

The Start-Up In Your Enterprise

Our Story of Disruption

Chris Jackson

July 2016



Me



My Work

Established in 1844

Adaption is in Our History

Inspiring Mission

Passionate People

From ISBN to FQDN

Embrace the Challenge!



Pearson

Organisational Context

CIO/COO/CTO

Technology
Operations

Global Product

...

OPERATIONS

NETWORK

NEW: CLOUD PRODUCT ENGINEERING

DEVELOPMENT
PRODUCT DESIGN

SECURITY

QA

EA

A Brief History...

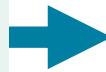
- Internal IT bureaucratic and slow to deliver
- Lack of standards in application design and build
- Spotty adoption of QA and Security standards
- Release process is manual, slow and high-risk
- Absence of collaboration between engineering and ops
- Roadmap planning horizon is 3-years out

A perfect storm is brewing...



Our Inception Point

- On the precipice of perpetually failing
- Previous initiatives were huge programs
- Developers running their own tooling
- Business headwinds increasing
- New leadership
- End to end review of tech strategy



- Appetite to do something different

Introducing Project Bitesize...

Bitesize - Born Different

Source

The screenshot shows a GitHub commit page for the file `codeofconduct.md` in the `bitesize` repository. The commit is identified by the ID `30620c1` and was made on `2016-04-22` by `Chris Jackson` at `2015-09-08`. The commit message is `Code of Conduct added`. The commit details the purpose of the code of conduct, outlines the manifesto's beliefs, and states the adherence policy.

Commit Details:

- Author:** Chris Jackson
- Date:** 2015-09-08
- Message:** Code of Conduct added

Commit Content:

Bitesize is designed to be different. At Pearson, we are challenging ourselves not just with new technology but also new ways of working. In order to do that we need to be very clear about the expectations we have of each other in the way we collaborate, communicate and engage.

This Manifesto outlines a set of beliefs that you agree to respect and adhere to during your work on this project. By signing this Manifesto, you recognise that by agreeing to this you will:

- Hold others accountable for respecting this agreement
- Be held accountable by others if they feel you are not respecting the code of conduct
- Uphold Pearson's values of Bravery, Decency and Imagination outlined [here](#) at all times
- Be excellent to each other

Adherence to this code of conduct is voluntary and there are no formal or informal disciplinary proceedings if you do not follow it, we trust in the decency and common sense of our people. However, in order to succeed where other initiatives have failed we do need to understand that how we work together is the #1 indicator of success for the project. If we fall into old working habits let existing silos of knowledge influence our approach we will not deliver on the potential of what this technology can enable and we will join the list of good ideas which failed to deliver.

Bitesize - Our Start-Up Story



FOUNDED

VC ONBOARDED

(Selected as Preferred Platform)

A-SERIES FUNDING

Aug'15

Oct'15

Dec'15

Feb'16

Apr'16

Jun'16

Sep'15

Nov'15

Jan'16

Mar'16

May'16

CUSTOMER #1

CUSTOMERS #2,3,4

PRODUCTION!



UEFA EURO

RESPECT

How
Hard Can
This Be?

PROBLEM #1

Fixing DevOps

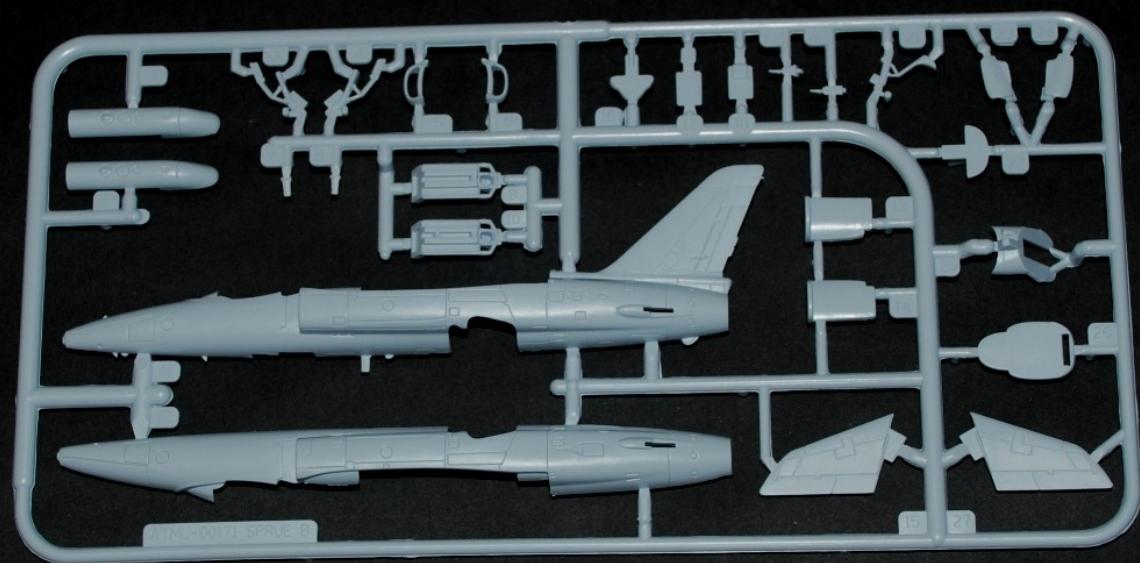


“We don’t need Ops, we already have a DevOps team with Jenkins”

PROBLEM #2

What Is the Product?

Understanding what Developers want...

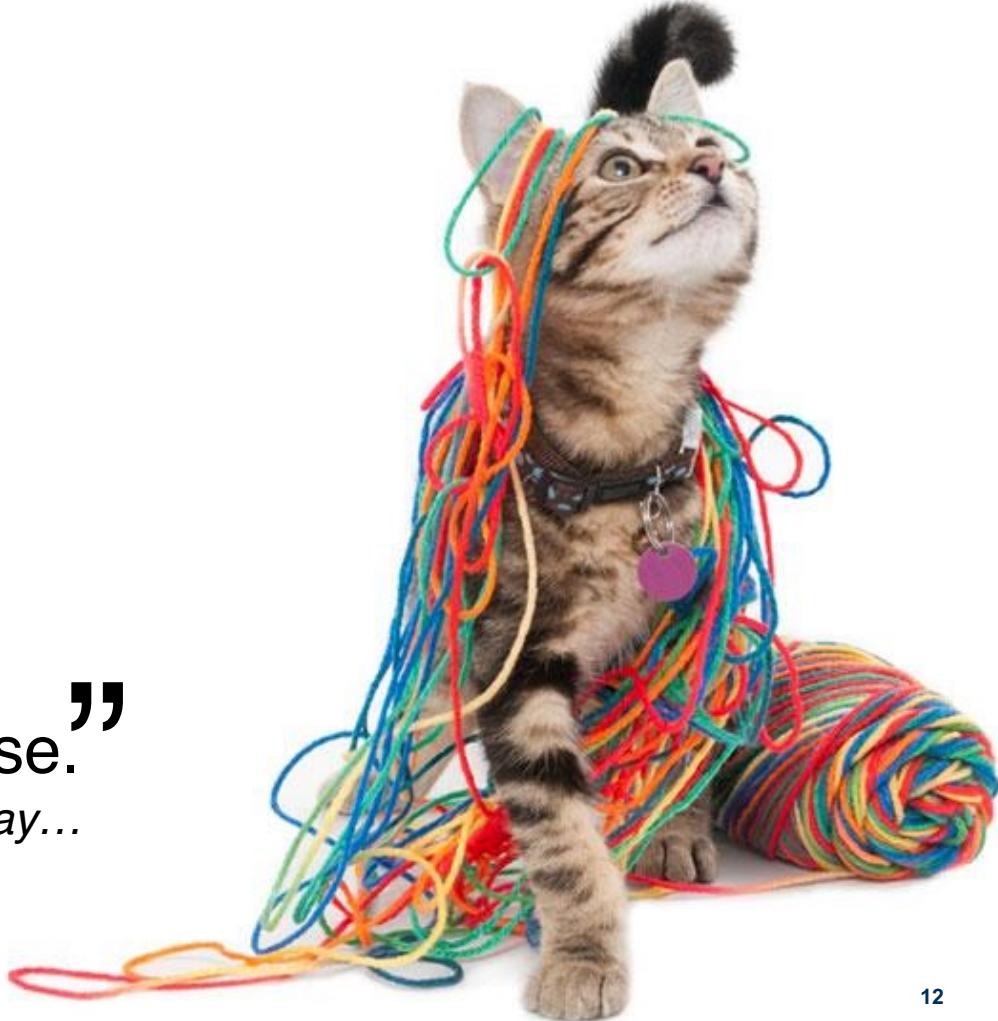


PROBLEM #3

Governance

“ Governance is what prevails when there is a vacuum of common sense.”

Me, every day...



So What Did We Do?



CGM

ECMU 443066 10
42G1

CMA CGM

MAX. GROSS 30,480 KG
67,200 LB
TARE 3,720 KG
8,200 LB

NET 26,760 KG
59,000 LB
CU. CAP. 67.7 CU. M
2,390 CU.FT

CMAU 807128 4
42G1

CMA CGM

MAX. GROSS 32,500 KG
71,650 LB
TARE 3,120 KG
6,200 LB

NET 28,780 KG
63,450 LB
CU. CAP. 67.7 CU. M
2,390 CU.FT

42G1

MAX. GROSS 32,500 KG
71,650 LB
TARE 3,680 KG
8,110 LB

NET 28,820 KG
63,540 LB
CU. CAP. 67.7 CU. M
2,390 CU.FT

TON
INTERNATIONAL
UNITEDTRIU
US 562521 0
4310

X.GROSS 30,480 KGS
67,200 LBS
TARE 3,720 KGS
8,200 LBS
PAYLOAD 26,760 KGS
59,000 LBS
CU.B.CAP. 67.66 CU.M
2,389 Cu.Ft

tex.

TEXU 722587 8
42G1

MAX. WT. 30,480 KGS
67,200 LBS
TARE WT. 3,635 KGS
8,014 LBS
PAYLOAD 26,845 KGS
59,186 LBS
CU. CAP. 67.34 CU.M.
2,311 CU.FT

CAPITAL

CLHU

Open Source at Pearson

Education
Sharing Information

Knowledge

Open Source
Sharing Code

[Python Client](#)

mward29 / [python-k8sclient](#)

Code

Issues 0

Pull requests 0

Wiki

CodeGen generated Python Client for Kubernetes v1

9 commits

1 bra

Branch: master ▾

New pull request

New file |

[Kubernetes Pack](#)

StackStorm / [st2contrib](#)

Code

Issues 14

Pull requests 16

Pulse

History for [st2contrib](#) / [packs](#) / [kubernetes](#) / [actions](#)

Commits on Feb 17, 2016



Initial cleanup commit

lakshmi-kannan committed 9 days ago

Commits on Feb 16, 2016

[Ingress Controller](#)

geriBatai / [contrib](#)

forked from kubernetes/contrib

Code

Pull requests 0

Wiki

Pulse

Graphs

History for [contrib](#) / [Ingress](#) / [controllers](#) / [nginx-alpha](#) / [controller.go](#)

Commits on Dec 2, 2015



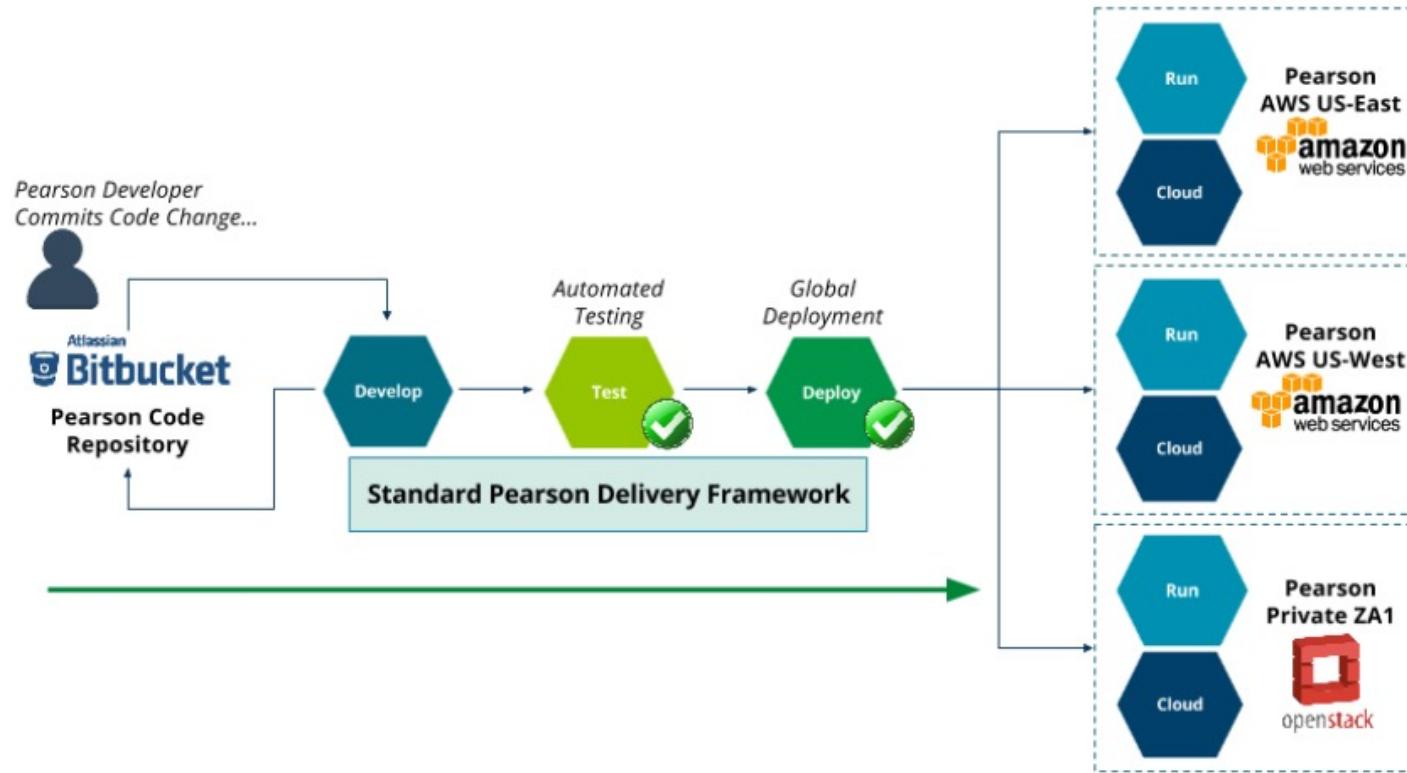
Pass Host header in nginx-alpha Ingress controller
aledbf committed on Dec 2, 2015

Commits on Nov 18, 2015



Enable cross-namespace ingress.
kraneur committed on Nov 18, 2015

Marketing Slide...



Accidentally #serverless



Developers
“I need a...”
“I want to...”

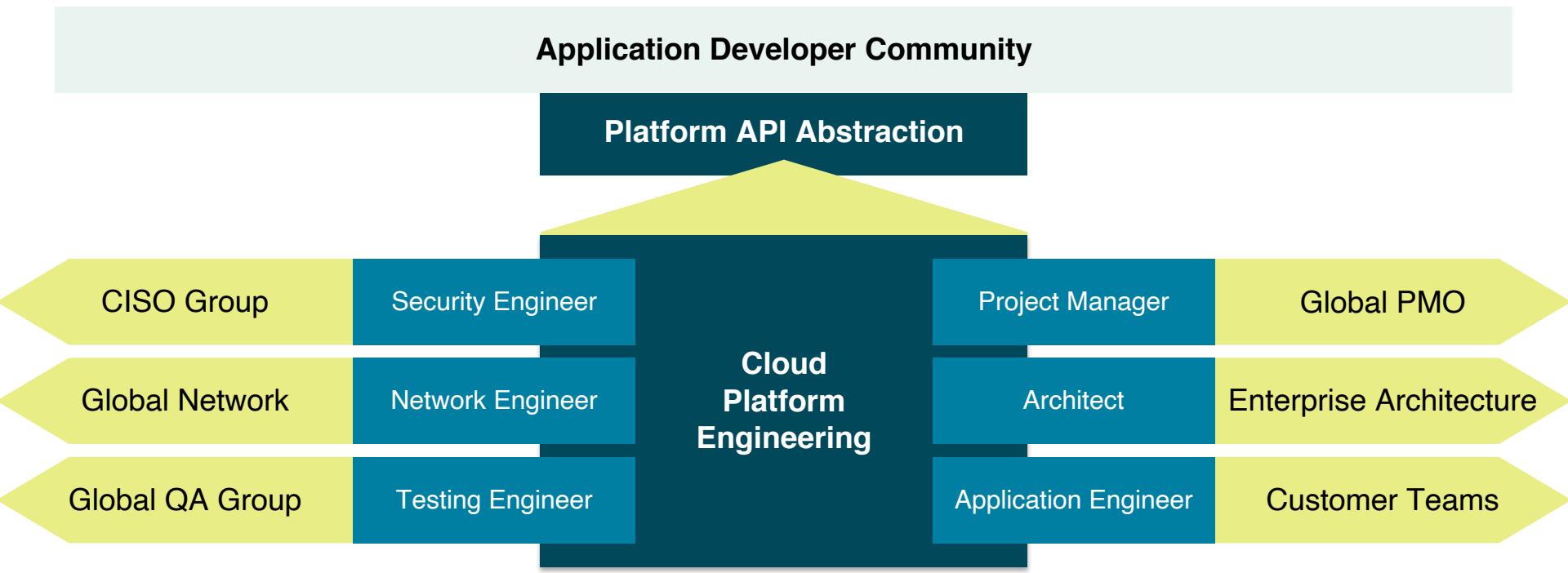
Developer Tooling
Interfaces/Plugins...

Platform API

Platform Tooling & Automation

Global Enabling Functions (TechOps, Security, QA...)
Human feedback loops, reinforce system trust model

A Vehicle for Enabling Functions



DevOps Target For

Global Technical Community

Community Engagement

Developer Experience

Best Practice
and Standards
Initiatives

New
Technology
Adoption &
Integration

Hackathons,
Brown Bags and
Meetups

“Do we already
have a ... I can
contribute to”

Next-Generation Application Platform

If This... Then That - The New Operations

Stuff People Care About

Things that Happen

Desired Response

“A synthetic transaction is failing”

Re-spawn pods, notify owners

“I want to deploy my application”

Execute deployment process

“Our A/B soak completed successfully”
...

Converge all production instances to B deployment
...

Trigger Systems

Workflows

Stuff People Concentrate On

Mechanism to Execute



Long Term Vision

Trigger Systems

Log Analytics, Monitoring, SOC...

Operational Run Books

Codified and On-Demand

Cognitive Learning &
Decision Making Systems
(e.g. Watson)

Service/App Metadata

Service Registry/Discovery

A Sentient Managed Service..?

A silhouette photograph of two people climbing a rocky mountain peak against a bright, cloudy sky. One person is on the ground reaching up, and another is on the rock face above, extending a hand to help. The scene symbolizes teamwork and support.

**WHERE WE
NEED HELP**

Areas for Breakout Discussion

- How does our Startup manage “hyper-growth”?
- When does DevOps it stop being DevOps?
- How do we recognise productivity gains vs cost savings?
- Skill transformation, how do we engage Pearson’s veterans?
- Setting the maturity bar, how do we qualify Platform suitability?

Get Involved?



<https://github.com/orgs/pearsontechnology/>

More coming soon...!



@chriswiggy

We're hiring... <http://pearson-technology.jobs/>

ALWAYS LEARNING