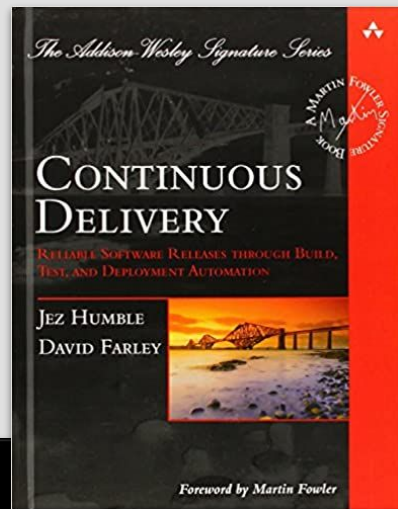
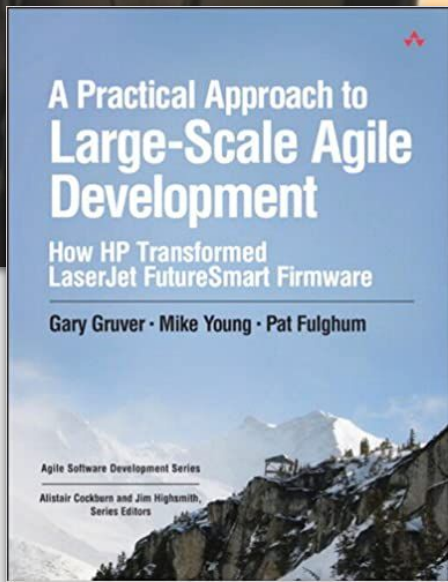


# the journey from devops to cloud engineering

...

Matt Stratton  
Staff Developer Advocate, Pulumi

# let's start by looking back





The conference that brings development and operations together.



Home



Contact



Events



Presentations



Blog

## Devopsdays Ghent 2009



welcome program reactions speakers participants

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!

[Tweets from devopsdays events](#)

**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](#)

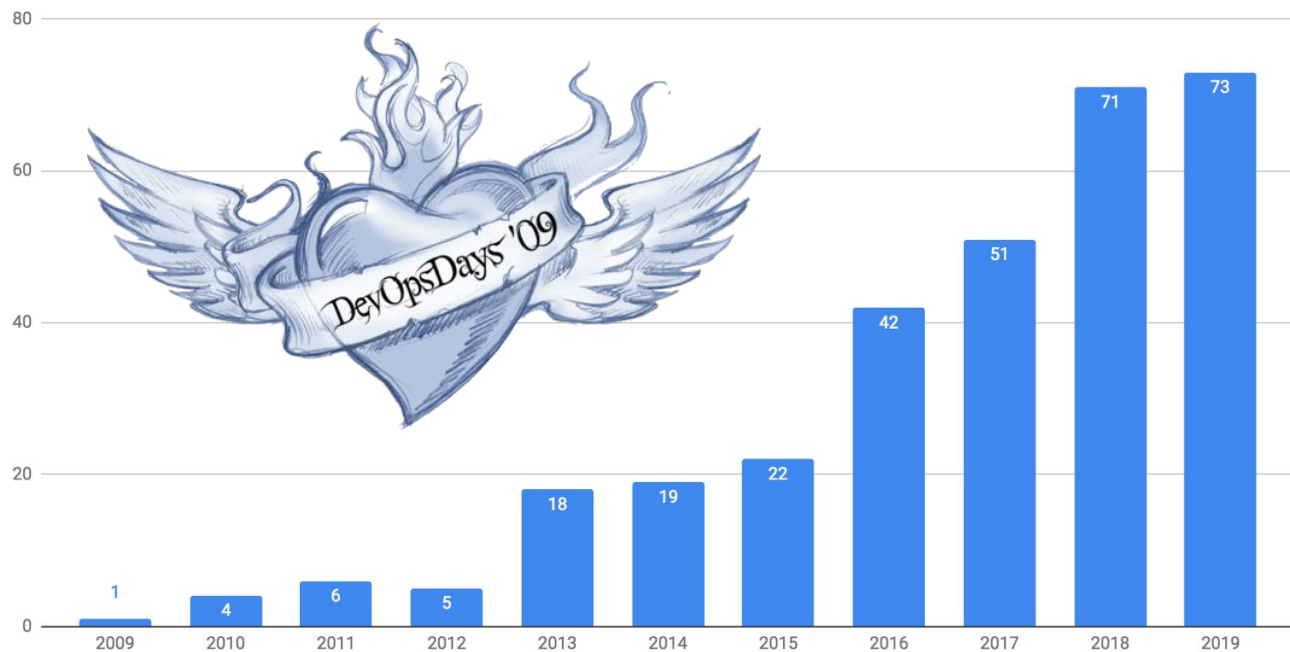
**Building Agile Infrastructures with Puppet** [\[PDF\]](#)[\[Video\]](#) [Teyo Tyree](#)

**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



What is DevOps?



DevOps is the union of people,  
process, and products to  
enable continuous delivery of  
value to our end users

Donovan Brown

What is DevOps?



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

Andrew Clay Shafer



**Khushil Dep**  
@khushil



Follow

#DevOpsIsNot copy-pasting answers from  
#stackoverflow



**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 [redacted] khakis.

@mattstratton

#serverlessdays



# CALMS

# culture

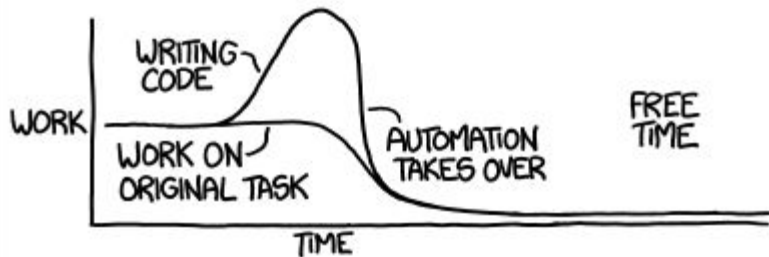
You can't directly change  
culture. But you can change  
**behavior**, and behavior  
becomes culture

—Lloyd Taylor, VP Infrastructure, Ngmoco

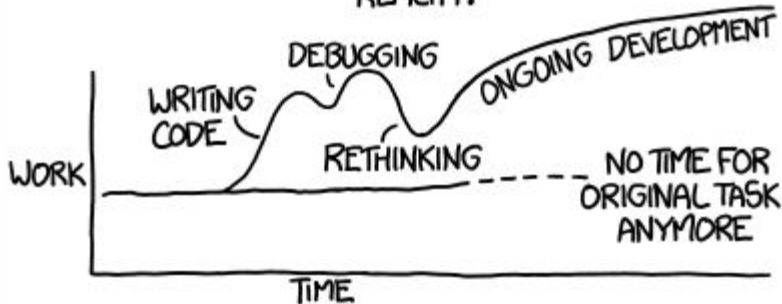
# automation

"I SPEND A LOT OF TIME ON THIS TASK.  
I SHOULD WRITE A PROGRAM AUTOMATING IT!"

THEORY:

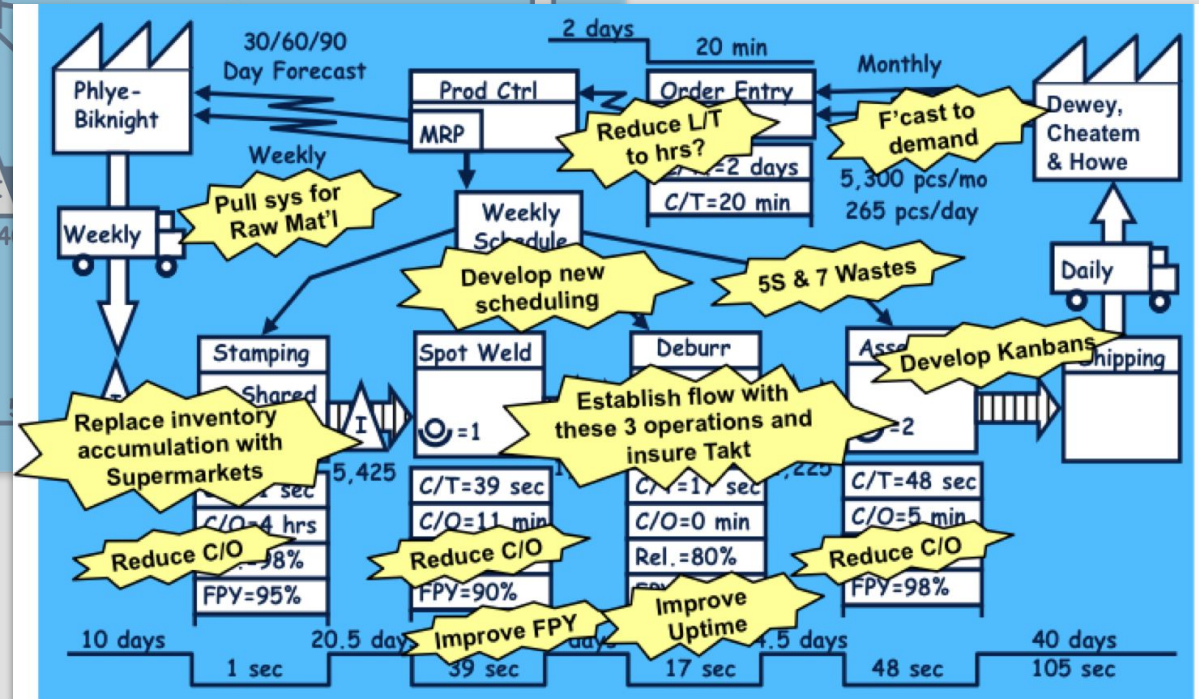
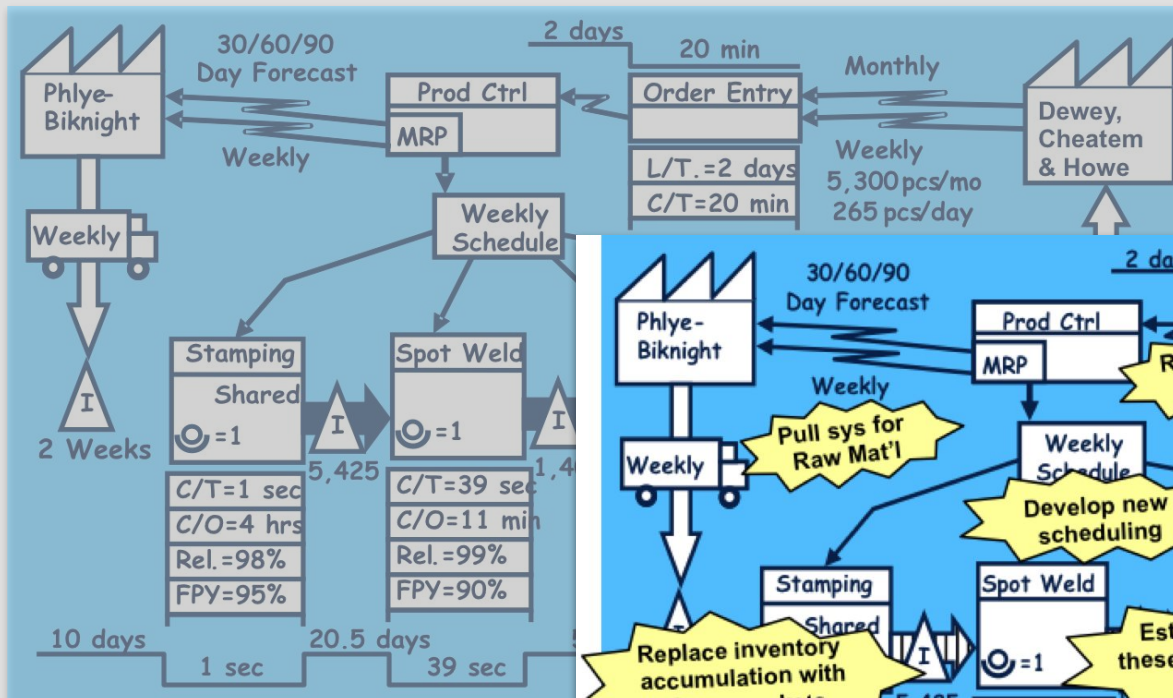


REALITY:



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



# 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

DevSecOps

sDevOps

DevOps



# words are hard

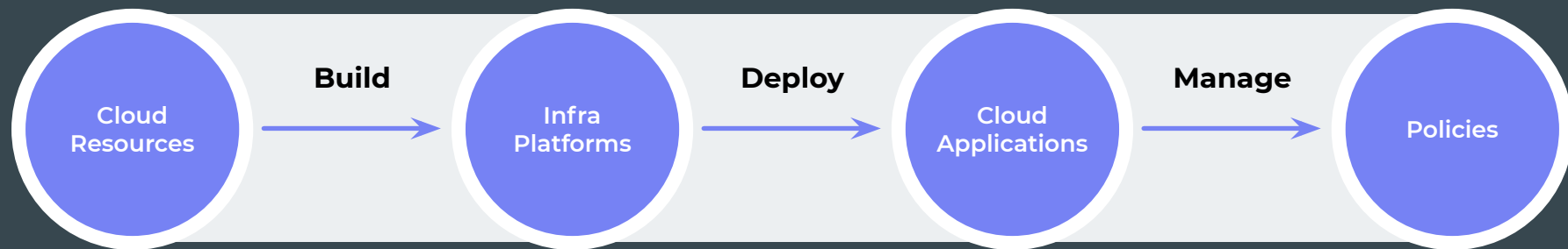


# don't worry

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.**



# 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

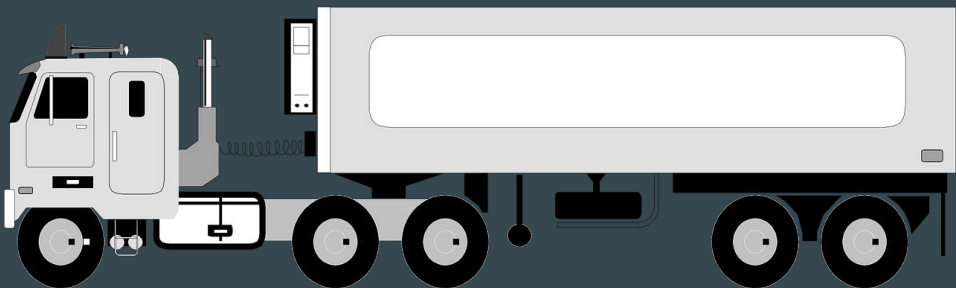
★ consistency breeds  
visibility

# 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

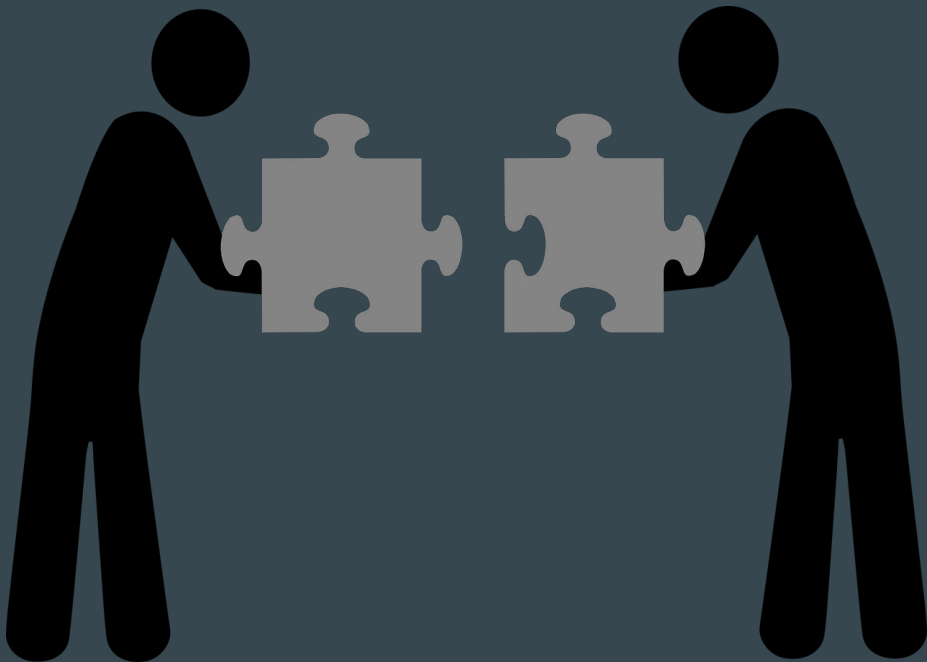
- ★ visibility again
- ★ measure cycle time
- ★ it's not just speed

# 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](https://twitter.com/mattstratton)

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Slides - [speaking.mattstratton.com](https://speaking.mattstratton.com)

LinkedIn - [linkedin.com/in/mattstratton](https://linkedin.com/in/mattstratton)

Podcast - [ArrestedDevOps.com](https://ArrestedDevOps.com)

DevOps Party Games - [devopspartygames.com](https://devopspartygames.com)

CNCFaceOff - [cncfaceoff.tv/readme](https://cncfaceoff.tv/readme)