

SMALL SCALE DEVELOPER INITIATED DEVOPS

A GRASSROOTS PUSH FOR DEVOPS

THANK YOU!!!

SLIM

HUSBAND, DAD, UNEMPLOYED

FACTGEM

THE WORLD'S FASTEST WAY TO
CONNECT DATA AND DELIVER INSIGHTS



Jason Blackhurst

@alsoKnownAsSlim

A husband of one, father of two, fairly technical.

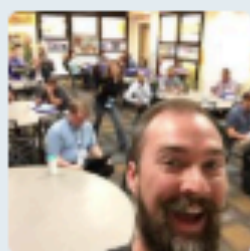
📍 Columbus, OH

🌐 jasonblackhurst.com

📅 Joined May 2016

🕒 Born on May 7, 1980

📷 Photos and videos



Tweets
97

Following
100

Followers
92

Likes
167

Lists
0

Moments
0

Tweets

Tweets & replies

Media



Jason Blackhurst @alsoKnownAsSlim · 17m

I'm honored to be speaking at Devops Columbus this evening! We will be having a conversation about what teams can do to grow a DevOps culture without a huge bankroll and approval from the Executives. I hope you'll come and join the discussion.



Developer Initiated DevOps: A Grassroots Push for DevOps

• What we'll do DevOps is often seen as a massive and expensive push that

BEHIND THE CURTAIN

!! DISCLAIMERS DISCLAIMERS DISCLAIMERS !!

Opinions/views seen here do not necessarily reflect those of:

FactGem, Rob Kinyon, MCPc, Fuse, Cardinal Health, ICC, McGraw-Hill, Jez Humble, Gene Kim, ThoughtWorks, James Shore, Martin Fowler, craigles75, STeve Shary, Richard Bradshaw, Google, Wikipedia, Amazon, AWS, any Federal Gov't branch, my mother, you, anyone else or their mother.*

*Opinions/views do not necessarily differ either.

WHAT IS DEVOPS?

► **Wikipedia:**

DevOps (a clipped compound of "software DEVelopment" and "information technology OPerationS") is a term used to refer to a set of practices that emphasize the collaboration and communication of both software developers and information technology (IT) professionals while automating the process of software delivery and infrastructure changes.[1][2] It aims at establishing a culture and environment, where building, testing, and releasing software can happen rapidly, frequently, and more reliably.[3][4][5]

► **Amazon:**

DevOps is the combination of cultural philosophies, practices, and tools that increases an organization's ability to deliver applications and services at high velocity: evolving and improving products at a faster pace than organizations using traditional software development and infrastructure management processes. This speed enables organizations to better serve their customers and compete more effectively in the market.

TL;DR

A NEW

PERSPECTIVE

**DEVOPS IS DEVELOPMENT
WHERE OPERATIONS IS THE
PROBLEM DOMAIN.**

Rob Kinyon

**CULTURE IS
CHALLENGING**

AN AGILE PERSPECTIVE

BUSINESS

DEVELOPMENT

BUSINESS

DEVELOPMENT



BUSINESS

OPERATIONS

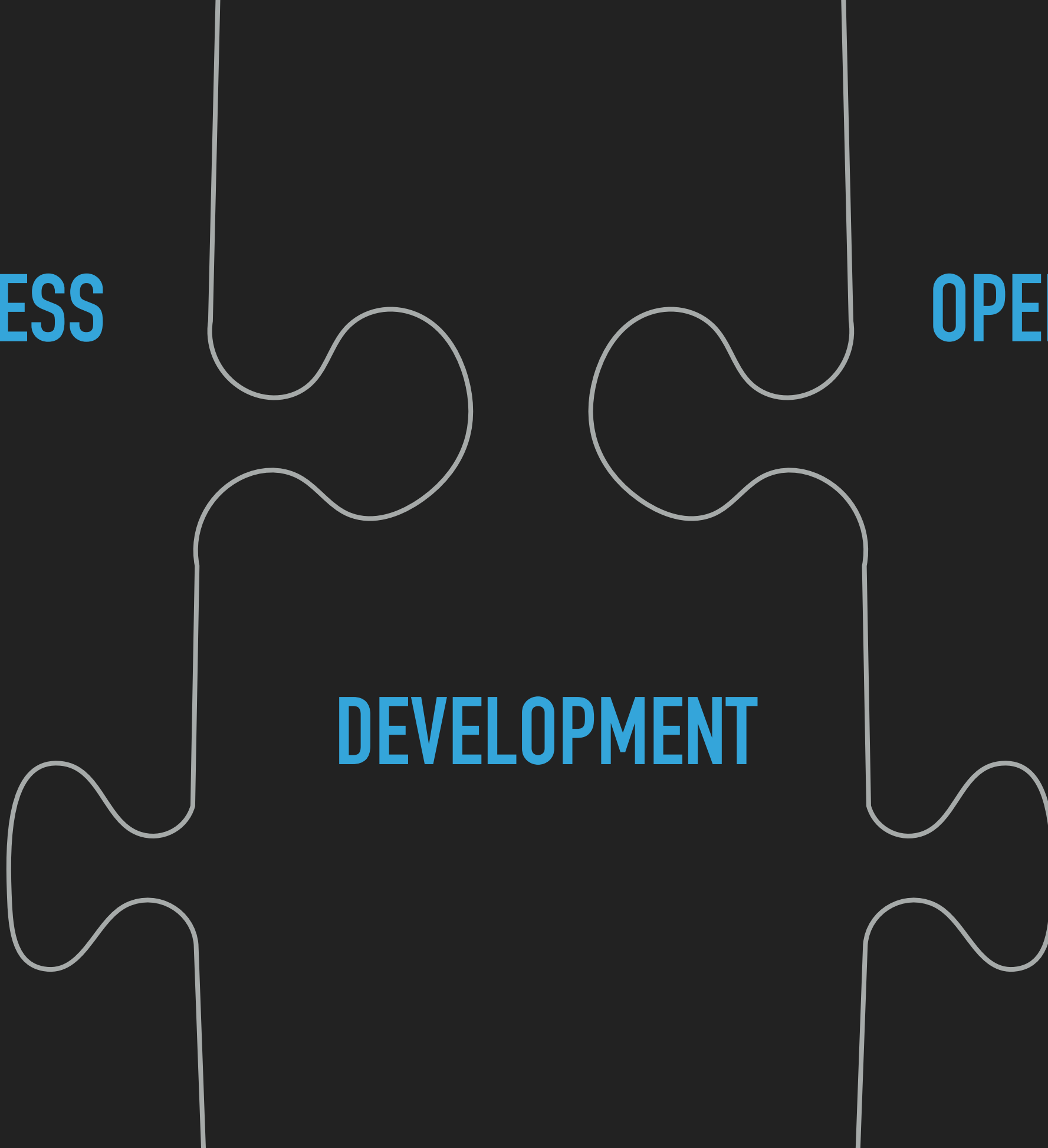
DEVELOPMENT



BUSINESS

OPERATIONS

DEVELOPMENT

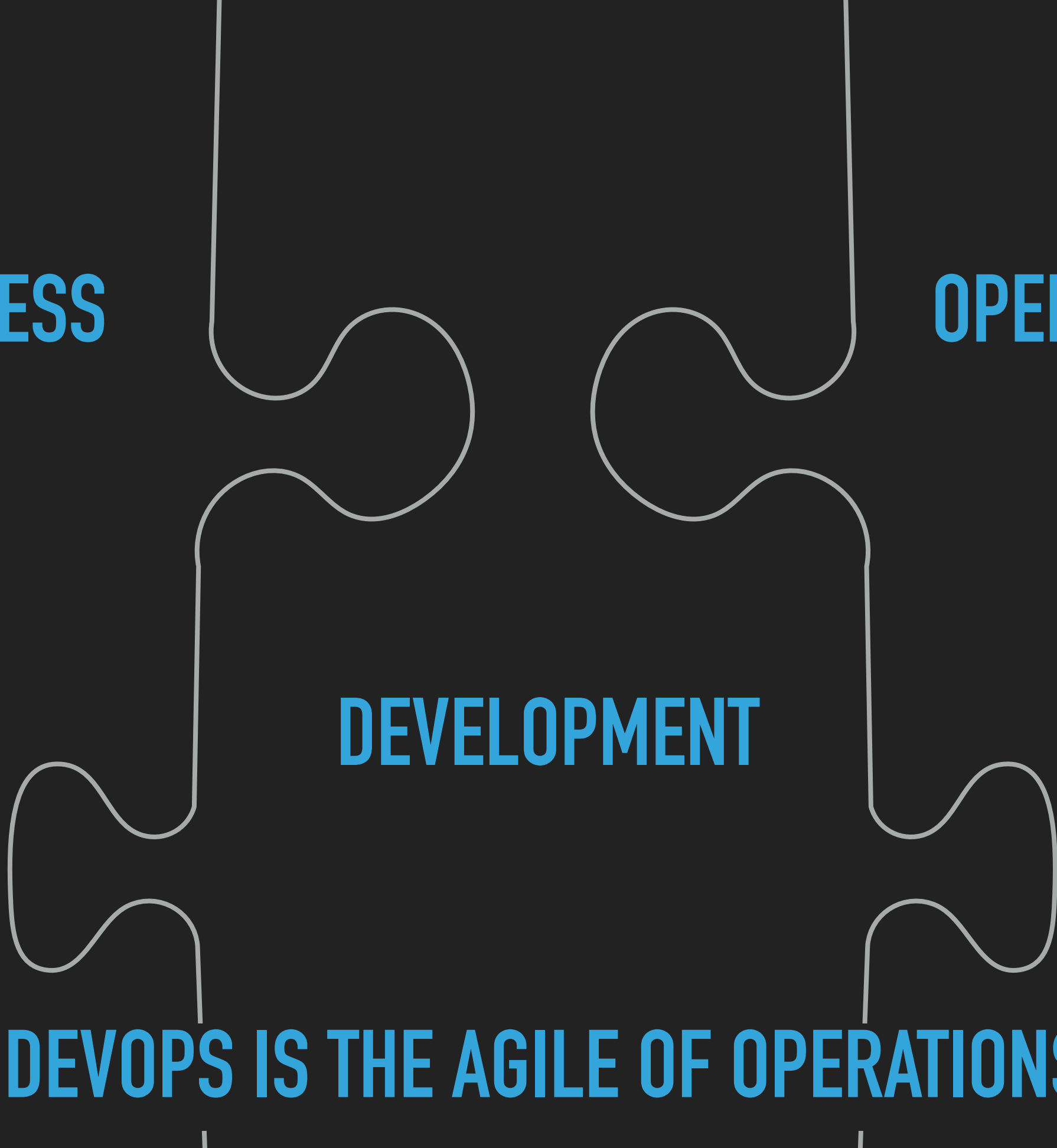


BUSINESS

OPERATIONS

DEVELOPMENT

DEVOPS IS THE AGILE OF OPERATIONS



AGILE MANIFESTO APPLIES TOO

- ▶ Individuals and interactions over processes and tools
- ▶ Working software over comprehensive documentation
- ▶ Customer collaboration over contract negotiation
- ▶ Responding to change over following a plan

AGILE MANIFESTO APPLIES TOO

- ▶ Individuals and interactions over processes and tools

AGILE MANIFESTO APPLIES TOO

- ▶ Working software over comprehensive documentation

AGILE MANIFESTO APPLIES TOO

- ▶ Customer collaboration over contract negotiation

AGILE MANIFESTO APPLIES TOO

- ▶ Responding to change over following a plan

WHY DEVOPS?

ACCORDING TO AWS DEVOPS BRINGS YOU:

- ▶ Speed
- ▶ Rapid Delivery
- ▶ Reliability
- ▶ Scale
- ▶ Improved Collaboration
- ▶ Security

PRACTICES

PRACTICES

- ▶ Continuous Integration
- ▶ Continuous Delivery
- ▶ Microservices
- ▶ Infrastructure as Code

BUT HOW?

PEOPLE

PROCESSES

TOOLS

PEOPLE

PROCESSES

TOOLS

START IN THAT ORDER!

PEOPLE

FIND THE MISSING VALUE.
GET CONSENSUS TO FIX IT

PEOPLE - THE VALUE

ENTHUSIAST
TURNED
EVANGELIST

PEOPLE - THE EXCUSES

EXCUSES!

EXCUSES!

(SOME BS, SOME REAL)

(SOME BS)

JEZ HUMBLE: IT WON'T WORK HERE

- ▶ We're regulated
- ▶ We're not building websites
- ▶ Too much legacy
- ▶ Our people are too stupid

JEZ HUMBLE: IT WON'T WORK HERE

- ▶ **We're regulated**

- ▶ Amazon

- ▶ Sarbanes-Oxley and PCI-DSS

- ▶ A deploy to Production
every second

JEZ HUMBLE: IT WON'T WORK HERE

- ▶ **We're not building websites**
 - ▶ Hewlett-Packard
 - ▶ Firmware for Printers and Scanners
 - ▶ Cost -40% Productivity +8x

JEZ HUMBLE: IT WON'T WORK HERE

- ▶ **Too much legacy**

- ▶ Suncorp Insurance Agency

- ▶ 15 Green Screen Mainframe Apps

- ▶ Eliminated 14 of 15

JEZ HUMBLE: IT WON'T WORK HERE

- ▶ **Our people are too stupid**
 - ▶ NUMMI - GM + Toyota
 - ▶ GM's worst plant
 - ▶ Add Toyota process -> best plant

(SOME REAL)

JEZ HUMBLE: ACTUAL REASONS

- ▶ Our culture sucks
- ▶ Our architecture sucks

JEZ HUMBLE: ACTUAL REASONS

- ▶ Our culture sucks
- ▶ Our architecture sucks

GO SLOW! TAKE IT EASY.

PEOPLE

FIND THE VALUE, KILL THE EXCUSES

PROCESS

FIND A BETTER WAY

DEVELOPER MINDSET

- ▶ Decompose Problem
- ▶ Focus on one piece
- ▶ Iterate and Adjust
- ▶ Starting with People and Process

HOLD UP

- ▶ Wait a minute

OPTIONS FOR CULTURE AND PROCESS

- ▶ Wholesale Culture
- ▶ New Hires
- ▶ < Continuous Integration
- ▶ The Slow Pipeline
- ▶ FOIA Requests
- ▶ Late Automated Feedback
- ▶ Angry Operations
- ▶ Prod Problems
- ▶ Meetings and Meetings
- ▶ **Adhoc**

WHOLESALE CULTURE CHANGE

Crap Culture

**SYSTEMS THINKING
AMPLIFY FEEDBACK LOOPS
TESTING AND LEARNING**

Devops Culture

THE FIX FOR WHOLESALE CULTURE

- ▶ Create the value and the Culture one little step at a time
 - ▶ Systems Thinking
 - ▶ Amplify Feedback Loops
 - ▶ Culture of Continual Experimentation and Learning

NEW HIRES

Person

**A DOCUMENT FOLLOWED BY
WEEKS OR MONTHS OF
FINDING OTHER STUFF.**

Employee

THE FIX

- ▶ Create a new hire feedback loop.

< CONTINUOUS INTEGRATION

Code Changes

**FEATURE BRANCHES.
WAIT... MERGE.
CODE FREEZE !!**

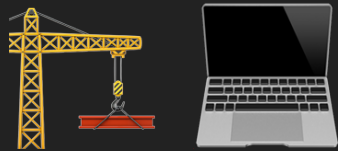
PROFIT!!!

THE FIX

- ▶ Ramp up the continuous!!

CONTINUOUS INTEGRATION ON \$1 A DAY

CONTINUOUS INTEGRATION ON \$1 A DAY



\$1

CAVEAT!

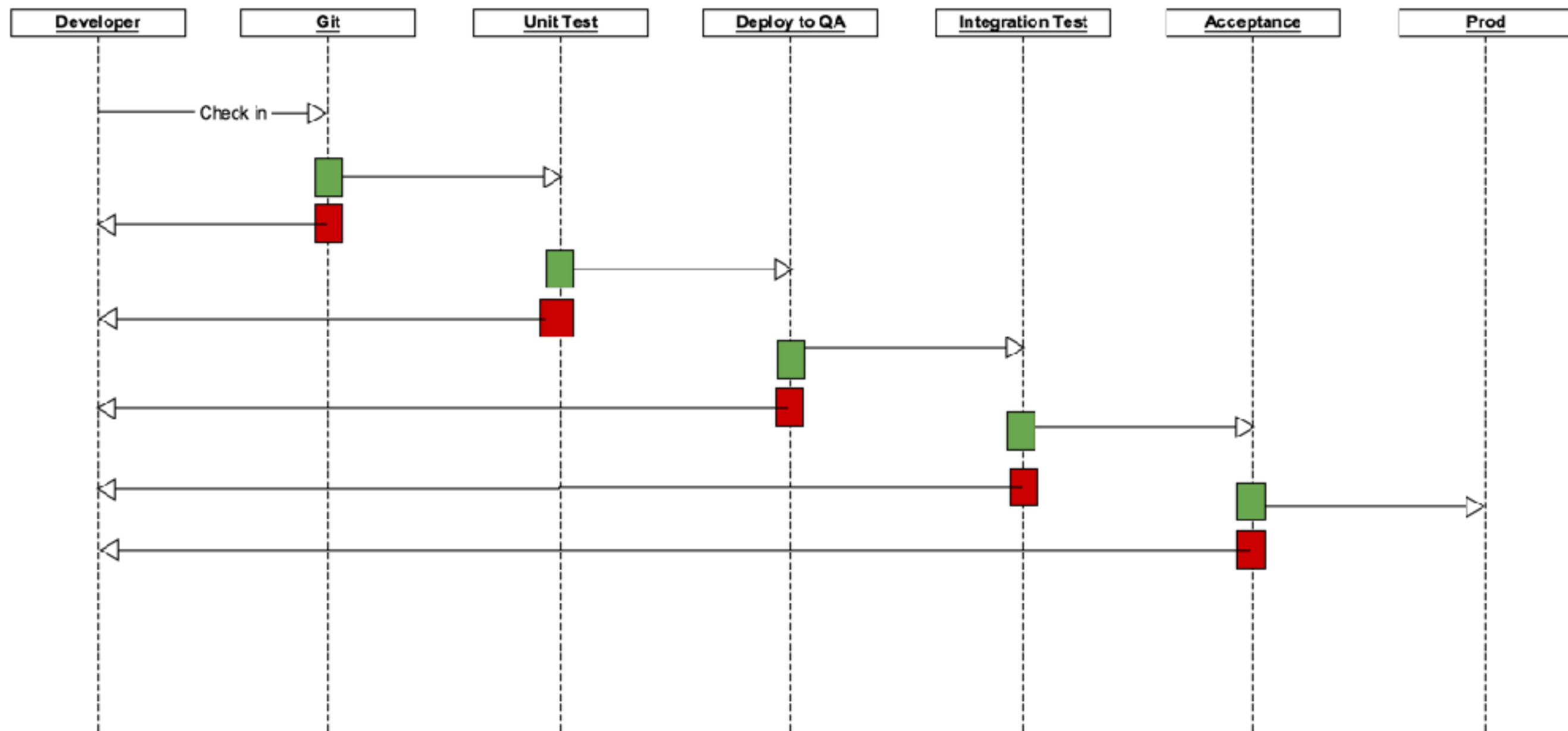
BUY IN!

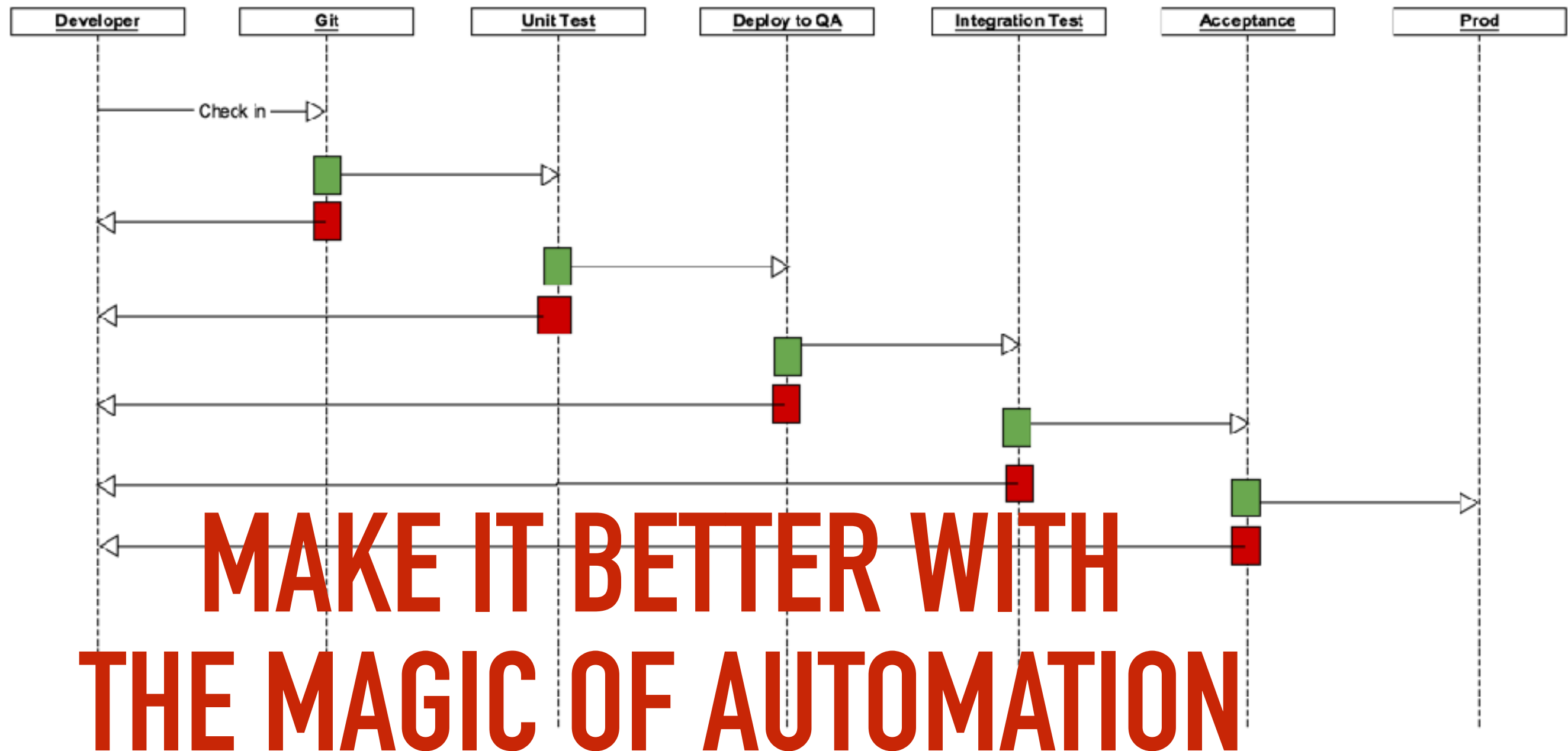
THE PIPELINE

Integrated Code Changes

**CODE DEPLOYMENT
TEST EXECUTION**

Usable Software





Developer

Prod



Ship It

THE SHADOW PIPELINE

[Back](#)

Integrated Code Changes

PRIVATE CODE DEPLOYMENT
PRIVATE TEST EXECUTION
SHHHHHHH

Usable Software

FOIA REQUESTS

Request for Information

WORK

Information

THE FIX

▶ THE SPAM CANNON!

CAVEAT!

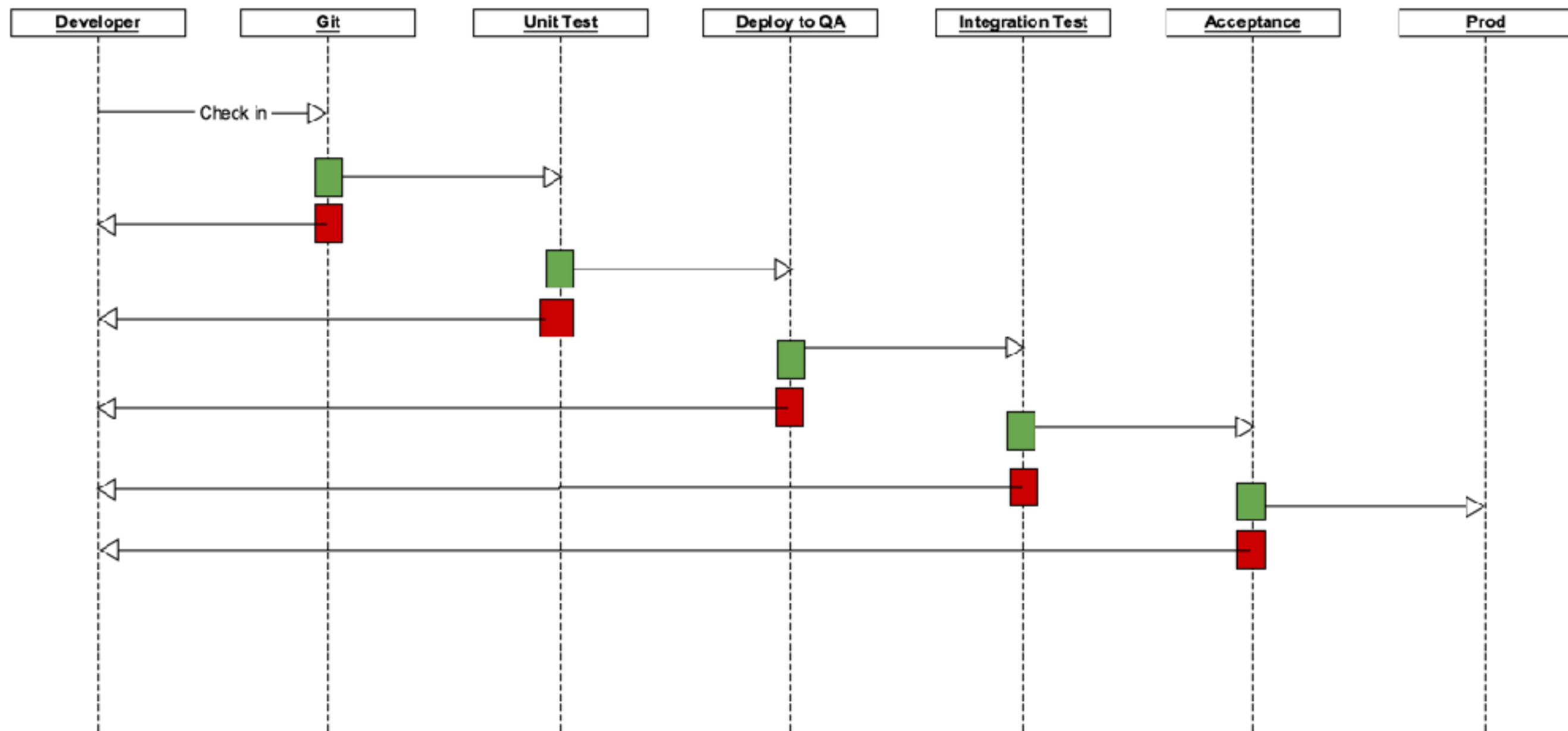
HIDDEN VALUE!

LATE AUTOMATED FEEDBACK

Code into the pipeline

**DAYS OR WEEKS OF
DEPLOYMENTS AND TESTS**

Errors



CAVEAT!

FIX SOMETHING!

ANGRY OPERATIONS

Questions and JIRA Tickets

**COMMAND LINE WIZARDRY.
CAFFEINE CONSUMPTION.
RAPIDLY MOVING ELECTRONS.**

Growls, stares, and Functional Servers

THE FIX

- ▶ Donuts and Coffee

PROD PROBLEMS

Functional code and infrastructure

**OPERATING PARAMETERS
CHANGED –OR–
BAU**

Server Failure

THE FIX

▶ Start Bridging the Gap

CAVEAT!

THIS IS NOT PROD!

MEETINGS, MEETINGS, MEETINGS

Blood, Sweat, and Tears.

HOT AIR

Go / No Go

THE FIX

► Gentle Nudges

THE WORKAROUND

- ▶ Break it down

ADHOC UNIT

Input

WORK

Output

THE FIX

- ▶ Break it down

PROCESS

FIND A BETTER WAY

CULTURE

IT MAKES OR BREAKS THE PROCESS

THE FIX FOR WHOLESALe CULTURE

- ▶ Fix Process and the Culture slowly w/
 - ▶ Systems Thinking
 - ▶ Amplify Feedback Loops
 - ▶ Culture of Continual Experimentation and Learning

ARCHITECTURE

MAKE A BETTER WAY

JEZ HUMBLE: ACTUAL REASONS

- ▶ Our culture sucks
- ▶ **Our architecture sucks**



A LOUDER WAY

THE BIG BANG



A BETTER WAY

**THE STRANGLER
APPLICATION**

ARCHITECTURE

MADE A BETTER WAY, SLOWLY

FINALLY

YOUR HOUSE IS IN ORDER

TOOLS

FIND A BETTER TOOL

WHY LAST?

**BUT WHEN YOU
NEED TOOLS..**

QUESTIONS?

ANSWERS: CHECK EM OUT

- ▶ Rob Kinyon: <https://streamlined-book.blogspot.com/>
- ▶ Jez Humble: <https://continuousdelivery.com/>
- ▶ Gene Kim: <https://itrevolution.com/>
- ▶ Damian Synadinos: <http://www.ineffable-solutions.com/>
- ▶ James Shore: <http://www.jamesshore.com/Blog/>
- ▶ Richard Bradshaw: <http://www.thefriendlytester.co.uk/>
- ▶ STeve Shary: <http://stevesmashcode.com/>
- ▶ Martin Fowler: <https://www.martinfowler.com/>
- ▶ <https://www.thisamericanlife.org/radio-archives/episode/561/nummi-2015>
- ▶ craigles75: <https://flic.kr/p/N5mcKY>
- ▶ Me, Slim, Jason Blackhurst: JasonBlackhurst@gmail.com [@alsoKnownAsSlim](#)
- ▶ License: [Creative Commons Attribution ShareAlike 3.0](#)

SUM UP

- ▶ When you look at what to change, look in this order:
 - ▶ People -> Process -> Tools
- ▶ Use the Developer Mindset
 - ▶ Decompose -> Focus on one Piece -> Iterate
 - ▶ Feedback
- ▶ I wish you the Best of Luck! Thank You!