



Pivotal

# BRIDGING INTO A DIGITAL FUTURE

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# WE BELIEVE

Transforming how the world builds software  
will shape the future.

Then

Now





Pivotal

# From idea to production: 6-9 months

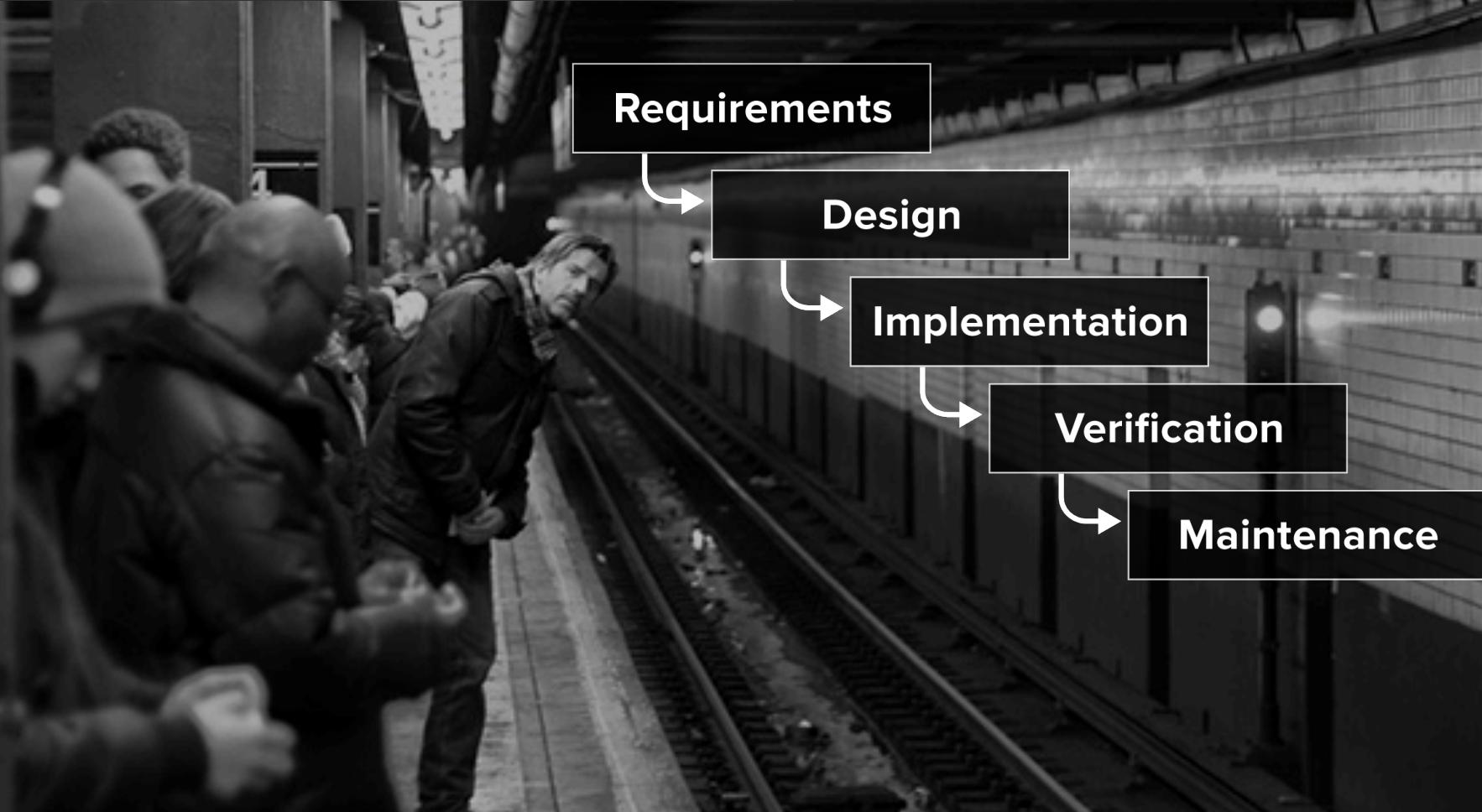
Requirements

Design

Implementation

Verification

Maintenance



An idea in the morning, is running in production by evening



# Speed

Boldility  
Modern  
Software

# Software is changing INDUSTRIES



Square

**\$6BN**

Financial Services

**NETFLIX**

**\$53BN**

Entertainment



**\$26BN**

Hotel

**T E S L A**

**\$34BN**

Automotive



U B E R

**\$50BN**

Transportation

**nest**

**\$3.2BN**

Industrial Products

# The enterprise REVOLUTION



\$138BN



\$34BN



\$108BN



\$62BN



\$145BN



\$23BN

# The enterprise REVOLUTION



700+ apps



Re-writing software  
the modern way



DevOps adoption with PCF  
Automated build pipeline



Spring + PCF

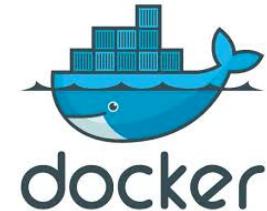


Agile software  
transformation



Major IT  
transformation

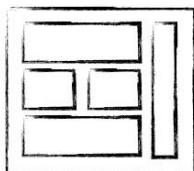
# Software is CHANGING



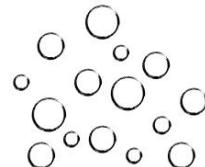
Continuous Delivery



kubernetes  
by Google



MONOLITHIC/LAYERED



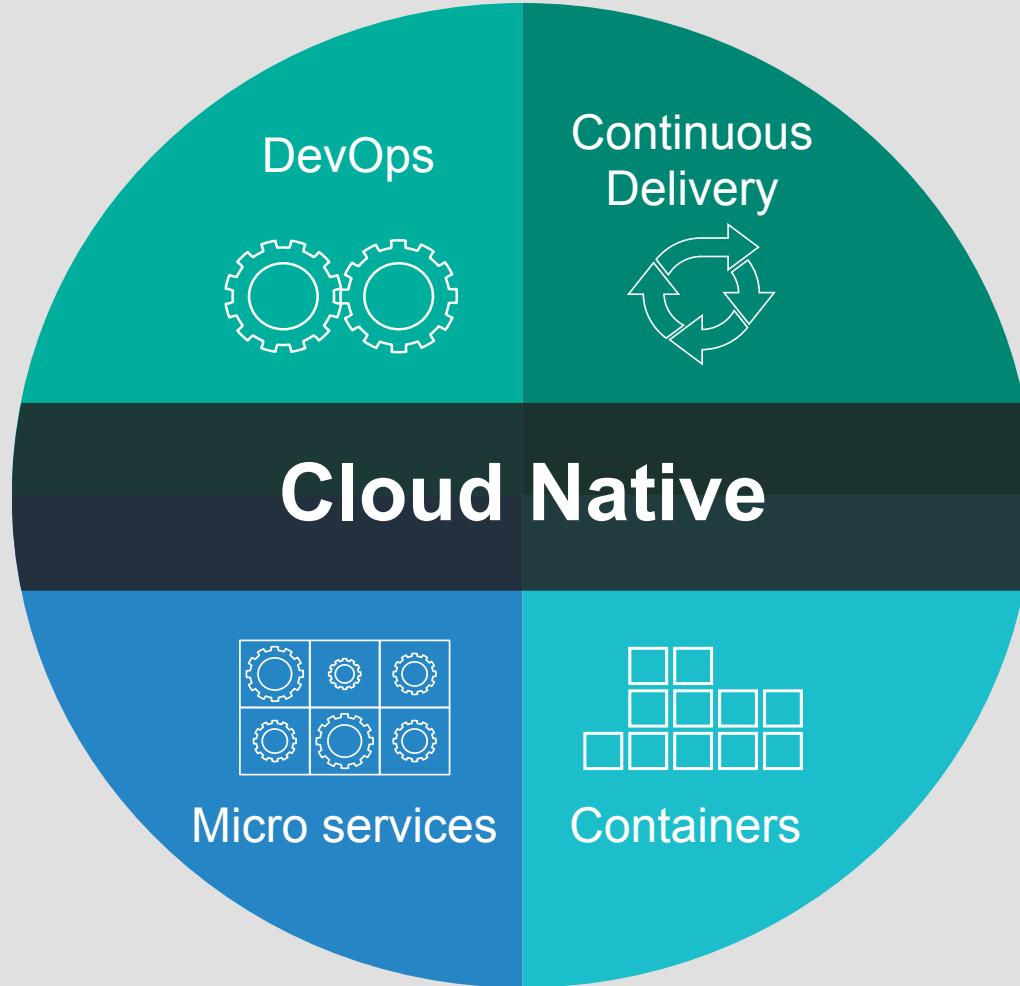
MICRO SERVICES



Spring Boot



Pivotal



# Becoming Cloud Native

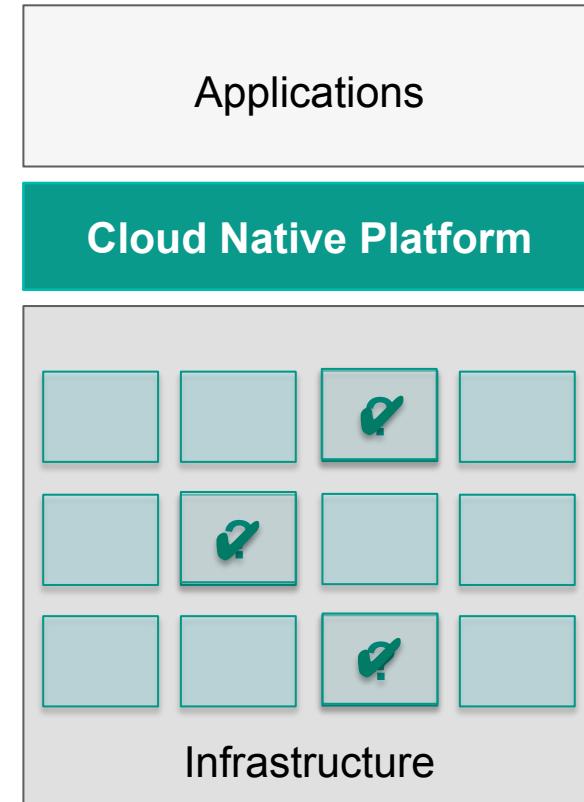
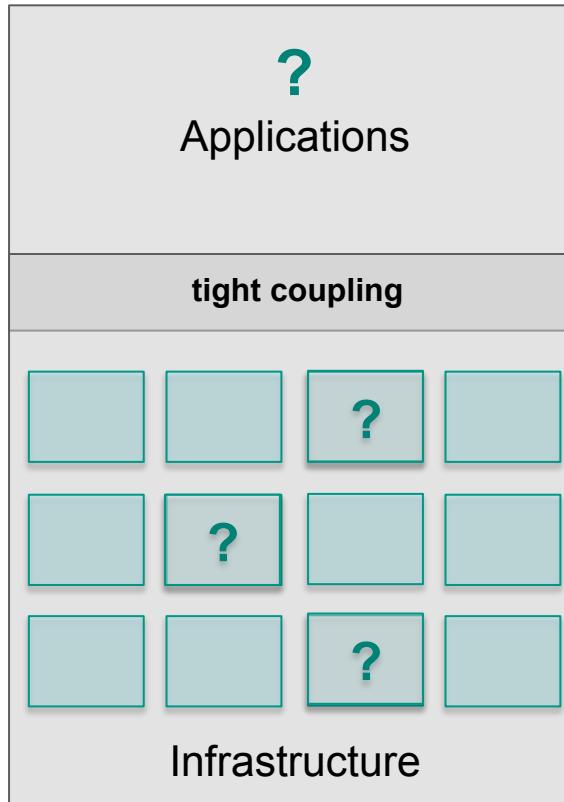
# Then

assume **reliable** infrastructure  
release code **every 3 months**  
works in **my** environment  
**tightly** coupled

# Now

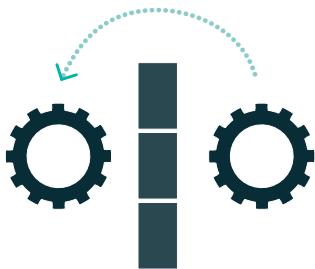
assume **fragile** infrastructure  
release code **early and often**  
**shared** Dev & Ops responsibility  
**loosely** coupled

# Assume FRAGILE infrastructure

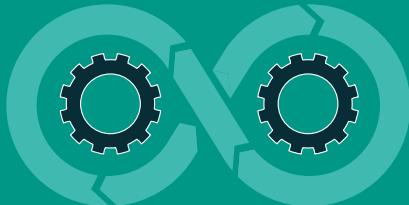


# DevOps

**Not my problem**  
Separate tools, varied incentives,  
opaque process



**Shared responsibility**  
Common incentives, tools, process  
and culture

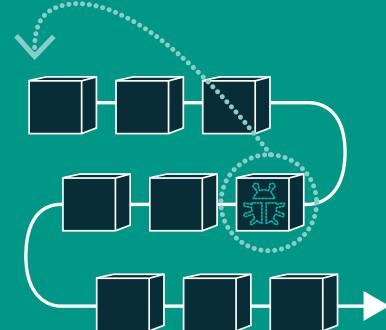


# Continuous Delivery

**Release once every 6 months**  
More Bugs in production

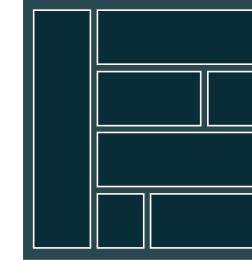


**Release early and often**  
Higher Quality of Code

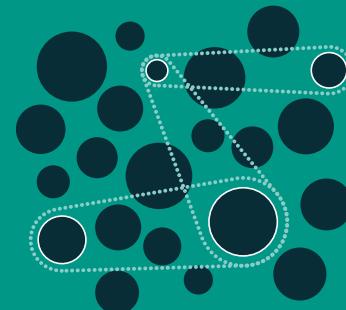


# Microservices

**Tightly coupled components**  
Slow deployment cycles waiting on  
integrated tests teams



**Loosely coupled components**  
Automated deploy without waiting on  
individual components



## Culture



Dev



Dev



IT Ops



IT Ops



IT Ops

## Cloud Native Framework

Application Framework



Spring Cloud



Spring Boot

Runtime Platform



Cloud Foundry



BOSH

Infrastructure Automation



AWS



VMWare



Azure



OpenStack

Infrastructure

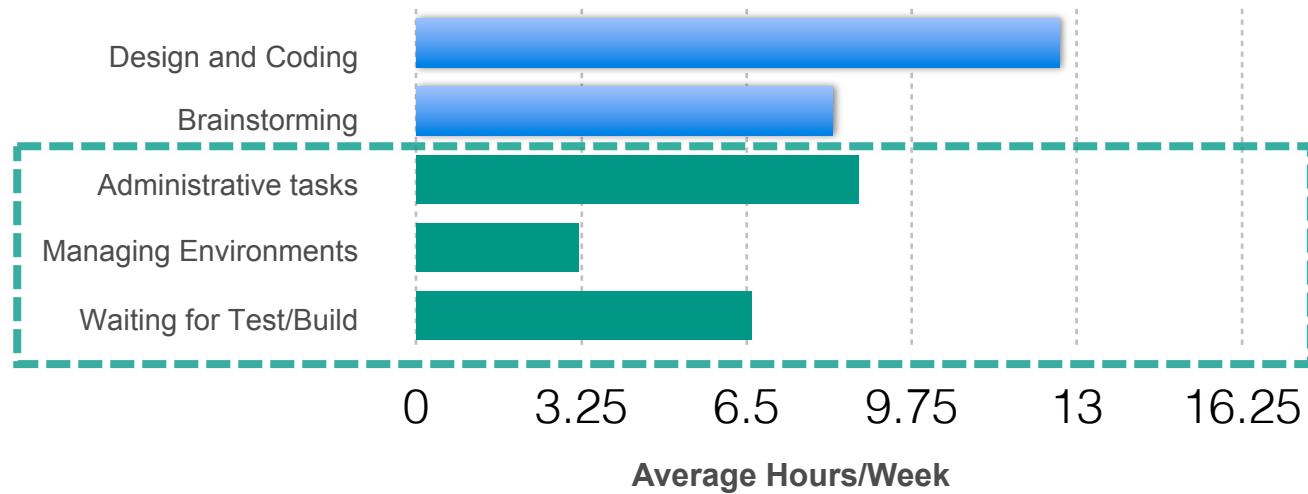
# The developer dream haiku

Here is my source code,

Run it in the Cloud for me,

I do not care how

# Software developers spend too much time **NOT** writing software



## Culture



Dev



IT Ops



IT Ops

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Dev

Application Framework



Spring Cloud



Spring Boot

# Spring Boot



From 0 to app in < 5 min

# Spring Cloud



Designed for fragile infrastructure in  
partnership with **Netflix**

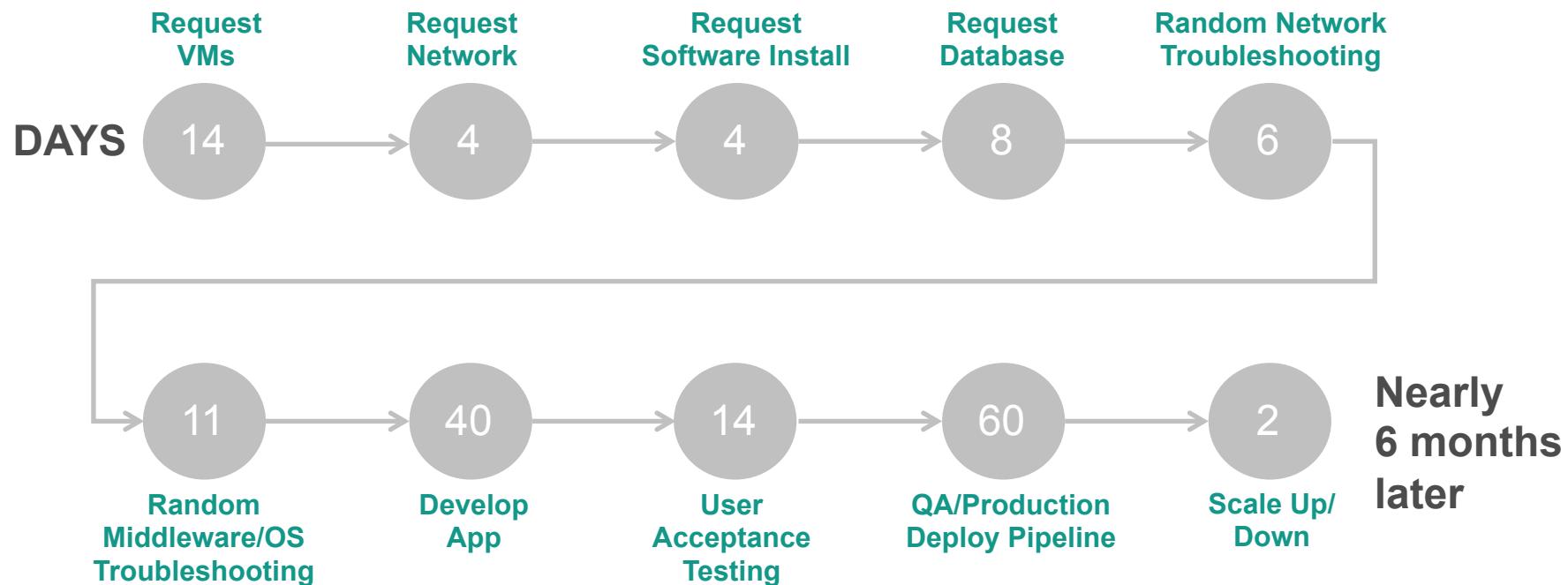
# The IT Operator reality

It's not enough just to deploy something

That's only Day One

You have to deploy again and again and again

# IT Ops spend time building snowflakes



## Culture

## Cloud Native Framework

## Tools



Dev



Dev



IT Ops



IT Ops



IT Ops

Application Framework



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Runtime Platform

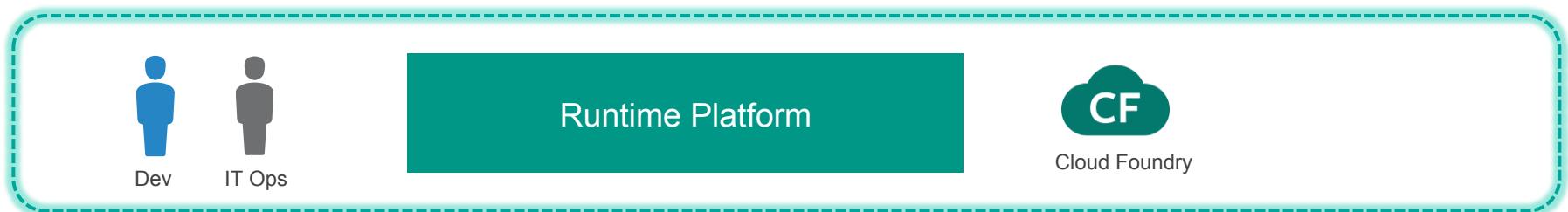
Infrastructure Automation

Infrastructure

## Auto scaling

**Self service**

**Container management**



**Self healing**

**Integrated logging**

**Application Performance  
Management**

**manage services  
not servers**

**no maintenance  
windows**

**zero downtime**

**embedded OS**

**infra as code**

**multi cloud support**



Infrastructure Automation

Infrastructure



BOSH



AWS



VMWare

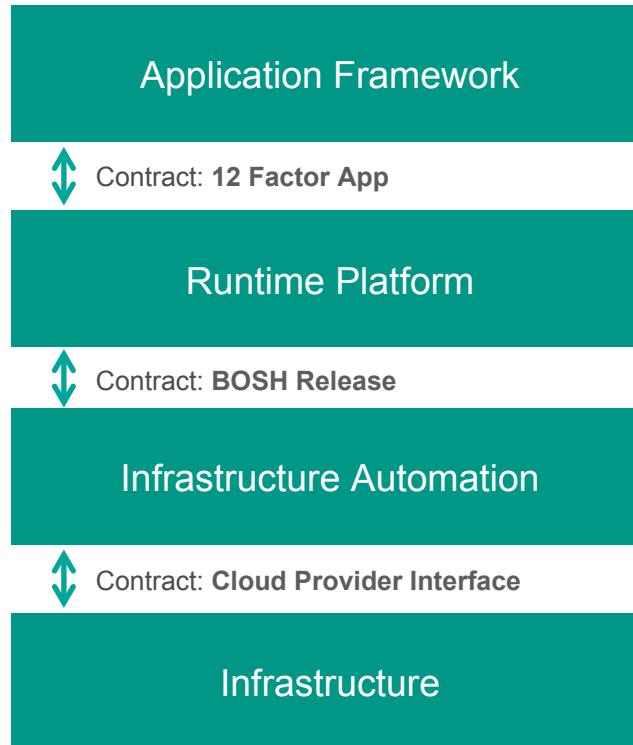


openstack®  
OpenStack

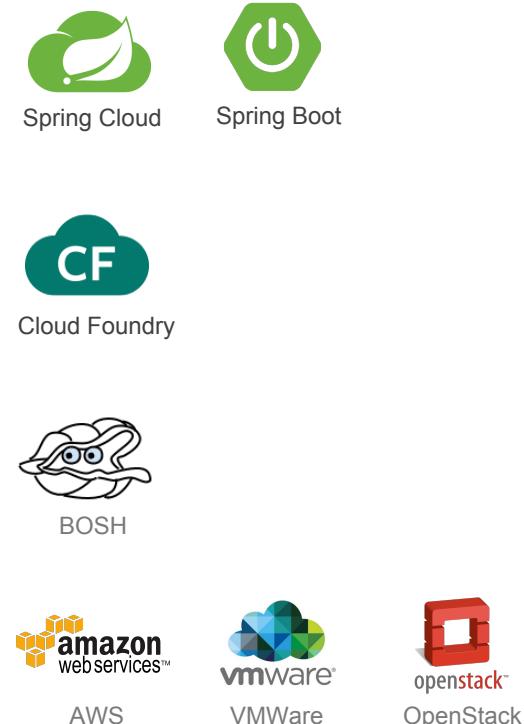
## Culture



## Cloud Native Framework



## Tools



# The future...is here

DevOps

25% of Global 2000

Spring Boot

1.8m downloads/month

Modern Software

Cloud Native

Talent shortage

Continuous Innovation

# Next Steps

App Dev.

IT Ops

Cloud Native Workshop

Developer Training

Quick Start PWS

Microservices University

Cloud Native Workshop

Proof of Concept

Migration Strategy

High Availability Architecture



Let's build something  
**MEANINGFUL**

# Q&A

Pivotal<sup>®</sup>