Bottom Up Enterprise Transformation

Getting buy in through the doing

Kyle Campos – Digital Services
2017
Digital Transformation Journey

Digital Services
Established

Transformation Planning

Transformation Execution

2017 +
Innovate!
Creation of the Digital Way

• Pivotal Labs engagements
• Agile transformation
• And hey, what’s that Pivotal Cloud Foundry thing you are deploying to?
Day 1 - How bad is it doctor?
It’s Really Bad

• Nothing automated
• Tech debt is crushing velocity & stability
• Silos, silos everywhere!
• Ticket hell
• No insights
• Almost no one believes it can change and those who do don’t know how to help
So what did we do?
• Started with monitoring & analytics
• Added automated testing (TDD, BDD, API)
• Improved our CI with static analysis engines
• Insights then focused our attention by highlighting pain points
• But we still had our hands tied with no access to our infrastructure
Own the stack
Pivotal Cloud Foundry

Take 1 – Private Cloud
Amazing!

Let’s GO !!!
Deal Signed !!!
Wait …
You want to use this in prod???
-Sincerely IT

UMM.. YEAAAH, ABOUT THAT..

HOW ABOUT... NO?
Pivotal Cloud Foundry

Take 2 – Public Cloud
PCF in Public Cloud

- New app meet bright shiny new infrastructure
- Within 1 week we have PCF running in the public cloud
  - Compare this to the 3 month lead time for just Dev environments in the existing IT infrastructure
- New cloud native app running
- Within a few more weeks we have 3 foundations running and automated CI/CD pipelines
Wait …

You put this in “the cloud” ?!?!?

- Sincerely

Angry IT
Pivotal Cloud Foundry

Take 3 – Private Cloud and this time we mean it!
PCF in Public Private Cloud

- Why would this time be any different?
  - We punctured the disbelief
  - All the hypotheticals were now real, real reference architecture
  - We had the expertise, the patterns, the proof to drive through
  - We had market pressure
  - Our initial production app was a public facing app with low risk data

- Our action forced the conversation
Digital Services Platform

Concourse Automated Pipelines

Quote 2, MyPolicy, Insurance Portal, Connect Services

Pivotal Cloud Foundry

Analytics
- Google Analytics
- bime
- Amazon Redshift
- mixpanel
- New Relic

Monitoring
- Datadog
- Rollbar
- StatusPage.io
- PagerDuty

Quality Testing
- Code Climate
- Sonar
- BrowserStack
- Cucumber
Highlights
PCF Impact

- 205% Dev Productivity
- 1,400% Deployment Frequency
- 1,614% Patch Frequency
- 99.8% Dev -> Prod Cycle
- 96.5% Initial Environment Cost
Velocity

Legacy

- Deployment Freq.: 1/wk → 3/day (+1,400%)
- Dev -> Prod Cycle: 8 days → 20 mins (-99.8%)
- Humans Required for Dev -> Prod: 4 → 0 (-100%)
- Patch Freq.: 1/quarter → 1/wk (+1,614%)
Time to Market

### Idea
- **MyPolicy App**
- **Alexa**

### Production
- **Pivotal Cloud Foundry**

#### Env Requests
- **Direct Access**
- **4 Months**
- **Legacy Ops Middleware Stack**

#### Dev Environment

98% decrease in time to PROD vs time to DEV

Infrastructure Footprint Comparison

% difference in application resource usage in Legacy vs PCF

Legacy

Static Scale
- 3x: 2cpu / 8gb mem / 37gb disk

+66% CPU

+99% Disk

+83% MEM

Elastic Scale
- 3x: 1cpu / 2gb mem / 1gb disk
Lessons Learned
Lessons Learned

- Enterprise IT “steady state” inertia is built of myopic disbelief, fear and risk averse incentives
  - “The world you’re describing does not exist” – Real Person
- Sometimes you have to build the real thing before they are convinced it’s the right thing
- Someone has to put their neck and credibility on the line
- Build a new team the races ahead that can teach the old team
- Rapidly increased velocity will send shockwaves through orgs and processes
- If you thought getting people to believe transformation is possible was tough, wait until you try and convince people that you actually accomplished successful transformation.
Be Aware Of
Be Careful Of

- The impact transformations has on others in the legacy space
  - Not all will be pleased with you
- The entrance criteria for apps in CF
  - People will be looking to blame CF for anything and everything that goes wrong with the app
  - For app re-platforms you have to be very strategic about what you fix now and what you address later
Questions?