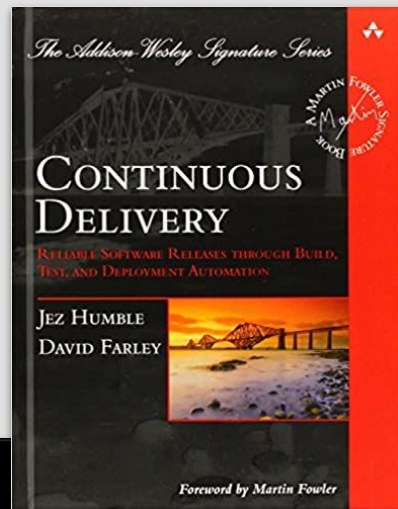
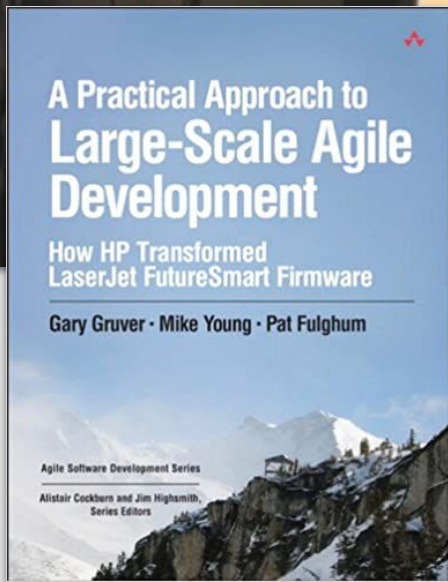


the journey from devops to cloud engineering



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

[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](#)

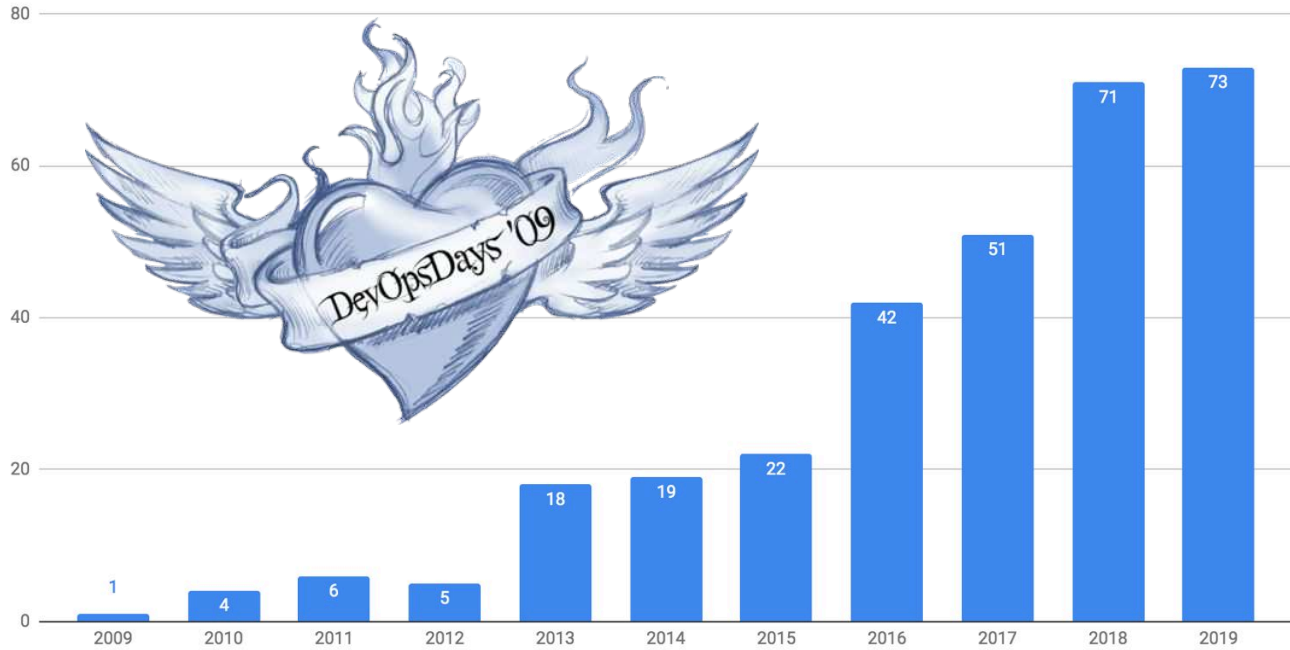
Building Agile Infrastructures with Puppet [\[PDF\]](#)[\[Video\]](#) [Teyo Tyree](#)

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



What is DevOps?



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

Donovan Brown

@mattstratton

 Pulumi

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
@joshhertze



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.

CALMS

culture

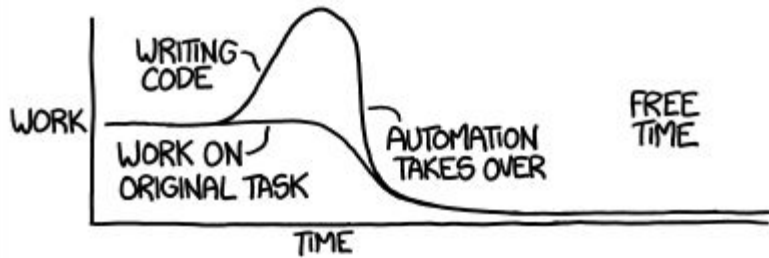
You can't directly change
culture. But you can change
behavior, and behavior
becomes culture

–Lloyd Taylor, VP Infrastructure, Ngmoco

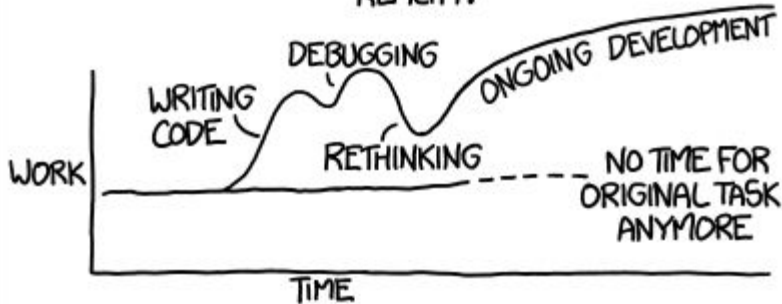
automation

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

THEORY:

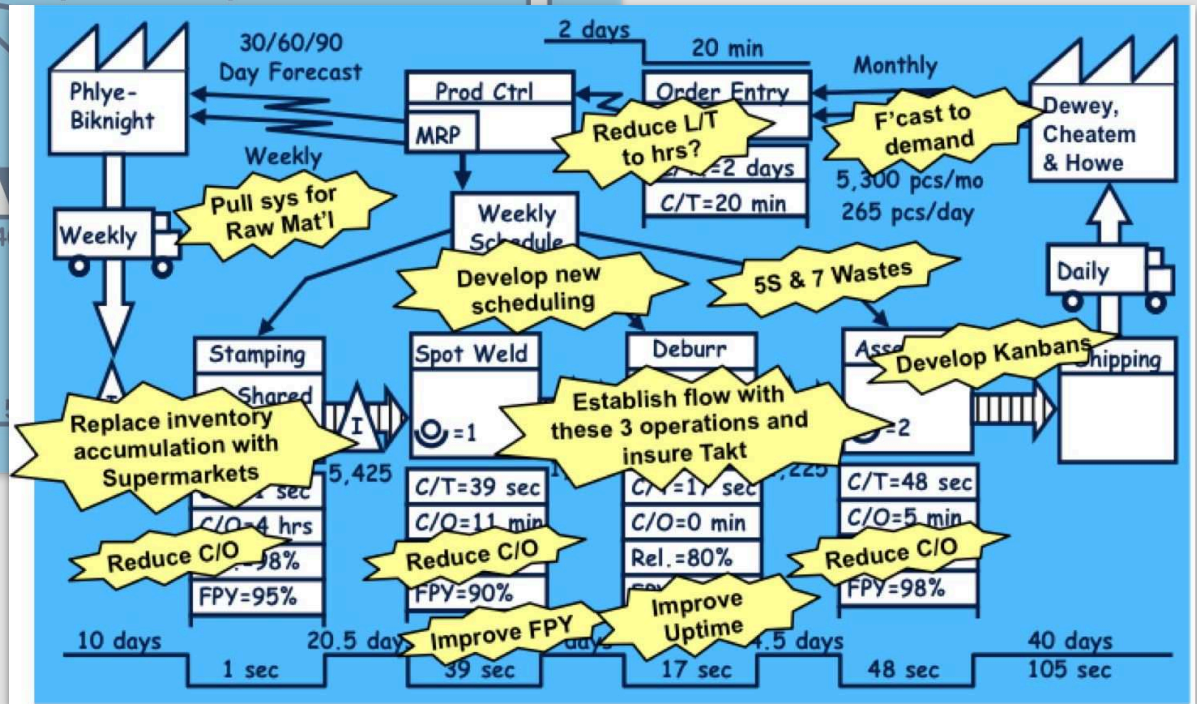
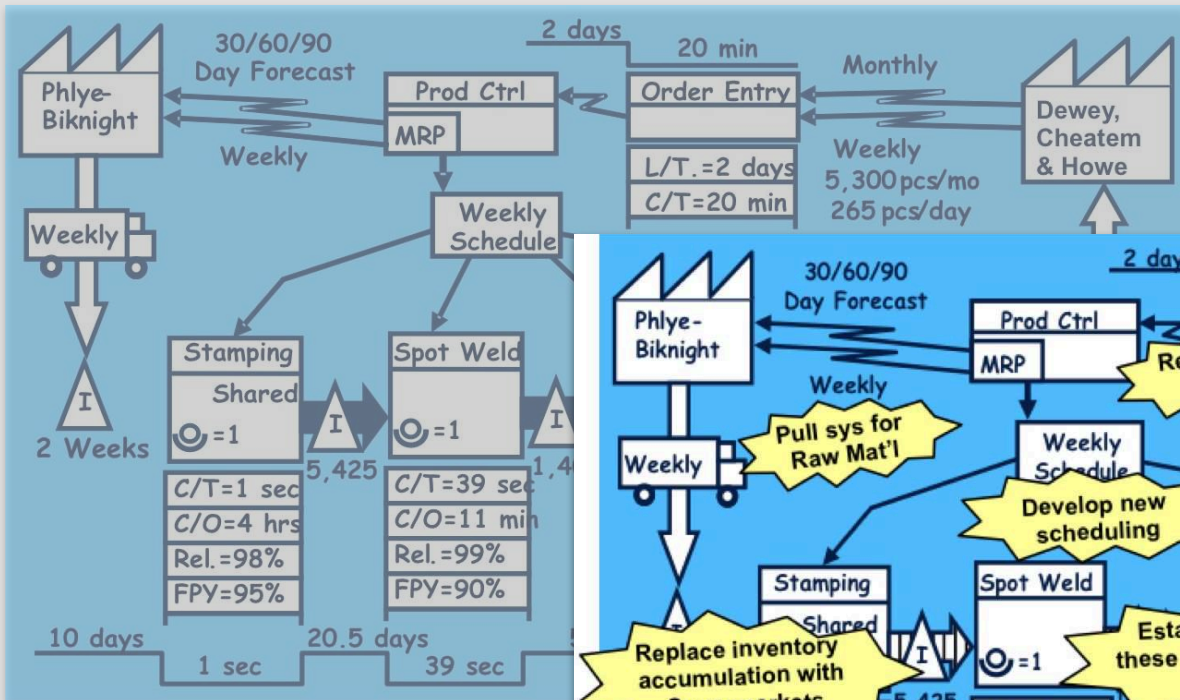


REALITY:



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

OpsDevOps

BizDevOps

DevOps

DevSecDE

DevSecOps



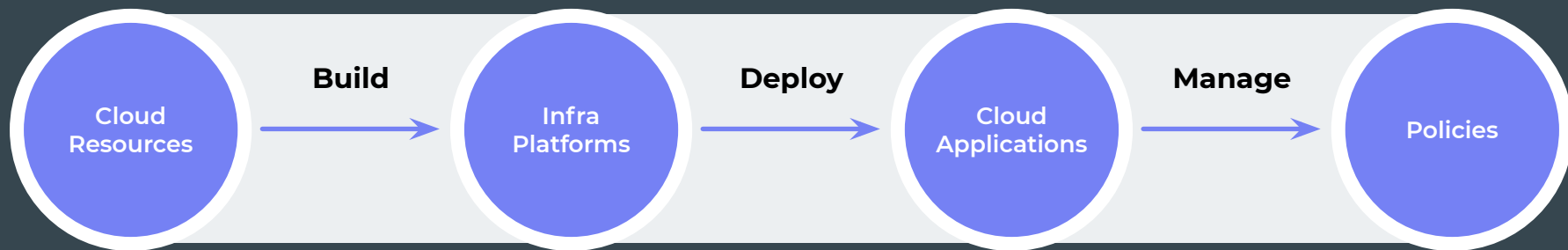
words are hard

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

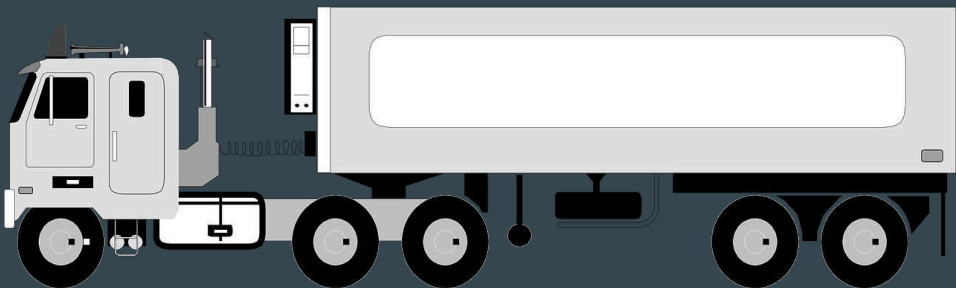
★ consistency breeds
visibility

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

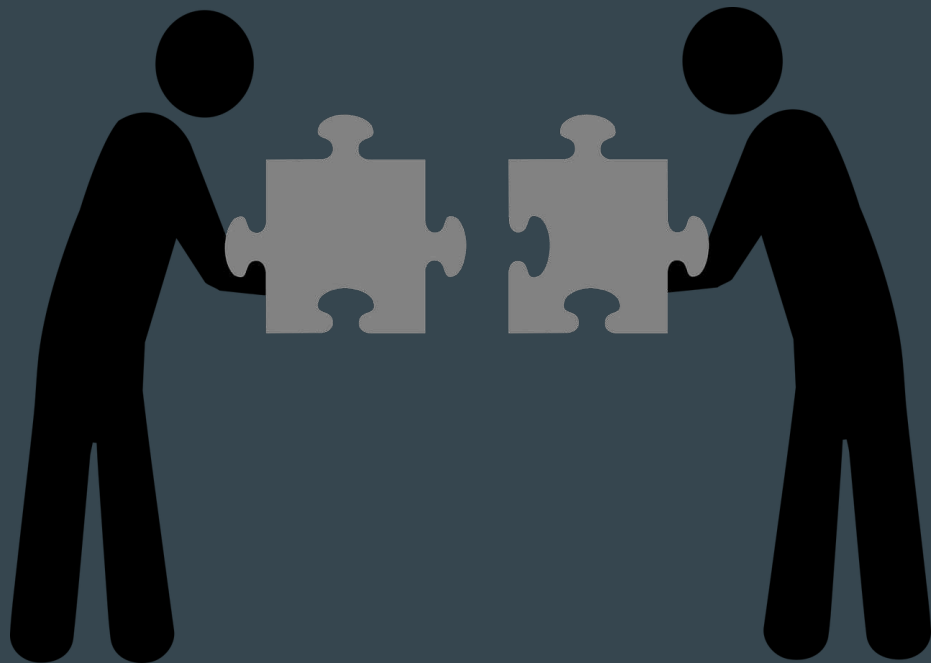
- ★ visibility again
- ★ measure cycle time
- ★ it's not just speed

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)

GitHub - [mattstratton](https://github.com/mattstratton)

Slides - speaking.mattstratton.com

LinkedIn - linkedin.com/in/mattstratton

Podcast - ArrestedDevOps.com

DevOps Party Games - devopspartygames.com