



FROM QUALITY ASSURANCE TO QUALITY ASSISTANCE

**80': \$500.000 FOR PROJECT
MANAGEMENT SOFTWARE**



EARLY 90': SOFTWARE FOR THE MASSES



MID 90': RISE OF SOFTWARE ENGINEERING



LATE 90'S: ARMY OF TESTERS

```
PhoenixBIOS 4.0 Release 6.0
Award BIOS
16MB System RAM Paralle
32MB Extended RAM Paralle
675KB Cache 386 Paralle
System BIOS shadowed
Video BIOS shadowed
1MB upper limit upper address: 0F0
Basic initialized
Fixed Disk 0: FUJITSU 5400640
340 MB: 100000 340 MB 340 047
The amount of system memory has changed or the suspend to disk file is absent.
See "Suspend to Disk File" in the below. User's Guide for instructions.
077: Check date and time settings
WARNING
651: System CMOS checksum bad - default configuration used

Press F1D to resume, F12 to Setup
```

DELL

**EARLY OO'S: TESTING IS TOO
EXPENSIVE... LET'S SEND IT
SOMEWHERE CHEAPER**



MID 00'S: IT'S ACTUALLY TOO SLOW... LET'S AUTOMATE IT



**LATE 00'S: STILL TOO SLOW...
LET'S SHARE THE
RESPONSIBILITY**



"OUR PEOPLE DON'T JUST TEST OUR PRODUCTS; THEY HAVE A MUCH BROADER MISSION TO INFLUENCE ALL TEAM MEMBERS TO TAKE RESPONSIBILITY FOR QUALITY."

MID 10'S: QUALITY ~~ASSURANCE~~ ASSISTANCE





Moving from quality assurance to quality assistance

Ready to embrace a brave new world where developers are also test

Inside Atlassian

QA

Quality assurance

If you're intrigued by the quality assistance approach, but don't know how to bring it to your team, we're here to help. The first step is understanding that this may be a seismic shift in the way your entire engineering department runs, and as such, doesn't happen overnight. The second step is helping your team understand why the endeavour is worthwhile. So let's start there.



SPOTIFY IS HIRING A

Quality Assistance Team Lead

Stockholm, Sweden

Full-Time

What you'll do

- Develop people through coaching, mentoring, and management support
- Advocate and promote leadership at all levels within the Spotify engineering community
- Work closely with the recruitment team to hire and onboard QA engineers
- Advocate for software development best practices (CI, testing, UX, responsive design, etc.)
- Grow the technical expertise of your chapter within the Software Quality dimension
- Work closely with squads, product owners, agile coaches and stakeholders to ensure we deliver innovative products and campaigns to our users

**"AT WORDSTAR, BACK IN
1983... I WAS ABLE TO
CONVINCE THEM TO CHANGE
THE NAME, FROM QUALITY
ASSURANCE TO QUALITY
ASSISTANCE."**

-- CEM KANER, THE ONGOING REVOLUTION IN SOFTWARE TESTING

ATLASSIAN: 6 QA ENGINEERS SUPPORT 100 PEOPLE

Inside Atlassian

QA

Quality assurance

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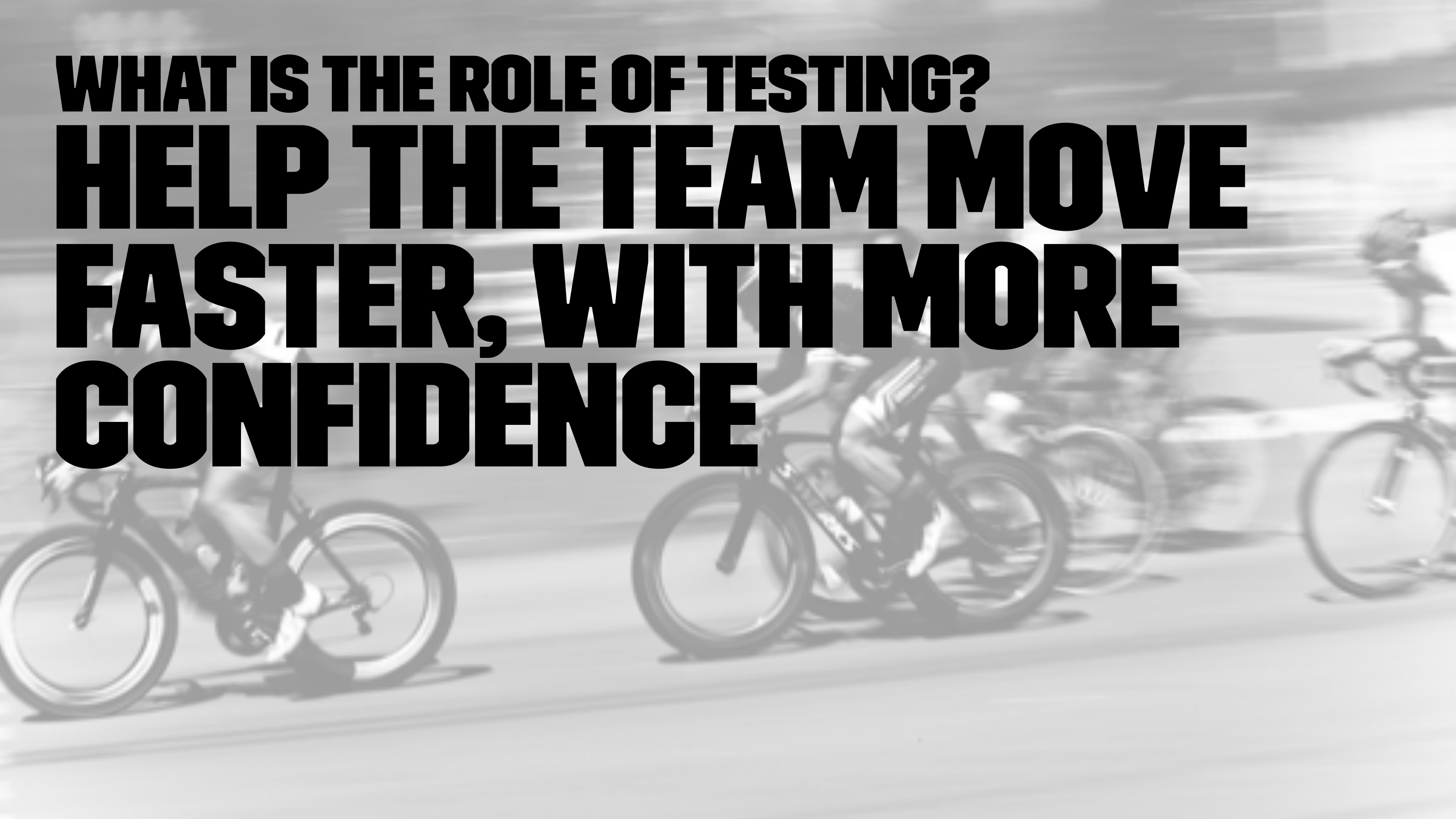
“NOT MY JOB!”



“WHAT IS THE ROLE OF TESTING?”



**WHAT IS THE ROLE OF TESTING?
HELP THE TEAM MOVE
FASTER, WITH MORE
CONFIDENCE**



'WITTY AND INSTRUCTIVE' WALL STREET JOURNAL

How to change things

switch

when change is hard

Chip & Dan Heath

NEW YORK TIMES NO.1 BESTSELLER

- 1. FIND THE FEELING**
- 2. SHRINK THE CHANGE**
- 3. GROW YOUR PEOPLE**



**“PEOPLE CHANGE...
BECAUSE THEY ARE
SHOWN A TRUTH THAT
INFLUENCES THEIR
FEELINGS”**

John P. Cotter, Heart of Change

**STEP 1: SELL THE
PROBLEM, NOT THE
SOLUTION**



MORE TRADITIONAL THINGS TO SHOW

- » End-to-end delivery cycle speed
- » Waiting time for tasks
- » Amount of rework
- » Satisfaction



**“PEOPLE DON’T RESIST
CHANGE; THEY RESIST
BEING CHANGED.”**

Peter Senge

STEP 2: INVOLVE THE TEAM IN PROPOSING SOLUTIONS





STEP 3: AIM FOR SMALL, REVERSIBLE EXPERIMENTS

SO, WHAT DO TESTERS DO NOW?





SO, WHAT DO TESTERS DO NOW?

**SHRINK THE CHANGE
GROW YOUR PEOPLE**

SO, WHAT DO TESTERS DO NOW?

~~SHRINK THE CHANGE~~ MAKE TESTING EASIER
~~GROW YOUR PEOPLE~~ TEACH OTHERS TO TEST

FOUR LEVELS

1. DELIVERY TASK/STORY

2. FEATURE

3. PRODUCT

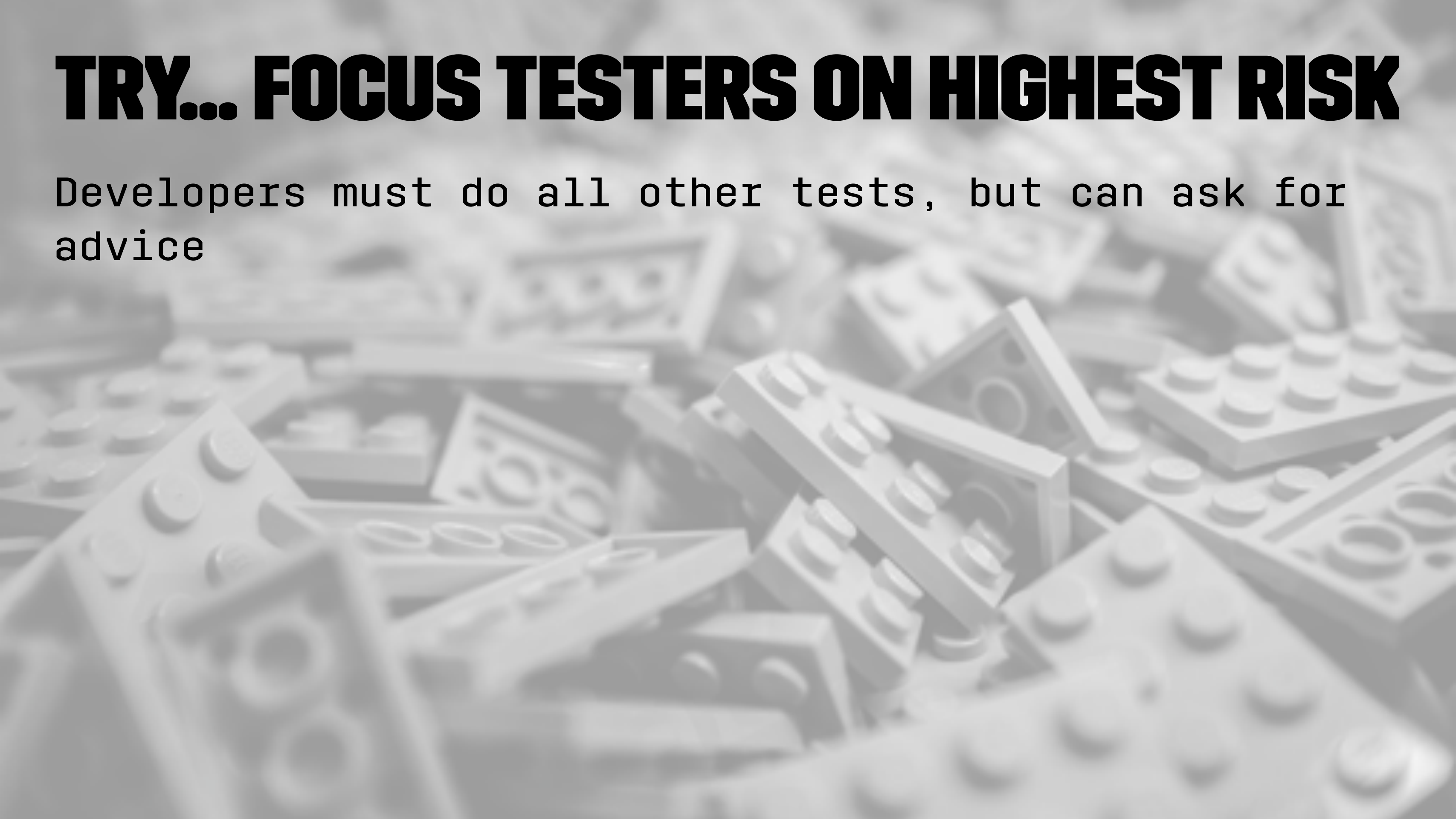
4. ORGANISATION

AT DELIVERY TASK/STORY LEVEL

- » teach people to ask better questions
 - » heuristics
 - » taxonomies
 - » boundary analysis
- » risk review
- » in-progress feedback

TRY... FOCUS TESTERS ON HIGHEST RISK

Developers must do all other tests, but can ask for advice



TRY... PRE-DEVELOPMENT TESTING NOTES

Write short notes on the types of bugs expected to see for this a type of task

TRY... QA KICKOFF

Pair with developers to brainstorm testing notes



TRY... DEVELOPER ON TEST

Developers take turns to perform most testing tasks



TRY... QUESTION CHECKLIST

A pre-agreed list of things developers can ask from a tester...



EXAMPLE... (1:15)

1. What are you going to test around feature X. I'll check that before I hand it over to you
2. I've checked A, B and C - is there anything more I should do before we call this ok?
3. X is really hard to test - can you help me out

TRY... FEEDBACK EXERCISES

Propose boundary conditions, let everyone write down what the system should do in those cases

TRY... QA DEMO

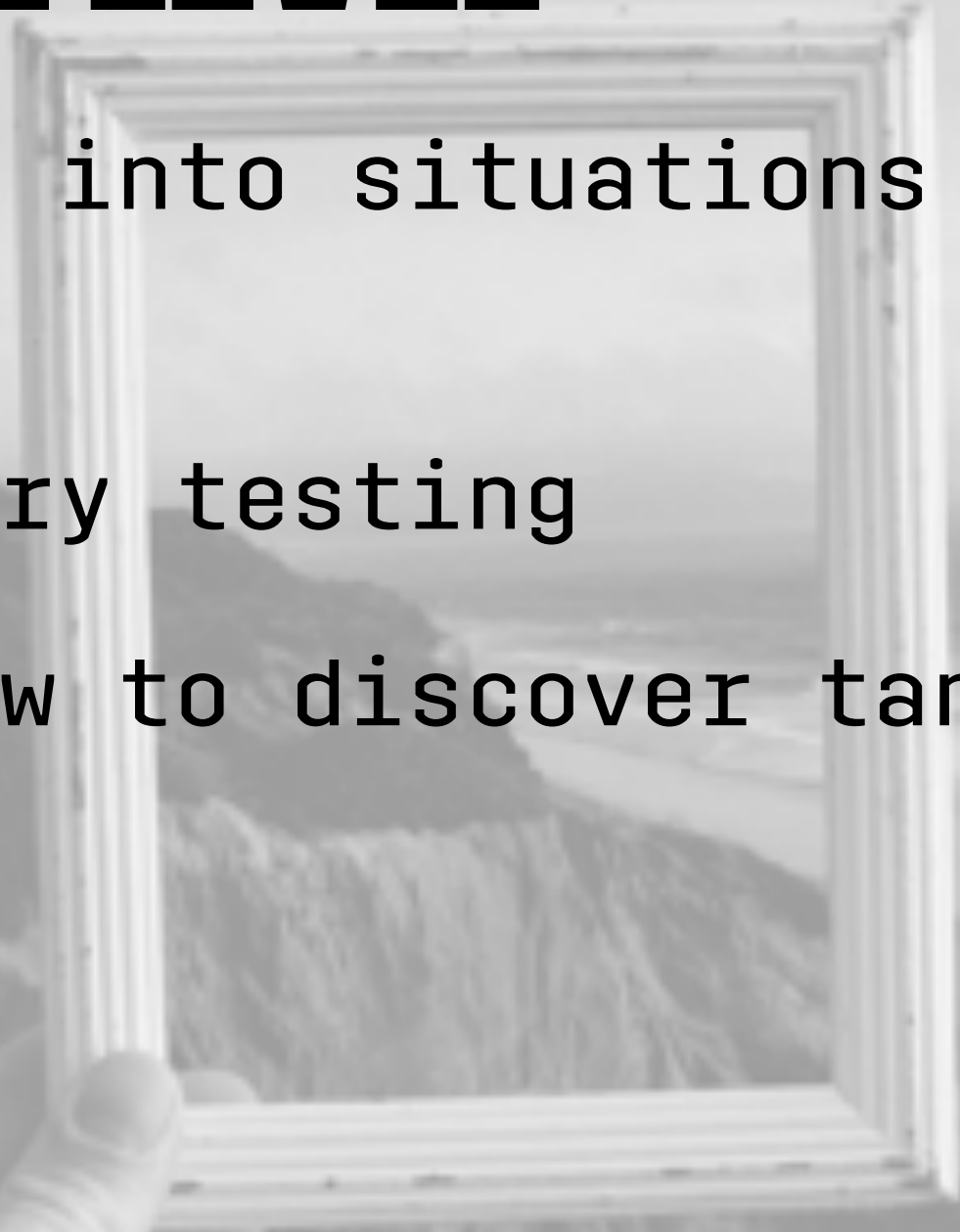
Review progress with developers and provide risk/
testing ideas

TRY... CROSS-FUNCTIONAL AUTOMATION TOOLS

Testers participate in defining the test, developers
automate

AT A FEATURE LEVEL

- » help people get into situations where they can be surprised
- » teach exploratory testing
- » teach people how to discover tangential information



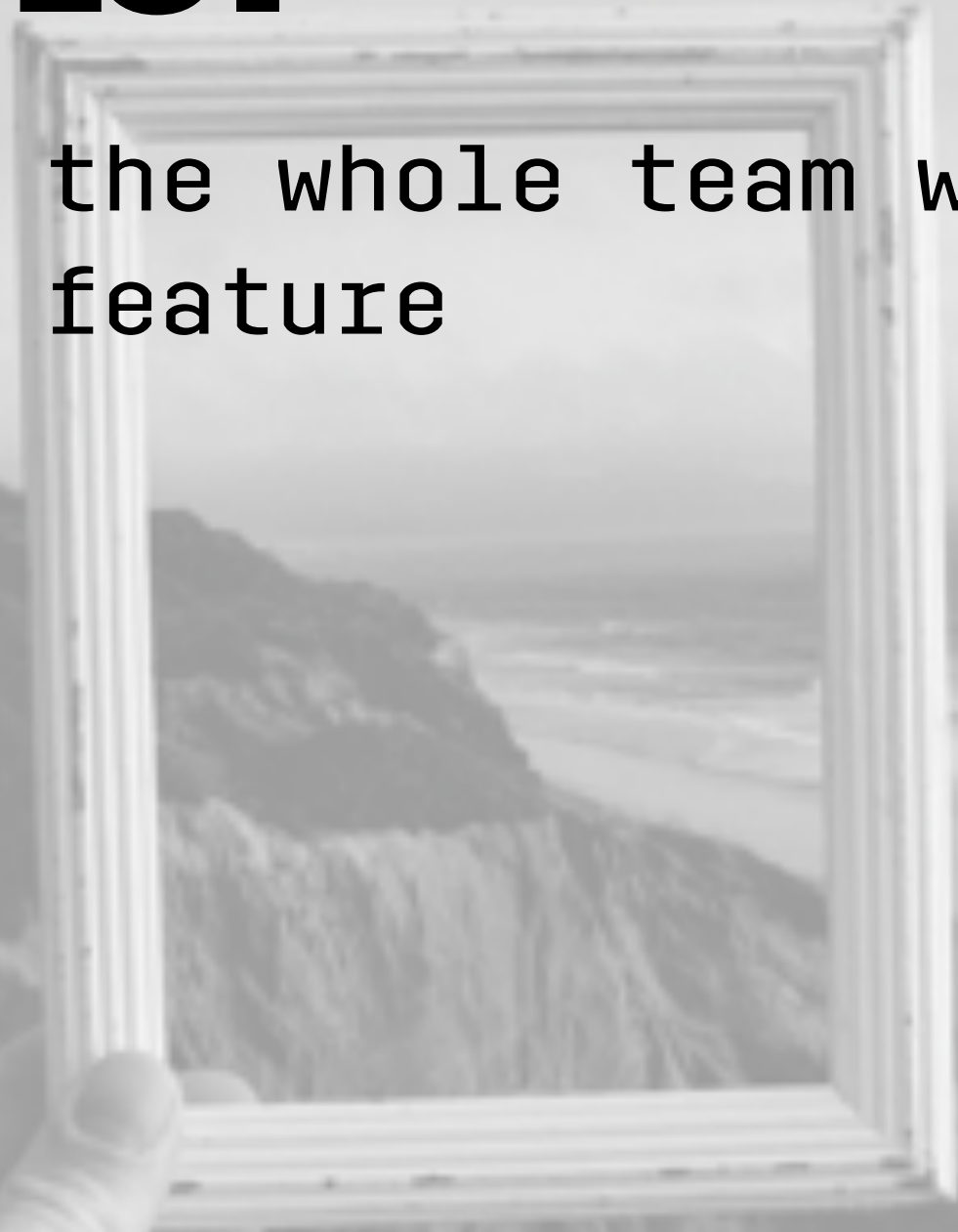
TRY... PAIRED EXPLORATION

Explore together with a developer, switching between driver and observer



TRY... BLITZ TEST

Short period when the whole team works together,
trying to break a feature



TRY... RISK STORMING

Group analysis of risks if the feature is broken, and ideas how to mitigate it



TRY... DOGFOODING

Use latest features internally before your users



TRY.. SPECIFICATION BY EXAMPLE

Collaborative analysis, capture acceptance criteria through key examples and document for automated tests



AT A PRODUCT LEVEL

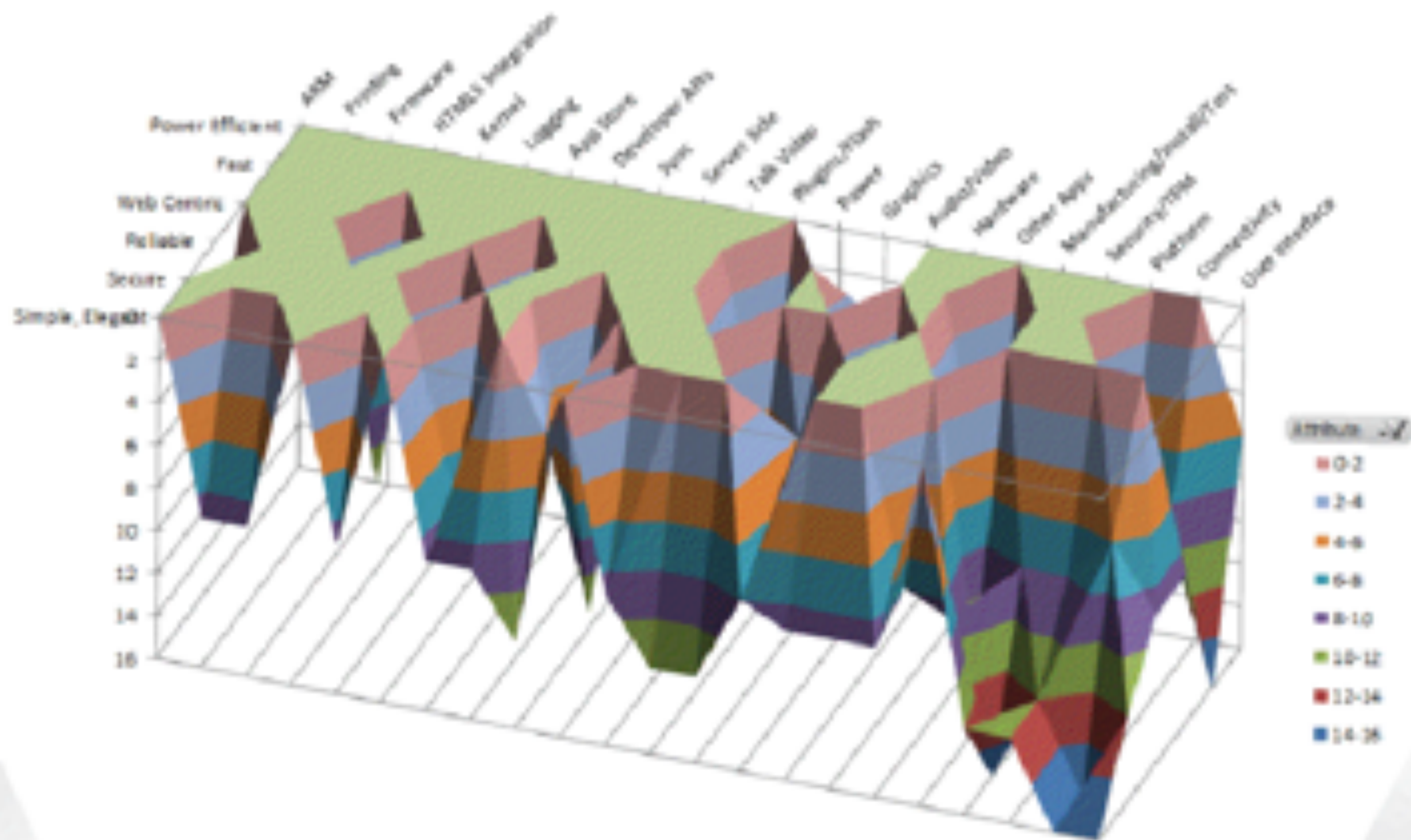
- » reduce testing friction
- » build up dashboards
- » improve system observability
- » introduce control points

TRY... BUG REVIEWS

Root cause analysis, review and learn from bugs

TRY... ACC MATRIX

Shared agreement on risk, mapping capabilities to components and quality attributes



TRY... TESTING TOURS

A variety of time-boxed exploration plans.

TRY... WASTE SNAKE

People record where they lose time unproductively,
periodically review and adjust process/tooling

TRY... BUILD SMALL CONTEXTUAL TOOLS

Speed up test setup or data collection

A search input field with a thin border. A mouse cursor is positioned at the left end of the field, and a microphone icon is located at the right end.

Google Search

I'm Feeling Lucky

Meet scientists using supercomputers to create a more sustainable water supply

3-result.html x Gojko@Neuri

file:///Users/gojko/work/mindmup/mindmup-svg/results/connectors/3-result.html

Appraise Home Summary Help

connectors.md / line label


Grid Overlay Inspect

Outcome: failure **Cause:** 556 pixels differ


Approve this example from your command line using:

```
appraise approve --page "connectors" --example "line label"
```

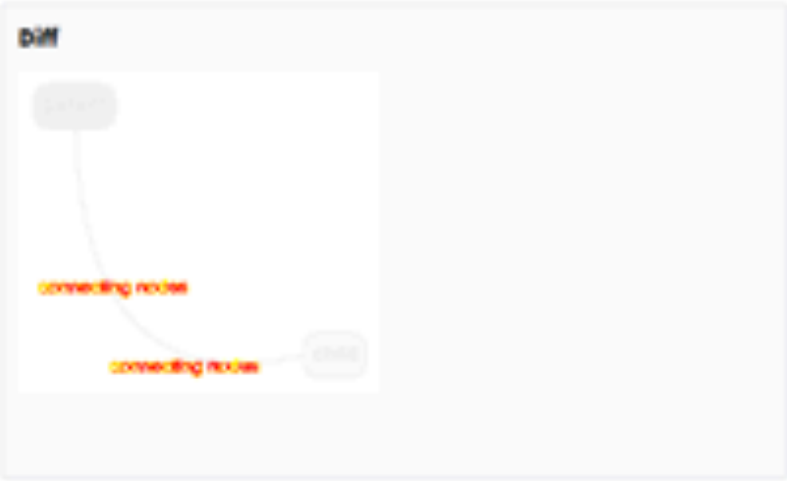
Expected




Actual



Diff



Source



AT AN ORGANISATIONAL LEVEL

- » speed up idea spreading
- » organise cross-team sharing
- » internal consulting
- » don't fix people's tests, fix their process



TRY.. ROTATE ACROSS TEAMS

Let testers change teams relatively frequently



TRY.. TESTING ON THE TOILET

Google test experts wrote fliers about testing topics, then plastered them on bathroom walls.



TRY.. FIXIT DAYS

Volunteers organize one day events to address important, but not urgent issues



TRY.. TESTING FAIR

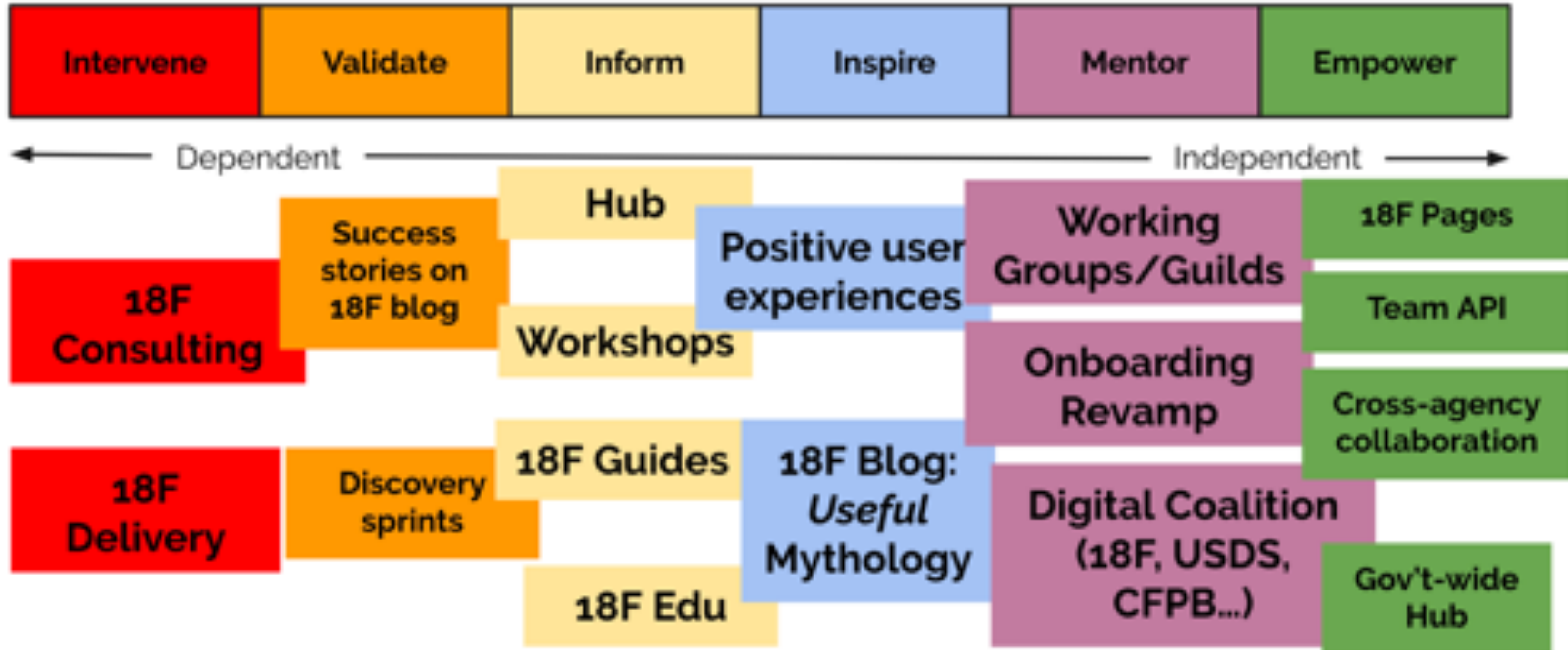
Show off latest tools and techniques to the rest of the organisation



MIKE BLAND'S RAINBOW OF DEATH MODEL

- » Intervene
- » Validate
- » Inform
- » Inspire
- » Mentor
- » Empower

Rainbow of Death: 18F



HUMANS VS COMPUTERS

by Gojko Adzic

