

# Intro to DevOps

Based on DevOpsDays London 2016

# DevOps – what is it about

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**“A cultural and professional movement,  
focused on how we build and operate  
high velocity organizations,  
born from the experiences of its practitioners.”**

[“Chef Style DevOps Kungfu”](#) by Adam Jacob  
[video from ChefConf 2015](#)

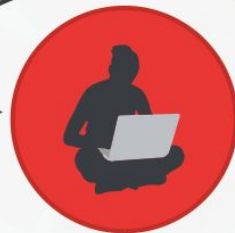


# CHEF™

# DEVOPS KUNG FU

**GONGFU (功夫):** The excellence achieved through long practice in one's skills

# WHAT IS DEVOPS?



**SIMPLE ANSWER:**



Where "Development"  
and "Operations" meet

A CULTURAL AND PROFESSIONAL MOVEMENT, FOCUSED ON HOW WE BUILD AND OPERATE HIGH VELOCITY ORGANIZATIONS, BORN FROM THE EXPERIENCES OF ITS PRACTITIONERS.

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Cultural and professional movement



How we build and operate



Based on building high velocity organizations



Born from the experiences of practitioners



**Cultural** like Hip Hop, Heavy Metal, or Otaku  
**Professional** like an MC, Lead Guitarist, or Animator



Encompasses the details of how we **build** things  
And how we **operate** them over time



Experiences in building **high velocity organizations**  
Organizations must want to go fast for DevOps to work



Most originators were **web innovators**  
These people were the **early explorers** of DevOps

## DEVOPS + GŌNGFU

A deep well  
of practical  
philosophy

Broad  
experience,  
unique to each  
individual

Recognizable  
by the basics  
and forms

Practically  
applied to  
the situations  
in your life

TO BECOME A  
**DEVOPS  
MASTER**



BUILD FEATURES ITERATIVELY | COLLECT METRICS | MANAGE RISK |  
SOLVE THEORY ARGUMENTS WITH EXECUTION | CHOOSE TOOLS THAT  
FIT THE JOB | INTEGRATE AND DELIVER CONTINUOUSLY | WRITE TESTS  
| FOCUS ON AVAILABILITY | PLAN FOR CAPACITY | PRACTICE INCIDENT  
RESPONSE | USE SCALABLE SYSTEMS DESIGN | BE UNIQUE | EMPOWER  
TEAMS | BUILD CONSENSUS ON IMPORTANT DECISIONS | PUT  
APPLICATIONS AND INFRASTRUCTURE THROUGH THE SAME WORKFLOW

PRACTICE YOUR **DEVOPS KUNG FU**

**KUNGFU.CHEF.IO**

# DevOps – what is it about

## CAMS

**C**ulture

**A**utomation

**M**easurement

**S**haring

“[What Devops Means to Me](#)” by John Willis

# DevOpsDays London 2016

## “Cloudy With a Chance of DevOps”

by **Bridget Kromhout** [@bridgetkromhout](https://twitter.com/bridgetkromhout)

- Principal Technologist for [Cloud Foundry](#) from [Pivotal](#)
- [Arrested DevOps](#) podcast
- [DevOpsDays](#) core team organizer

presentation: [slides](#), [video](#)



“IN THE LAST WEEK THERE WERE  
67 DEPLOYS  
OF 496 CHANGES  
BY 18 PEOPLE”

FLICKR DEV BLOG, DECEMBER 17TH 2008

Image credit: visual\_dichotomy on Flickr

QUOTED IN “10+ DEPLOYS PER DAY:

DEV AND OPS COOPERATION AT FLICKR” AT VELOCITY 2009

JOHN ALLSPAW & PAUL HAMMOND

@BRIDGETKROMHOUT

Pivotal™

WHY DON'T WE ALL MOVE THAT FAST TODAY?

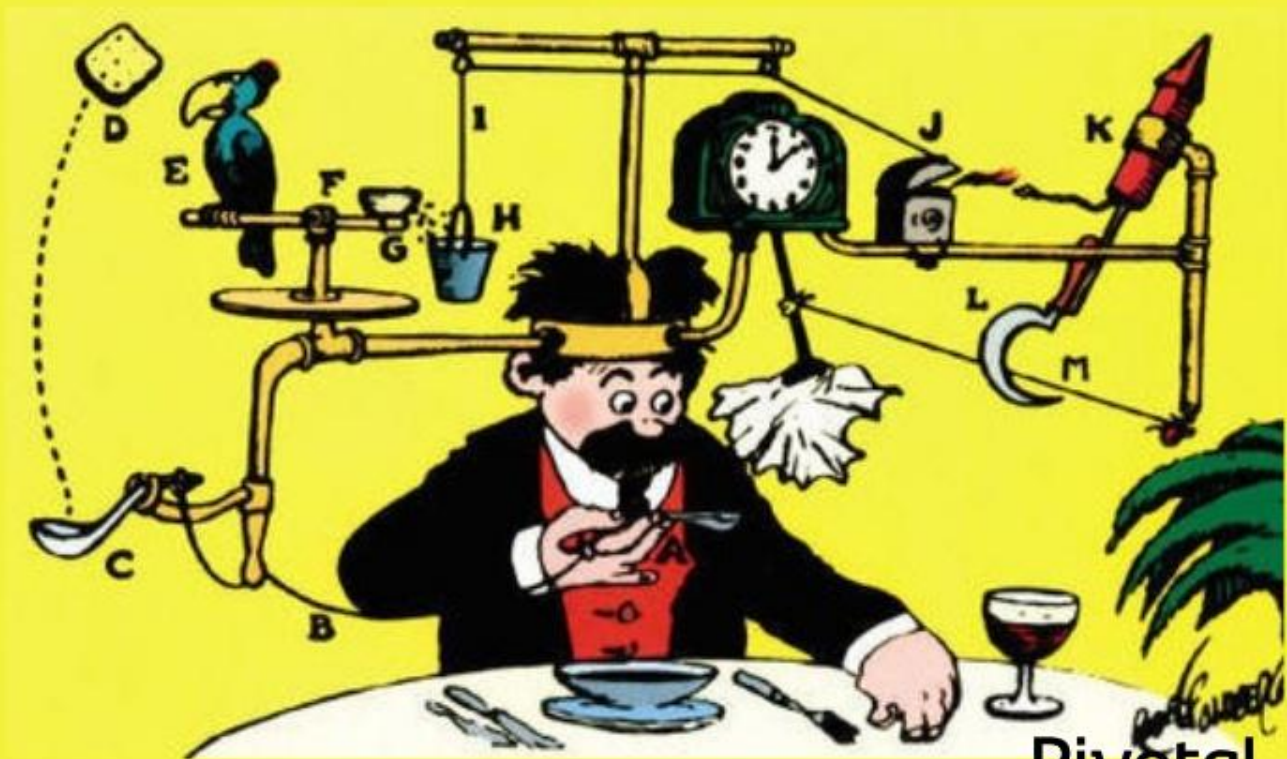
ENVIRONMENTS: HOW LONG TO SPIN UP A  
NEW ONE OR COPY AN EXISTING ONE?

DEPLOYS: HOW OFTEN? HOW LONG DO THEY  
TAKE? HOW OFTEN DO THEY GO WRONG?

FAILURE: WHAT DOES RECOVERY LOOK LIKE?

NOT THE GOAL:

“AUTOMATE ALL THE THINGS”

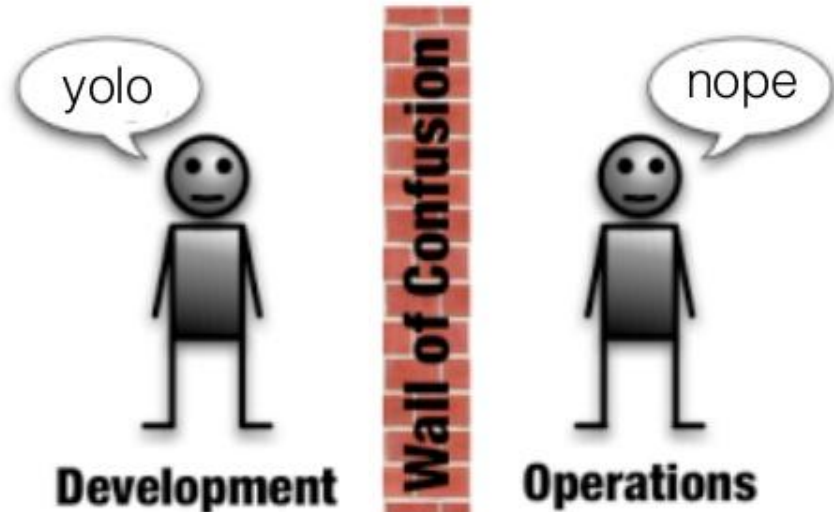




## @BRIDGETKROMHOUT



# THE WALL OF CONFUSION





# AGILE 2008 SYSTEM ADMINISTRATION



PATRICK DEBOIS

ANDREW CLAY SHAFER



# DevOpsDays London 2016

**“We are great at DevOps  
but the Enterprise is failing”**

by **Joanne Molesky** [@jemolesky](#)

- Principal Associate at ThoughtWorks
- coauthor of “[The Lean Enterprise:  
How High Performance Organizations Innovate at Scale](#)”

presentation: [slides](#), [video](#)

THE LEAN SERIES

ERIC RIES, SERIES EDITOR

Jez Humble, Joanne Molesky & Barry O'Reilly

# LEAN ENTERPRISE

How High Performance  
Organizations  
Innovate at Scale

O'REILLY®



A man with glasses and a mustache, wearing a dark suit and tie, is speaking at a podium. He is gesturing with his right hand. The background is dark blue with the words "Inspiring Ideas" in a large, light blue, serif font. The overall image has a blue tint.

# Inspiring Ideas

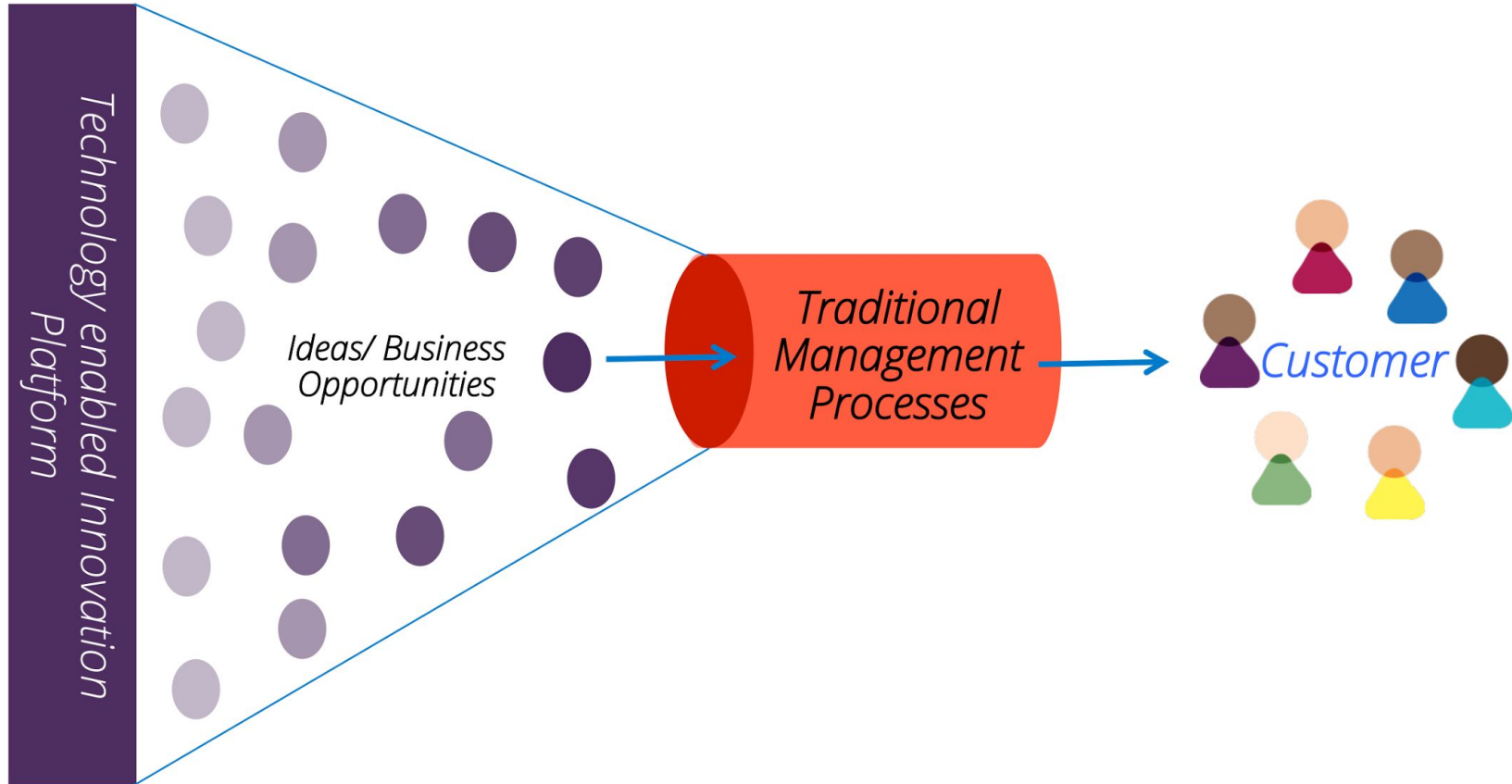


**RIGHT NOW, YOUR COMPANY HAS 21ST  
CENTURY INTERNET ENABLED BUSINESS  
PROCESSES, MID 20TH CENTURY  
MANAGEMENT PROCESSES, ALL BUILT  
ATOP 19TH CENTURY MANAGEMENT  
PRINCIPLES.**



- Gary Hamel, American Management Expert

# TECHNOLOGY IS NO LONGER THE BOTTLENECK

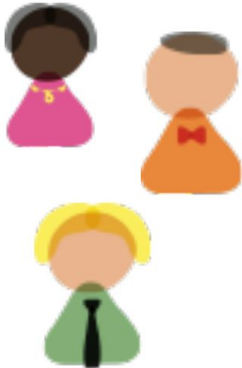


# TRANSFORM FROM PROJECT THINKING ...

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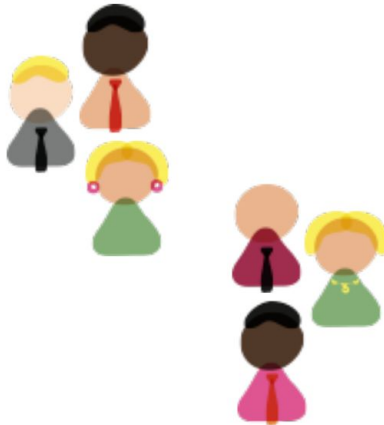
## **BUSINESS**

*Many 'good' ideas -  
**WE NEED \$\$\$!***



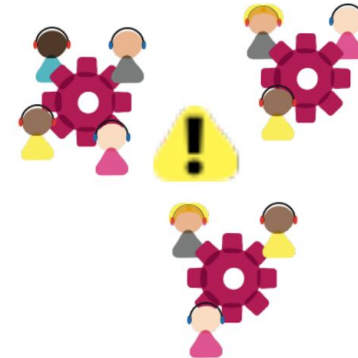
## **PROJECTS**

*We're working -  
**GIVE US \$\$\$!***

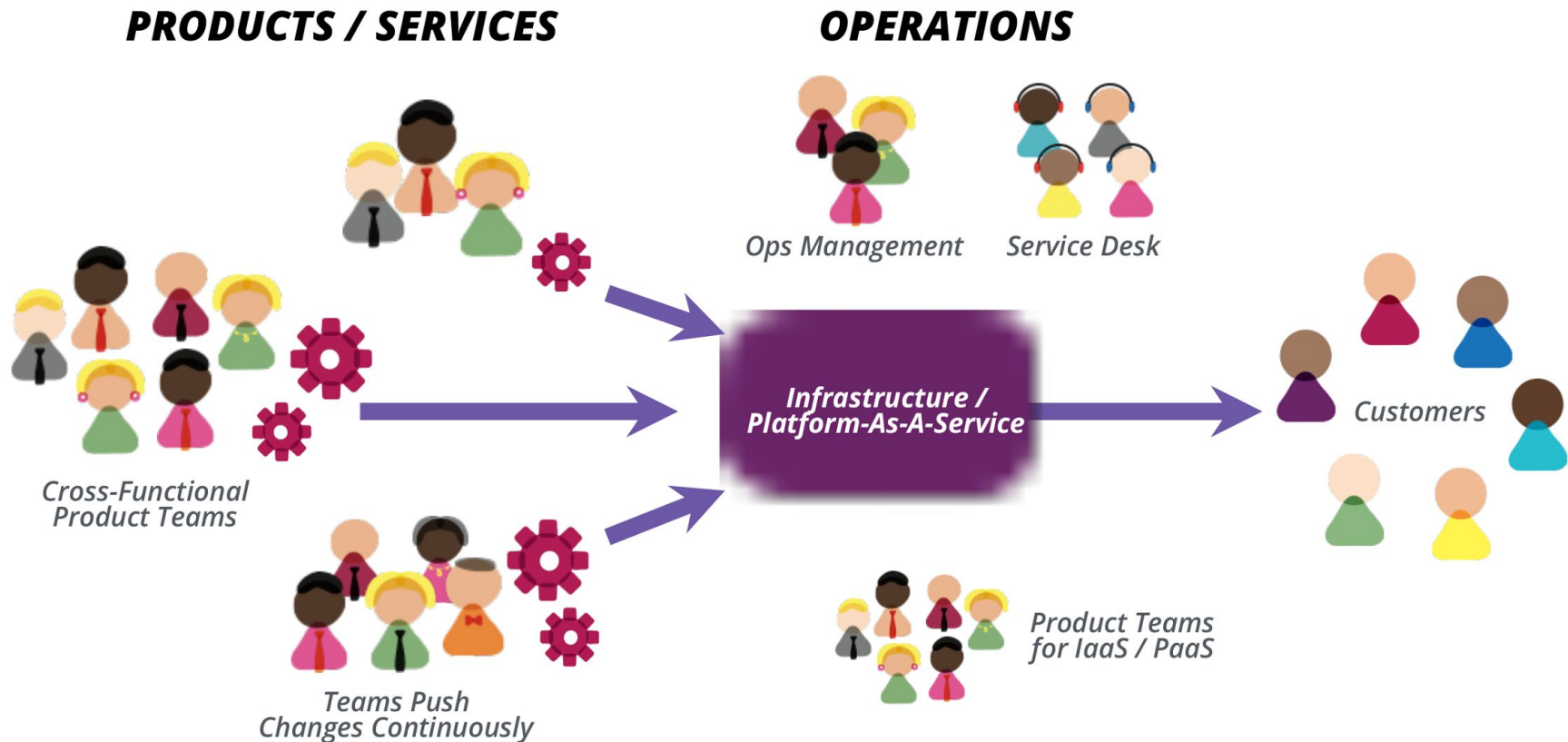


## **OPERATIONS**

*That doesn't work -  
**NEED MORE \$\$\$!***



# TO PRODUCT THINKING...



# SOFTWARE IS EATING THE WORLD

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**BUSINESS**



**TECHNOLOGY**

*Technology as a strategic capability*  
*Willingness to support experimentation*  
*Iterative, adaptive working processes and practices*  
*Provide a safe learning environment*

# DevOpsDays London 2016

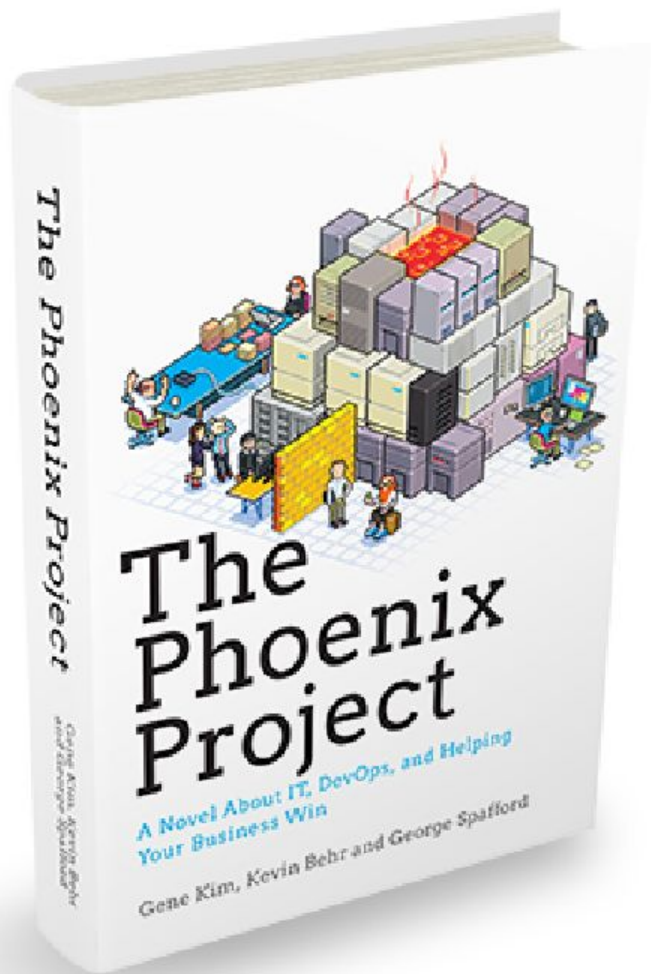
## “The impact on DevOps becoming mainstream”

by **Gene Kim** [@RealGeneKim](#)

- founder and CTO of Tripwire for 13 years
- books author:
  - [“The Phoenix Project:](#)  
A Novel About IT, DevOps, and Helping Your Business Win”
  - [“The Visible Ops Handbook”](#)
  - upcoming [“DevOps Handbook”](#)

presentation: [slides](#), [video](#)





“This book will have a profound effect on IT, just as *The Goal* did for manufacturing.”

—**Jez Humble,**  
co-author *Continuous Delivery*

“This is the IT swamp draining manual for anyone who is neck deep in alligators.”

—**Adrian Cockcroft,**  
Cloud Architect at Netflix

“This is *The Goal* for our decade, and is for any IT professional who wants their life back.”

—**Charles Betz,** IT architect, author  
“*Architecture and Patterns for IT*”

puppet labs®

# 2015

STATE OF

DevOps

# REPORT

In Partnership with

IT REVOLUTION





**Surprise #1:**

**The Business Value Of DevOps  
Is Even Higher Than We Thought**

# High Performers Are More Agile

**30x**

more frequent  
deployments

**200x**

faster lead times  
than their peers

# High Performers Are More Reliable

**60x**

the change  
success rate

**168x**

faster mean time  
to recover (MTTR)

# High Performers Win In The Marketplace

**2x**

more likely to  
exceed profitability,  
market share &  
productivity goals

**50%**

higher market  
capitalization growth  
over 3 years\*

# Amazon 2015: 136K deploys/day

AWS Summit

**Thousands of teams +  
Microservices architecture +  
Multiple environments +  
Continuous delivery**

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**= 50 million deployments a year**



**Surprise #2:**

**DevOps Is As Good For Ops...  
...As It Is For Dev!**

***“As a lifelong Ops practitioner, I know we need DevOps to make our work humane.***

***In the past, I’ve worked every holiday, on my birthday, my spouse’s birthday, and even on the day my son was born.”***

**Nathan Shimek**  
**Engineering Manager, New Context**



# Developers Carry Pagers

“We found that when we woke up developers at 2am, defects got fixed faster than ever”

– Patrick Lightbody,  
VP Prod Mgmt, New Relic

“You build it, you run it.”

– Werner Vogels  
CTO, Amazon



***“As a developer, the most satisfying points in my career?”***

***“It’s when I wrote the code, pushed the button to deploy it, watched the metrics to see if it actually worked in production, and fixed it if it broke.”***

**Tim Tischler**  
**Director of Operations Engineering**  
**Nike, Inc.**



# Dev And Ops: We're Both Engineers

The top predictor of IT performance and organizational performance was...

...whether Ops put production artifacts into version control!

# DevOpsDays London 2016

## “Minimum Viable Platform”

by **Casey West** [@caseywest](#)

- Principal Technologist for [Cloud Foundry](#) Platform at [Pivotal](#)

presentation: [slides](#), [video](#)

# Minimum Viable Platform

- Dynamic DNS, routing and load balancing
- Backing services broker
- Infrastructure orchestration
- Health management, monitoring, and recovery
- Immutable artifact repository
- Log aggregation



# What's a platform?

Credit: Simon Wardley

