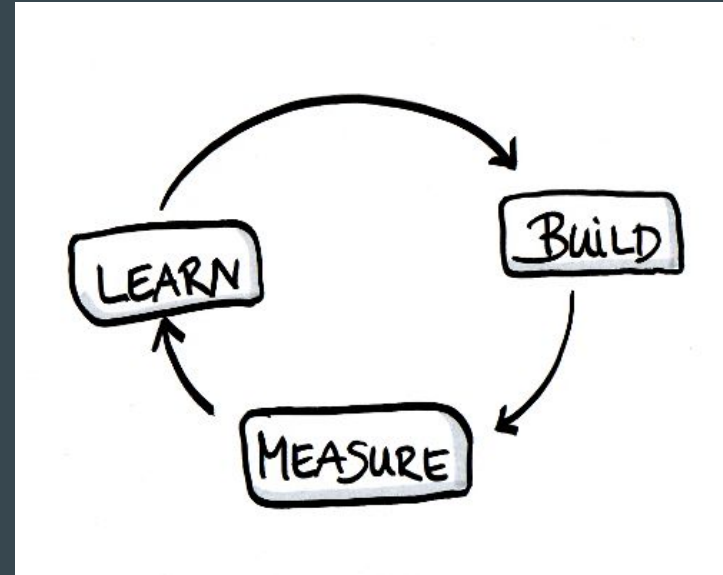
Shipping is a hypothesis

Learn and adapt



Getting Started with Data

1. Ask, what does business success look like for this component / feature?
2. Add logging / instrumentation / analytics to answer question #1
3. Evaluate and adjust



SEVEN

We expand testing abilities and knowhow across the team; understanding that this may reduce (or eliminate) the need for a dedicated testing specialist

Expand testing knowhow across the team

Software testing isn't a dark art

Focus on the first half of this principle. If the second half is meant to be, it will happen naturally

Generalizing is good

SW Engineer

SW Engineer

SW Engineer

SW Engineer

SW Engineer

SW Engineer

Tester

**The Modern Tester is a
Specializing Generalist**

**SW Eng - perf
specialist**

**SW Eng -
database
specialist**

**SW Eng
Generalist**

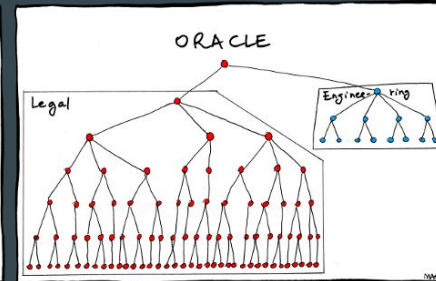
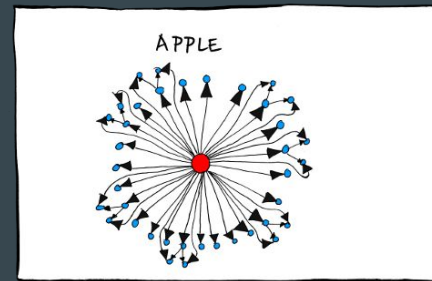
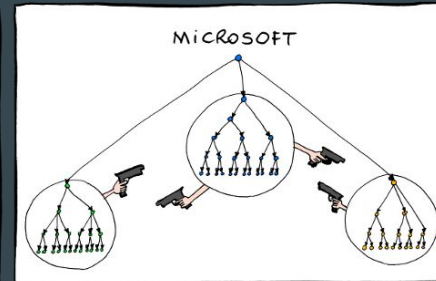
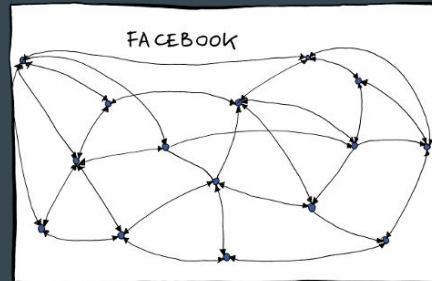
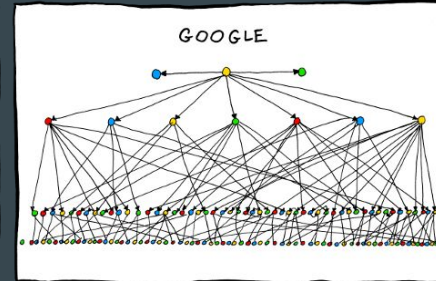
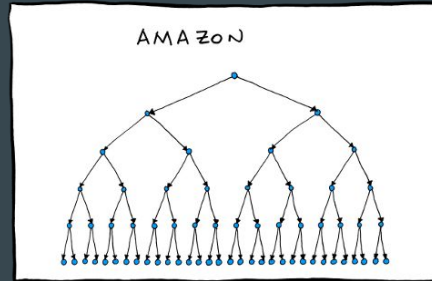
**SW Eng - devops
specialist**

**SW Eng - Data
specialist**

**SW Eng - Front
End specialist**

**SW Eng - Test
specialist**

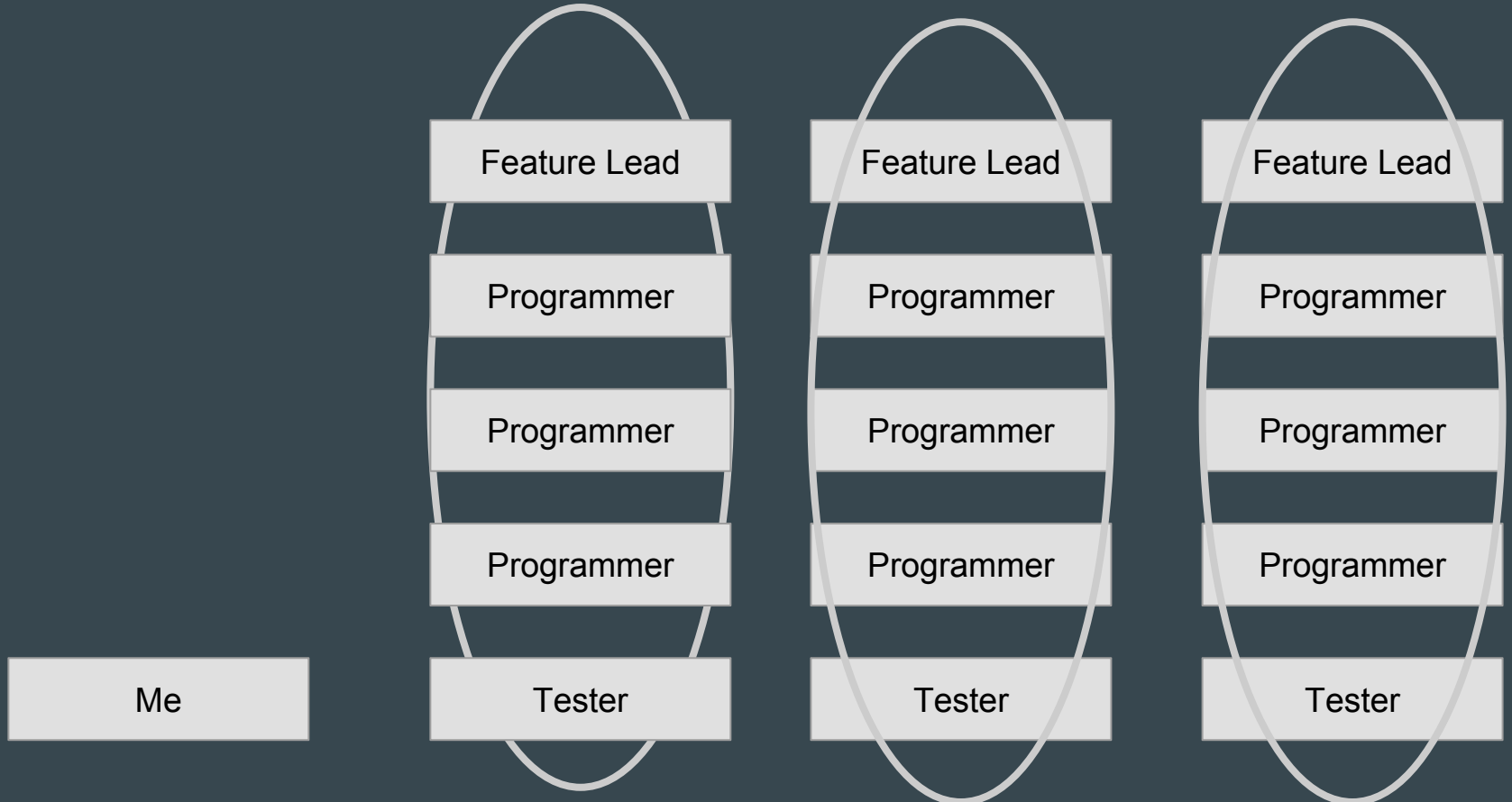
The Modern Testing Org



Twisting the Matrix Org



Twisting the Matrix Org



Modern Testing Principles

[Read the Modern Testing Principles](#)

The Modern Testing Mission Statement

Accelerate the Achievement of Shippable Quality

The MT Principles

These continue to be a work in progress – feel free to add comments, or join our slack group for a more detailed discussion.

The seven principles of Modern Testing are:

1. Our priority is improving the business.
2. We accelerate the team, and use models like Lean Thinking and the Theory of Constraints to help identify, prioritize and mitigate bottlenecks from the system.
3. We are a force for continuous improvement, helping the team adapt and optimize in order to succeed, rather than providing a safety net to catch failures.
4. We care deeply about the quality culture of our team, and we coach, lead, and nurture the team towards a more mature quality culture.
5. We believe that the customer is the only one capable to judge and evaluate the quality of our product
6. We use data extensively to deeply understand customer usage and then close the gaps between product hypotheses and business impact.
7. We expand testing abilities and knowhow across the team; understanding that this may reduce (or eliminate) the need for a dedicated testing specialist.



<https://moderntesting.org>

Accelerate the Achievement of Shippable Quality

Modern Testing Mission



lisacrispin

@lisacrispin

Following



Let's run with modern testing, folks!



lisacrispin

@lisacrispin

Following



Some excellent points here. What I like about the whole modern testing thing is it is generating really good conversations. Let's keep talking and experimenting!



James Shiels

@J_shiels

Follow



In a world of modern testing and unified engineering, no matter what role I end up in I will always have a focus on quality due to my background and you know what...That's a value add right there for any role. Testers need to know their net worth [@alanpage](#) [@BrentMJensen](#)



Chris George

Jul 3 · 8 min read

Application of modern testing for testing a modern application

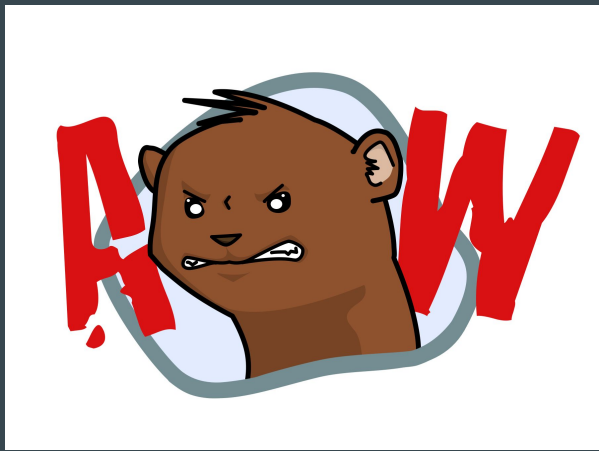
Quality is not synonymous with testing. Automated testing in a CI

“The future is already here — it’s just not very evenly distributed.”

- William Gibson



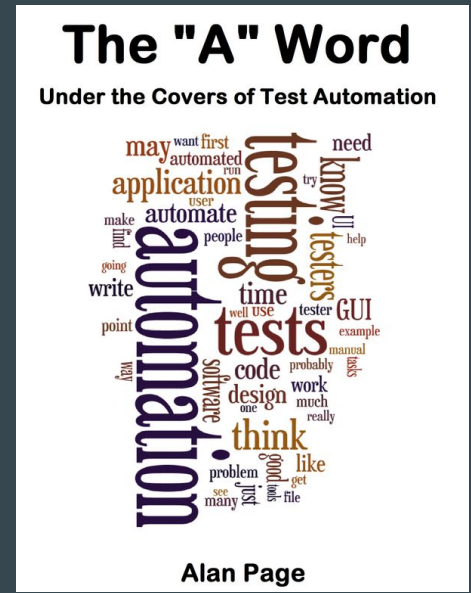
Thank you!



<http://angryweasel.com>



<http://angryweasel.com/ABTesting>



<https://leanpub.com/TheAWord>