# the journey from devops to cloud engineering

...

Matty Stratton
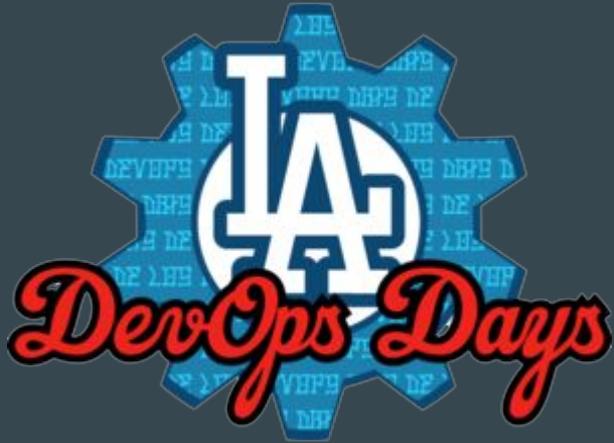
# let's start by looking back

A Practical Approach to **Large-Scale Agile Development**

How HP Transformed LaserJet FutureSmart Firmware

Gary Gruver · Mike Young · Pat Fulghum

Agile Software Development Series
Alistair Cockburn and Jim Highsmith, Series Editors

The Addison Wesley Signature Series

**CONTINUOUS DELIVERY**

RELIABLE SOFTWARE RELEASES THROUGH BUILD, TEST, AND DEPLOYMENT AUTOMATION

JEZ HUMBLE
DAVID FARLEY

Foreword by Martin Fowler

**wear a mask 雷启理**
@littleidea

Don't just say 'no', you aren't respecting other people's problems... #velocityconf #devops #workingtogether

3:32 PM · Jun 23, 2009 · Twitter Web Client

**8** Retweets **2** Quote Tweets **12** Likes

@mattstratton

#DevOpsDays

The conference that brings development and operations together.

Home   Contact   Events   Presentations   Blog

# Devopsdays Ghent 2009

welcome   program   reactions   speakers   participants

Tweets from devopsdays events

This is how the first devopsdays was announced:

The first devopsdays happened in Belgium - Ghent and was a great success. Have a look at the reactions is created and the presentations that were held. See you next time!

**Non-Functional Requirements: do user stories help?** [PDF][Video] Rachel Davies

**Cucumber-nagios** [slideshare][Video] **Flapjack … rethinking monitoring for the cloud** [slideshare][Video] Lindsay Holmwood

**Building Agile Infrastructures with Puppet** [PDF][Video] Teyo Tyree

**Introducing Kanban in operations** [PDF][Video] Mattias Skarin

**Continuous Integration, Pipelines and Deployment** [slideshare][Video] Chris Read

**A private openQRM Cloud use-case for a developer team … not only for sysadmins.** [ODP][PPT][Video] Matthias Rechenburg

devopsdays events
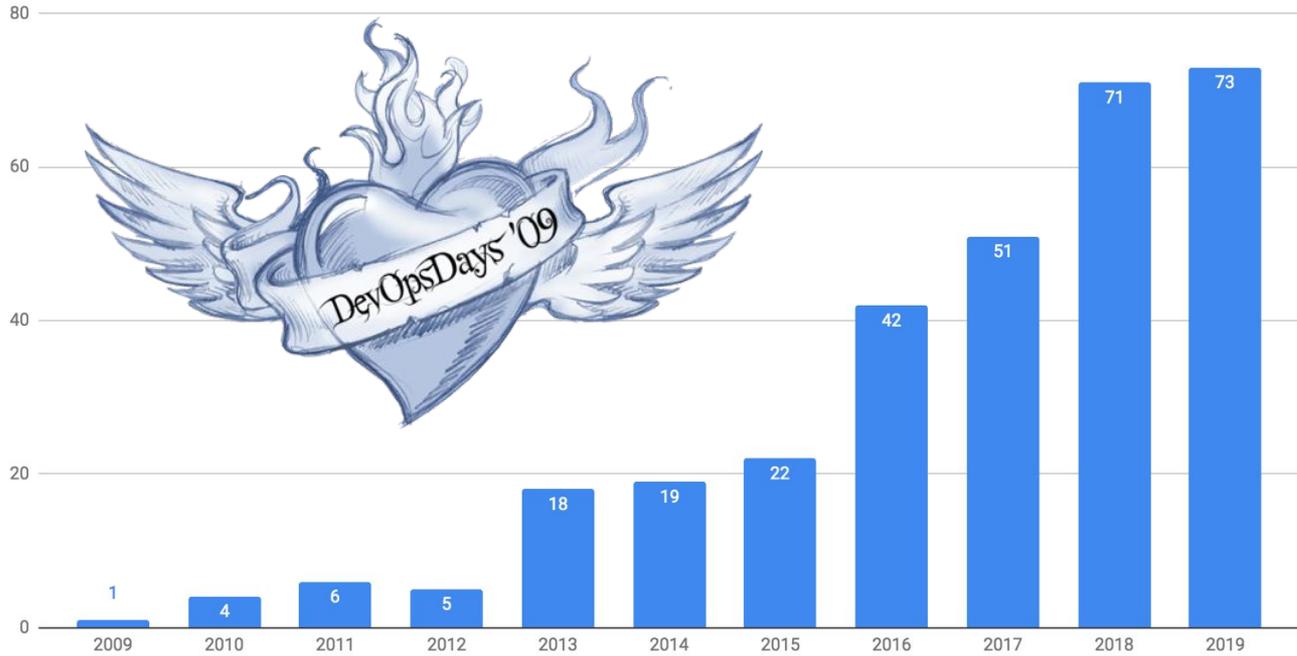
| Year | Events |
|------|--------|
| 2009 | 1 |
| 2010 | 4 |
| 2011 | 6 |
| 2012 | 5 |
| 2013 | 18 |
| 2014 | 19 |
| 2015 | 22 |
| 2016 | 42 |
| 2017 | 51 |
| 2018 | 71 |
| 2019 | 73 |

# Optimizing the human experience and performance of operating software with software and humans

Andrew Clay Shafer

An engineering culture of collaboration, ownership, and learning with the purpose of accelerating the software development life cycle from ideation to production.

Emily Freeman

**Khushil Dep**
@khushil
Follow

#DevOpsIsNot copy-pasting answers from #stackoverflow

ಠ_ಠ **DevOps**
@joshhertzse
Following

#devopsisnot a fullstack 10x rockstar engineer.

**Rachael**
@halfwrittentale
Follow

#DevOpsIsNot just developers being on call

**Rainbow DashOps**
@mattstratton

#DevOpsIsNot just reading The Phoenix Project

**Jason Walker**
@TheDesktophero
Following

#DevOpsIsNot about avoiding discipline and structure, or just about t-shirts & stickers

**James Hebden**
@james_hebden
Follow

#DevOpsIsNot your ▓▓▓▓▓ khakis.

@mattstratton                                                #DevOpsDays

# CALMS

# culture

You can't directly change culture. But you can change **behavior**, and behavior becomes culture

–Lloyd Taylor, VP Infrastructure, Ngmoco

# automation
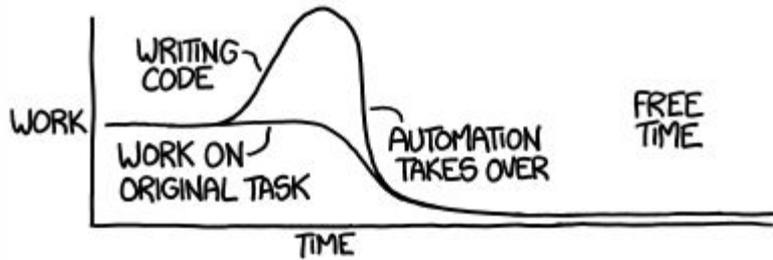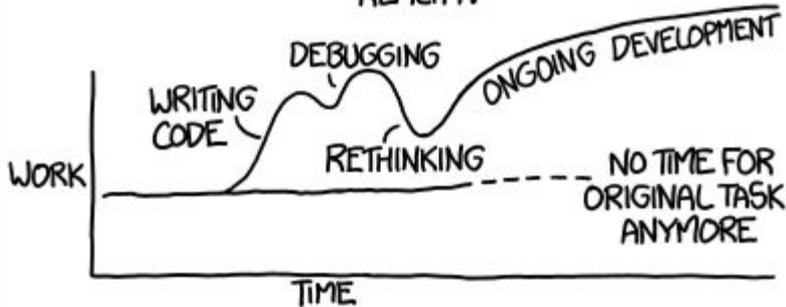
Asking experts to do boring and repetitive, and yet technically demanding tasks is the most certain way of ensuring human error, short of sleep deprivation, or inebriation.
— *Continuous Delivery*, Jez Humble and David Farley

# lean

@mattstratton

#DevOpsDays
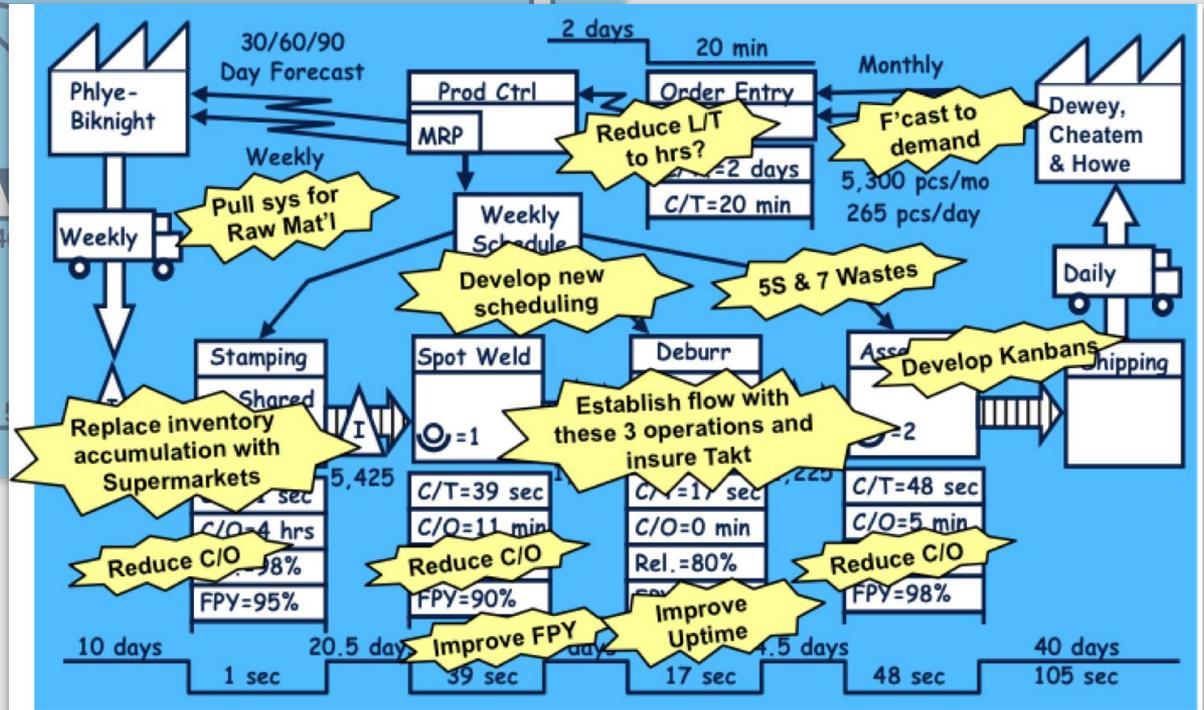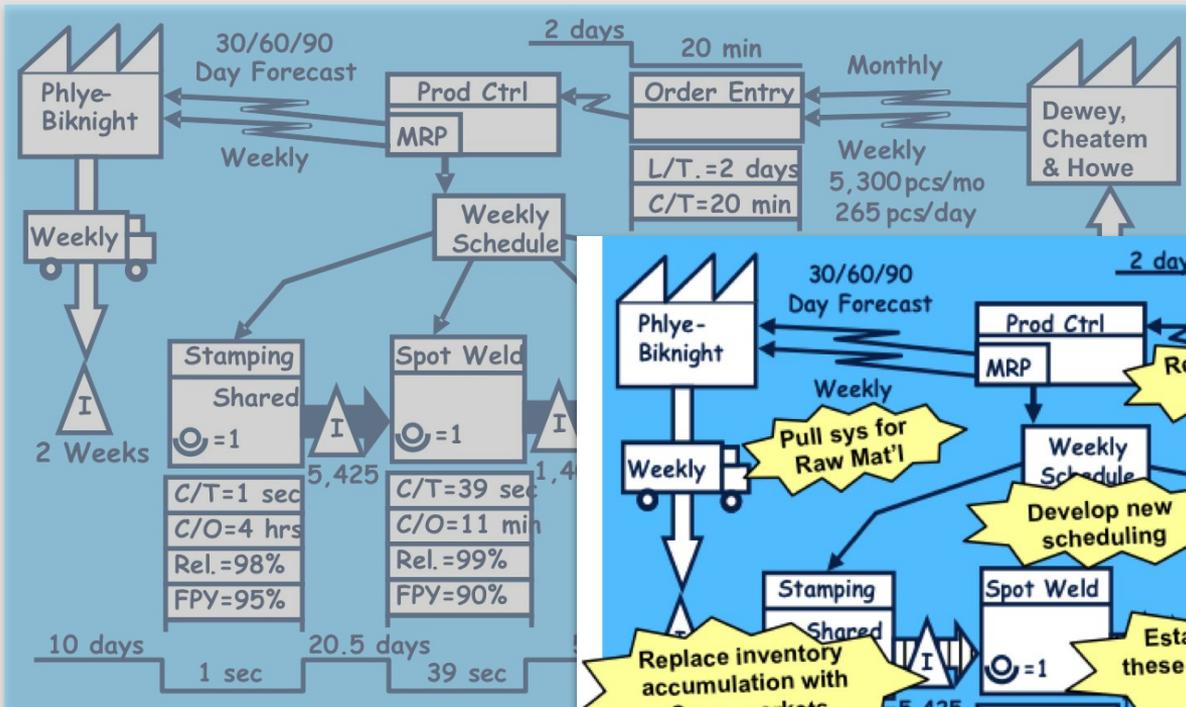
# measurement

# sharing

# but... what happened?

# it's all about automation?

# kubernetes will save us all

# "culture is for yoghurt"

# devops is being sold to you

"You can't buy devops, but I can definitely sell it to you"
– Matty Stratton, charismatic grifter

DevOps

BizDevOps

DevSecDE...

...sDevOps

...DevOps

DevSecOps

@mattstratton

#DevOpsDays

# words are hard

# don't worry

I have more words for you

# Cloud Engineering

Cloud Engineering employs standard **software engineering practices** and tools across infrastructure, application development, and compliance teams to **tame the complexity of the modern cloud**.

Cloud Resources → **Build** → Infra Platforms → **Deploy** → Cloud Applications → **Manage** → Policies
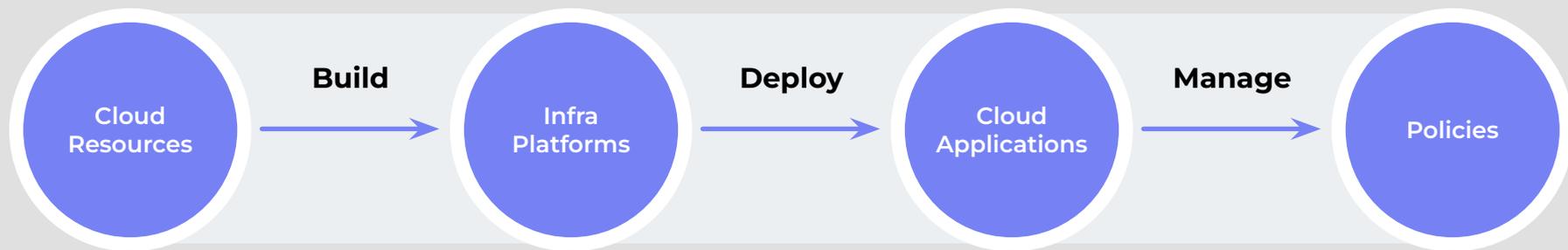
# build

# Build

★ Shared services platforms
★ Reusable infrastructure components
★ Apply existing frameworks and tools

# build + calms

# [build] culture

★ focus on differentiators

★ common development experience

★ drives empathy

___

# [build]
# automation

★ reusable components
★ leverage ecosystems
★ avoid bespoke implementation

———

# [build]
## lean

★ focus on value

★ drive efficiency

★ review for improvement

———

# [build] measurement

★ consistency breeds visibility

___

# [build]
# sharing

★ reusable components
★ ecosystem promotes outside sharing
★ learn from existing practices

___

# deploy

# Deploy
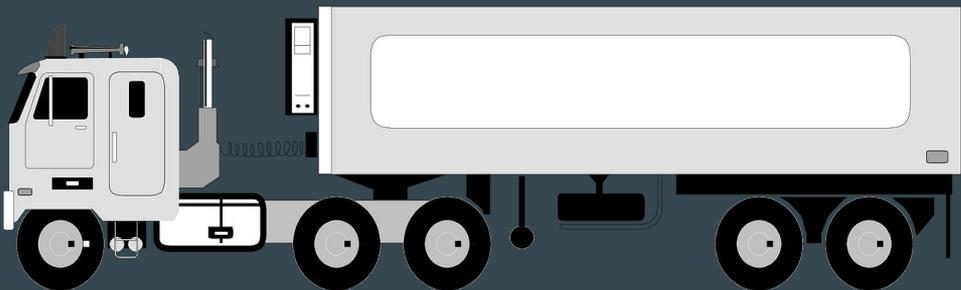


- ★ The same way, every time
- ★ I mean, *every* time
- ★ Quality and security checks
- ★ Automate checklists!
- ★ Infrastructure is part of the application

# deploy + calms

# [deploy]
# culture

★ "it doesn't count until it's in prod"

★ iterative development

★ enables continuous improvement

___

# [deploy] automation

★ CI/CD pipelines

★ automated checks

★ checklists are great!

let's automate them

____

# [deploy]
# lean

★ enables fast feedback

★ visibility into the supply chain

★ identify bottlenecks

___

# [deploy] measurement

★ visibility again

★ measure cycle time

★ it's not just speed

# [deploy] sharing

★ look, more visibility
★ common pipeline means less duplicate work
★ everyone knows "what changed?"

___

# manage

# Manage
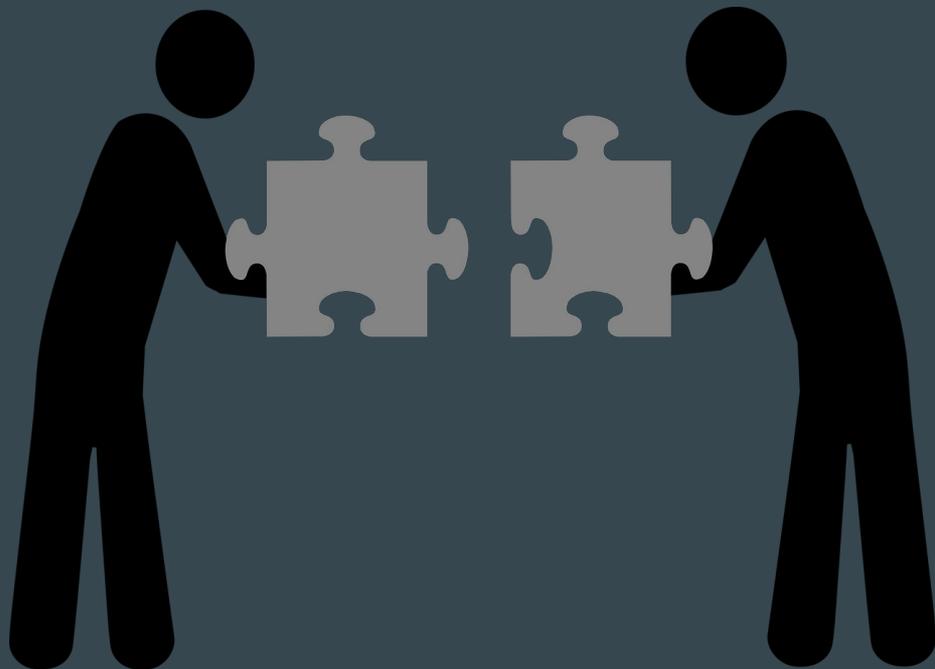
- ★ Visibility
- ★ Security is everyone's job
- ★ Common "vocabulary"
- ★ Controls and process that enable and enhance

# manage + calms

# [manage] culture

★ collaboration enabled through common code

★ guardrails enable confidence

★ increase common understanding across disciplines
___

# [manage] automation

★ computers can't lie
★ trust of process/checks
★ policy goes from vague to understandable

___

# [manage]
# lean

★ determine improvements for safety

★ express value stream changes in code

———

# [manage] measurement

★ visibility into current policy

★ view of current state of compliance

★ identify when policy and value collide

___

# [manage] sharing

★ shared vocabulary

★ utilize success patterns

★ share learning

___

# let's take devops back

# Thank You



Twitter - @mattstratton

GitHub - mattstratton

Slides - speaking.mattstratton.com

LinkedIn - linkedin.com/in/mattstratton

Podcast - ArrestedDevOps.com

DevOps Party Games - devopspartygames.com