

Pivotal

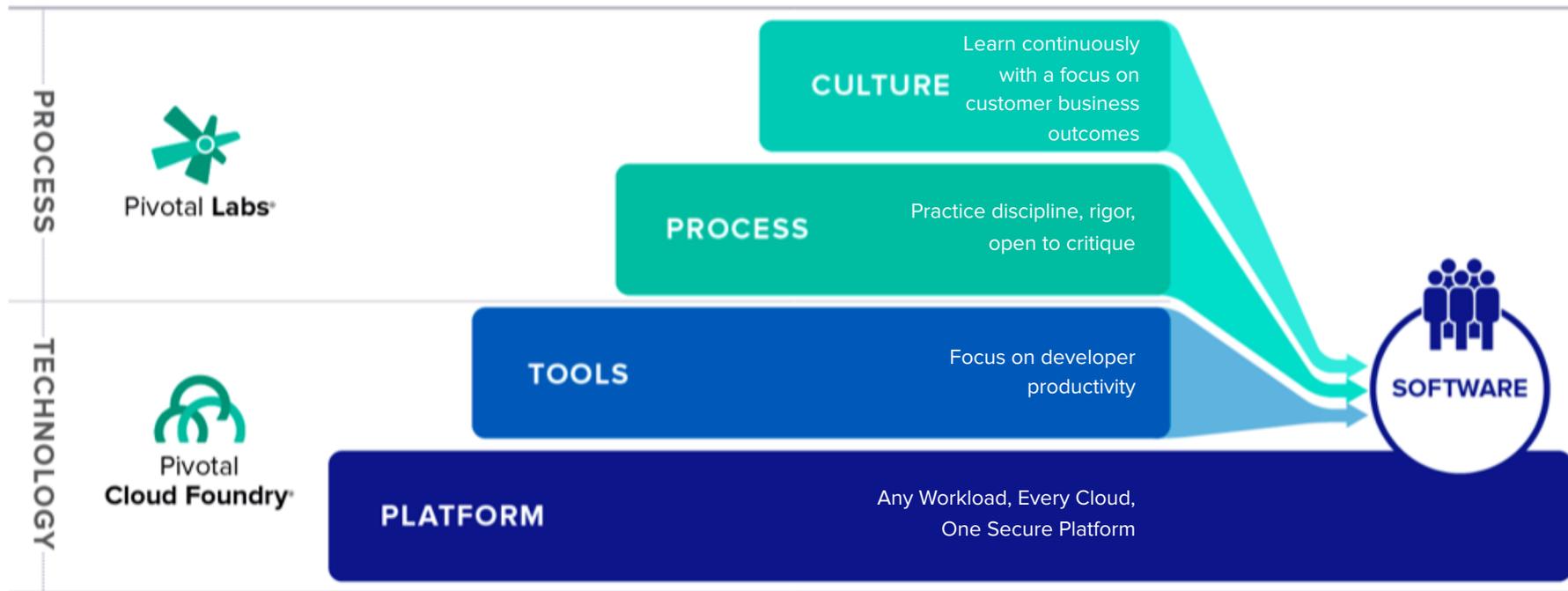
Who put digital transformation in my DevOps?

Nov, 2018

@cote

cote.coffee/bettersoftware

Pivotal: transforming how the world builds software



Enterprises are transforming with Pivotal

AUTO & TRANSPORTATION



INDUSTRIAL & BUSINESS SVCS.



FINANCIAL SERVICES



HEALTHCARE & INSURANCE



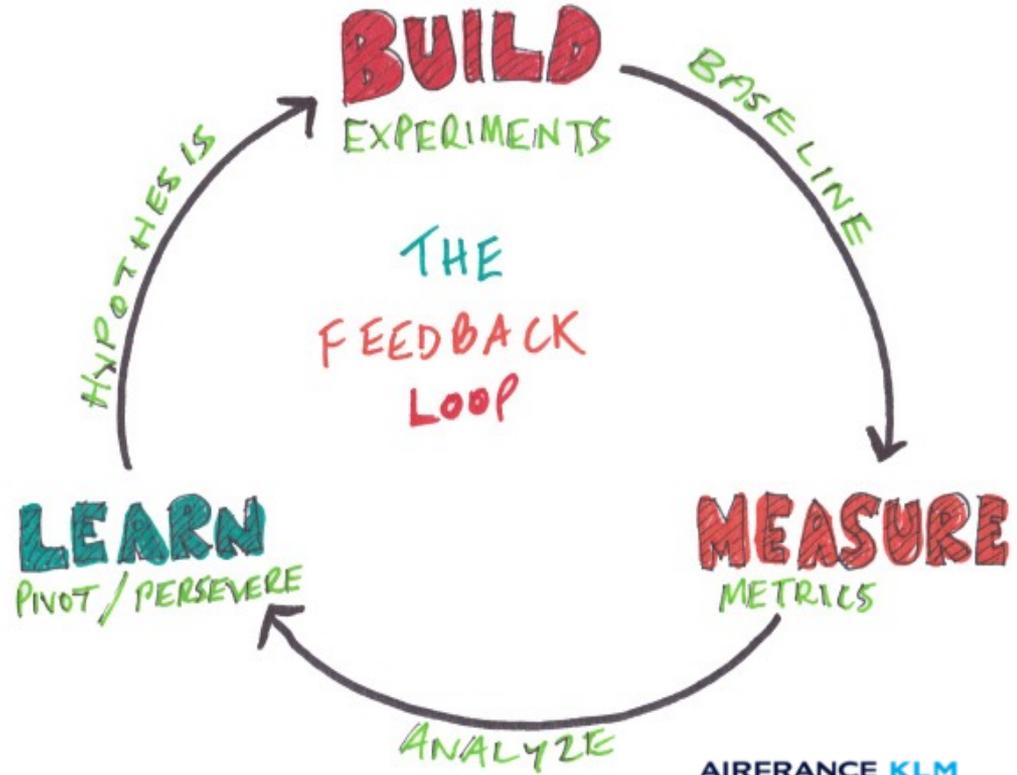
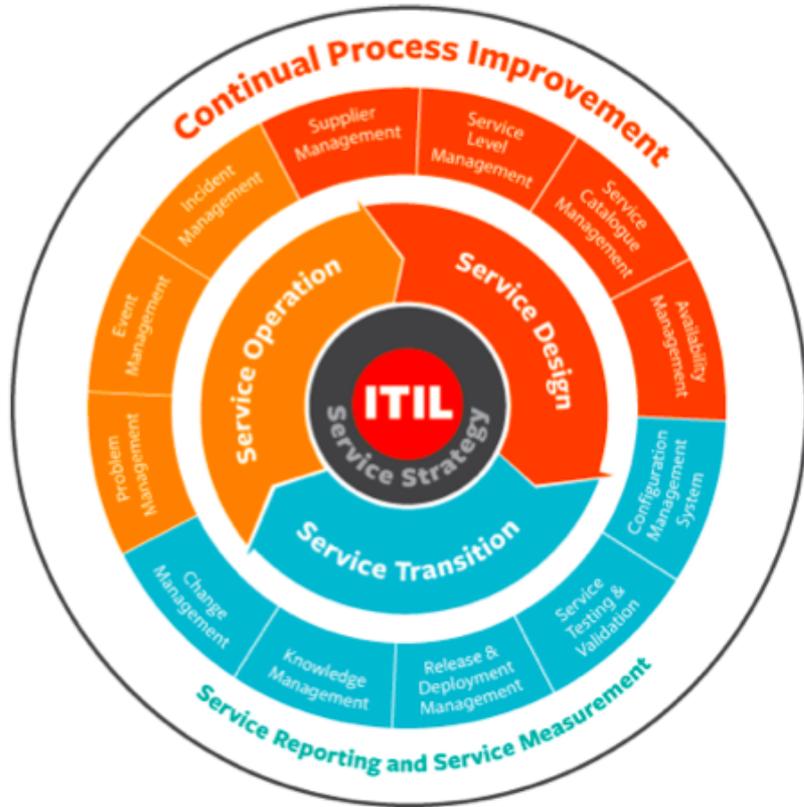
TECHNOLOGY & MEDIA



CONSUMER & COMMUNICATIONS



Service Delivery → Product Delivery



AIRFRANCE KLM

From 37% availability to \$440m in back taxes

Before

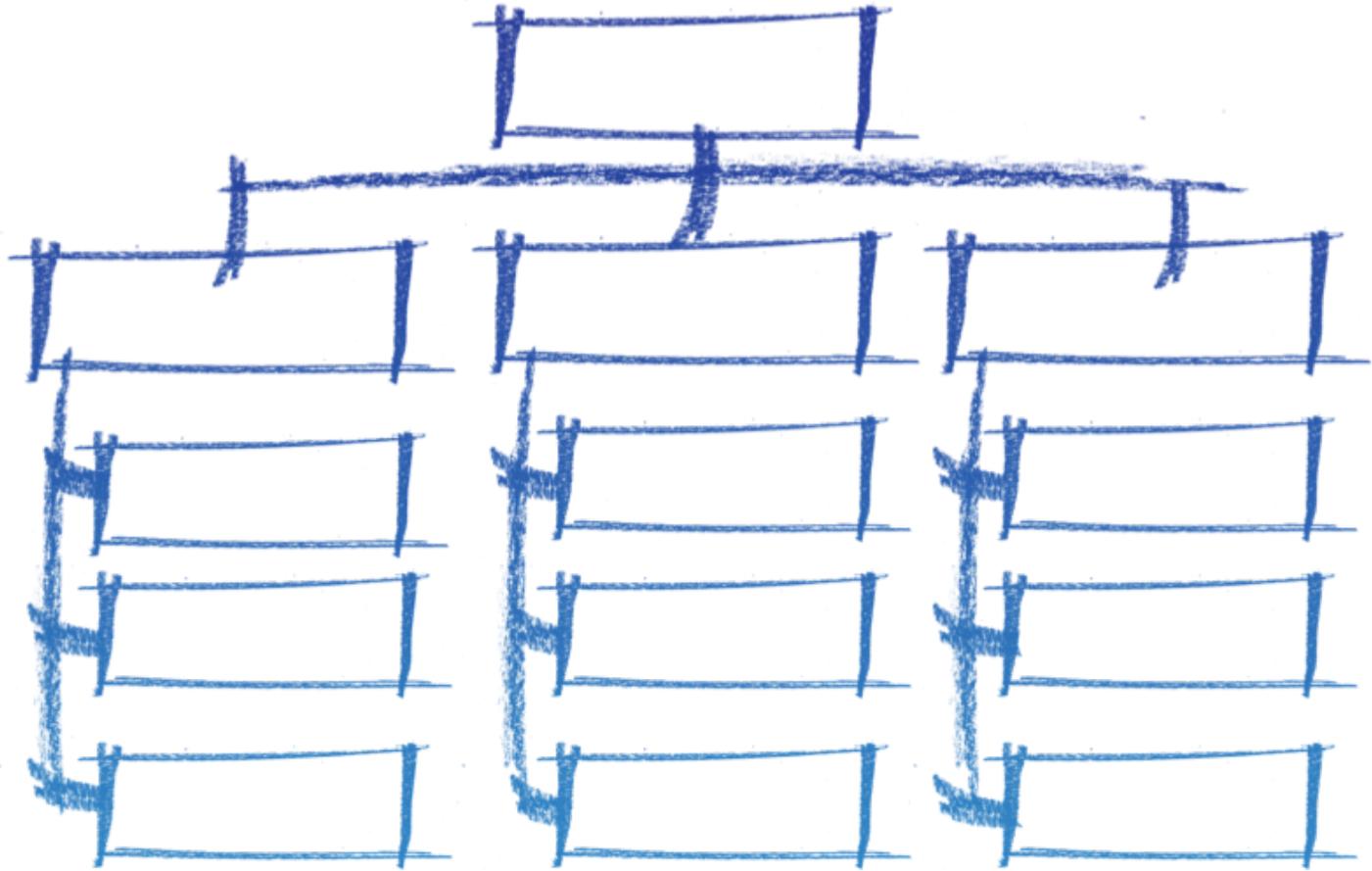
Overview by Year		
YEAR	STATUS	AMOUNT
2014	Balance Due	\$644 >
2013	Taxes Paid	\$685 >
2012	Refund/Applied	\$100 >
2011	No Information Available	--

After

Overview by Year	
YEAR	BALANCE DUE
2014	\$644.00 >
2013	\$0.00
2012	\$0.00
2011	No Return on File >

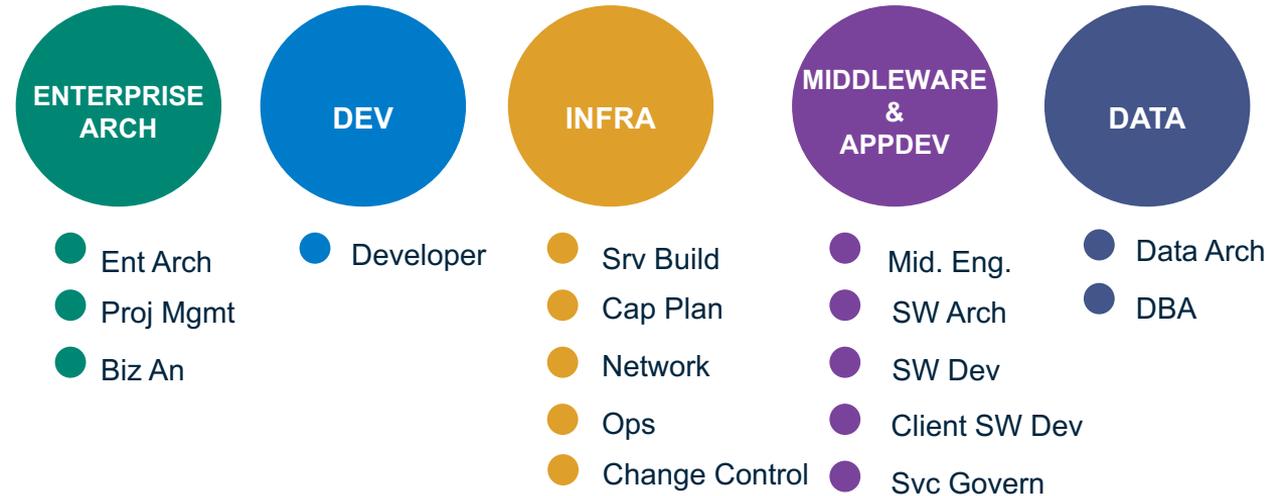
- User-centric, small batch
- Only 37% of calls answered, shrinking budgets
- From 2 year to 9 week releases
- 2m+ users paid \$440m in taxes





Organizing for outcomes

Functional organizations are a poor fit for product delivery



- Optimized for cost & repeatability
- Requires coordination overhead
- Locally optimized
- Elusive responsibility for final outcome
- Often lacks design & product management

“The Business”



Corporate strategy, revenue goals, mission, etc.

Leadership, EAs, etc.

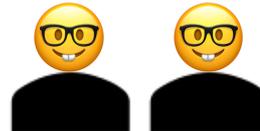


Culture, process, methodology, governance, compensation, etc.

Product teams

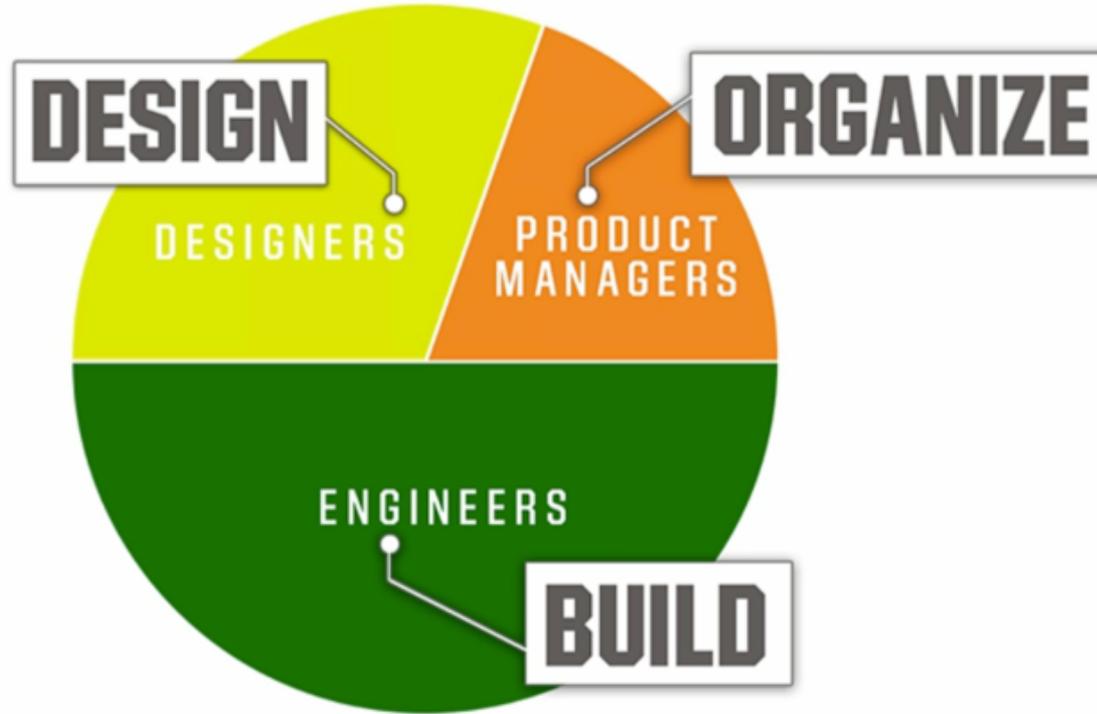


Platform Engineers



☁️ Private or public IaaS ☁️

Product centric, balanced teams



From coding 20% of the time coding to coding 90% of the time



An agile methodology, proven over 25+ years:

- Balanced teams w/all roles needed, dedicated to the product
- Paired programming, & beyond
- Test-driven Development
- Short iterations
- Continuous Integration & Continuous Delivery

“The Business”



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Leadership, EAs, etc.

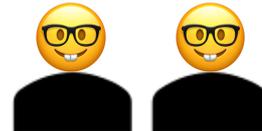


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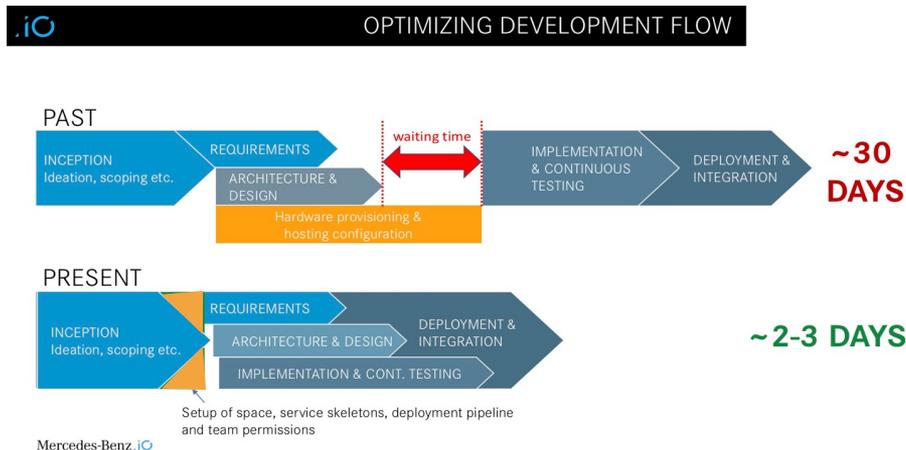
Platform as a Product by removing toil

Functions

- Removes toil with automation & programming
- Stands up & manages the platform
- Creates shared services/middleware/etc.
- Consults with initial projects

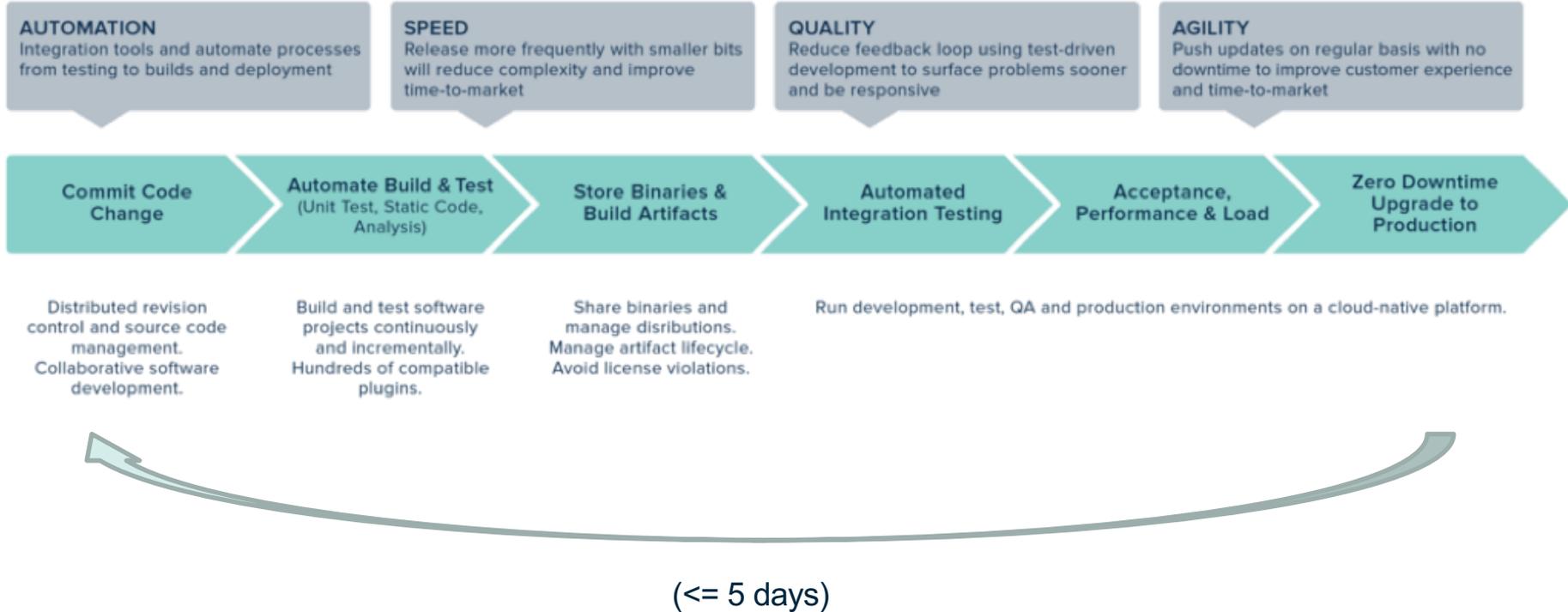
Insane staff efficiency

- T-Mobile USA: 8 ops to 300 developers, 11k containers
- Dick's Sporting Goods: 6 ops to 120 devs.



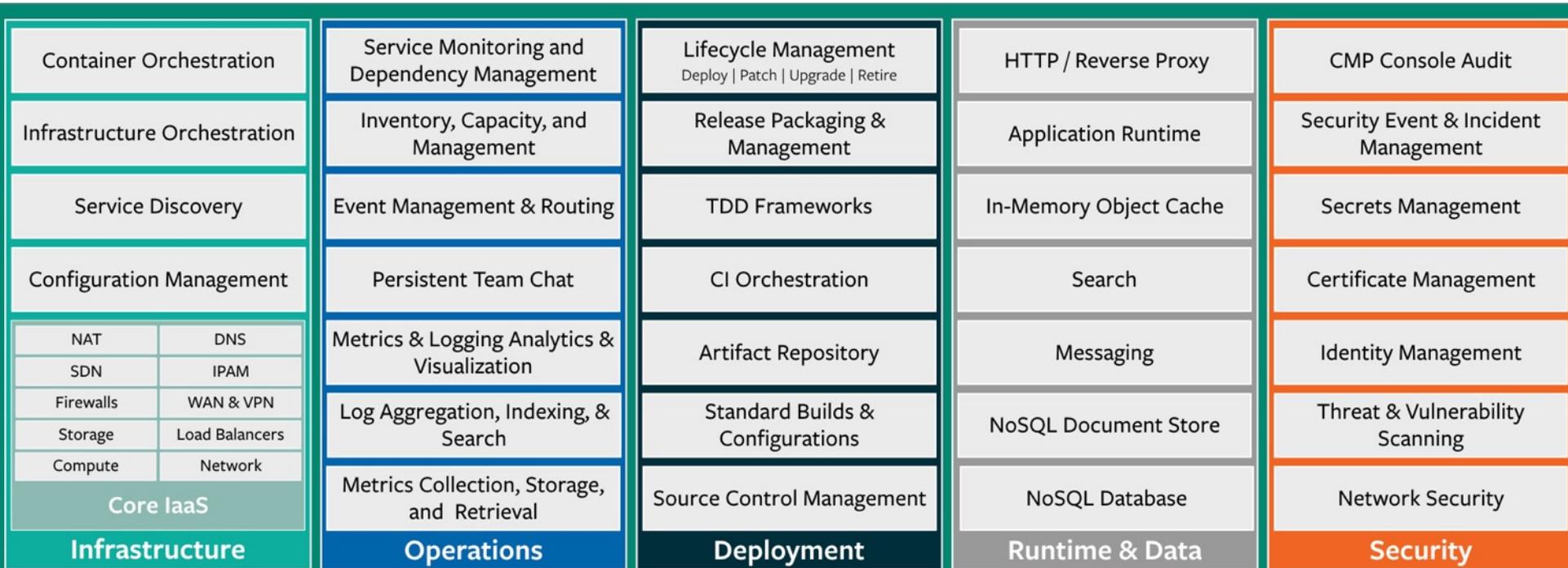
DAIMLER

Standardize & automate with a build pipeline



Sources: [“Speed Thrills: How to Harness the Power of CI/CD for Your Development Team.”](#) Ben Kamysz & Jared Ruckle, Pivotal, Aug 2017. CI/CD estimate based on the [“The 12th Annual State of Agile Report”](#) (2018) and [“Survey Analysis: Agile Now at the Tipping Point - Here's How to Succeed.”](#) Mike West, Gartner, June 2017, see also [estimates from 2015](#).

Standardize on a platform



Reference Architecture for Cloud-Native Platforms



Pivotal Cloud Foundry®

Application Code & Frameworks

Buildpacks | Spring Boot | Spring Cloud | Steeltoe



Pivotal Application Service (PAS)

>cf push

Java | .NET | NodeJS



Pivotal Container Service (PKS)

>kubectl run

Elastic | COTS | Spark



Pivotal Function Service

Coming Soon!



Pivotal Services Marketplace

Pivotal and Partner Products

Open Service Broker API



Embedded OS
(Windows & Linux)

NSX-T

CPI (15 methods)



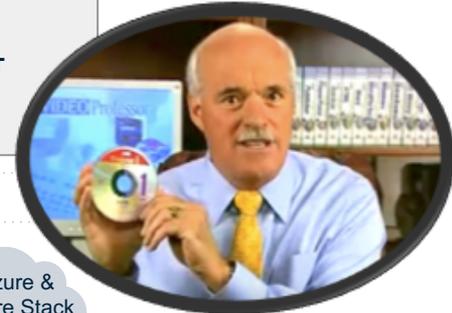
vSphere

OpenStack

AWS

Google Cloud

Azure & Azure Stack



“The Business”



Corporate strategy, revenue goals, mission, etc.

Leadership, EAs, etc.

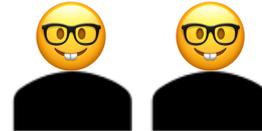


Culture, process, methodology, governance, compensation, etc.

Product teams



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“Executive sponsorship for us was absolutely critical. Without that we could not have gotten anywhere that we needed to be.”

Brendan Aye

T-Mobile
(USA)



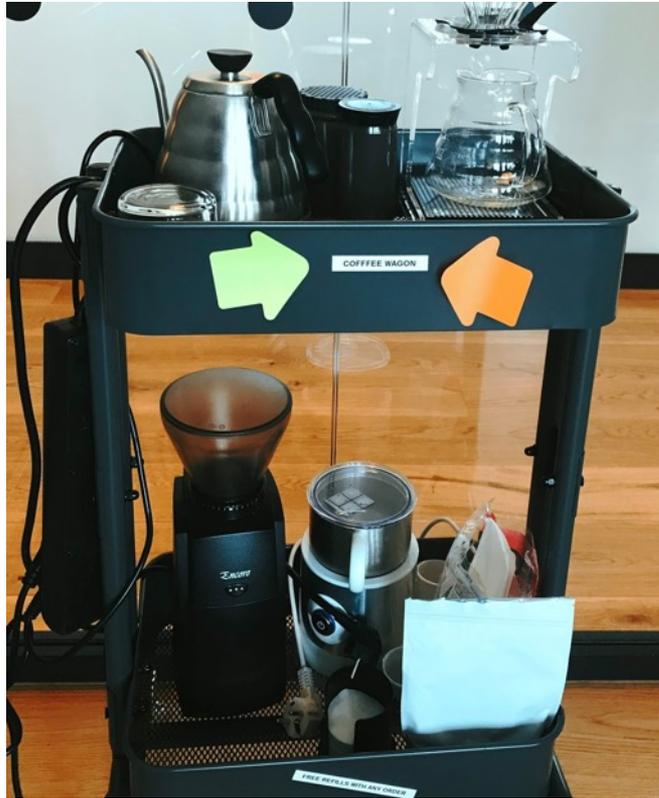
“We believe that we need to reimagine banking to make banking simple, seamless, as well as invisible to allow our customers to **live more bank less.**”

Siew Choo Soh, DBS Bank



Leadership (the missing piece)

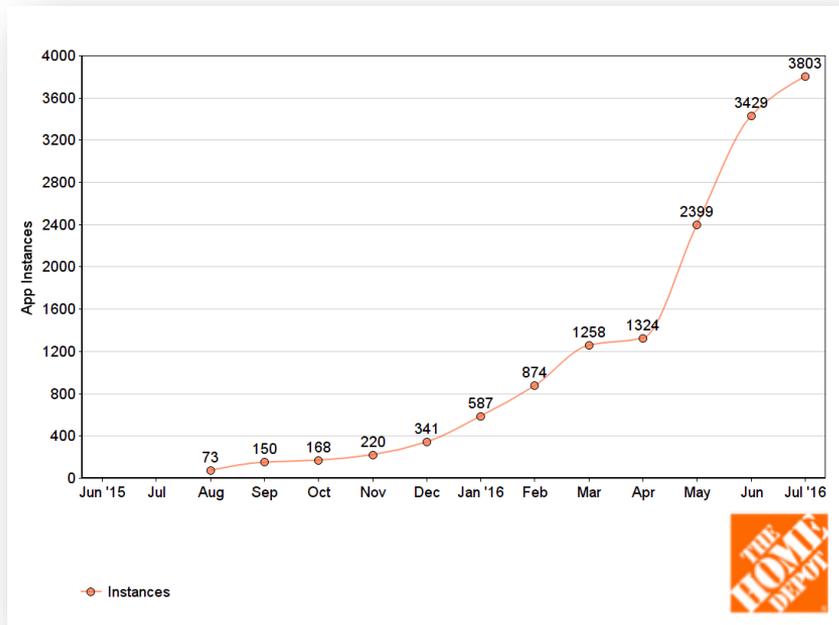
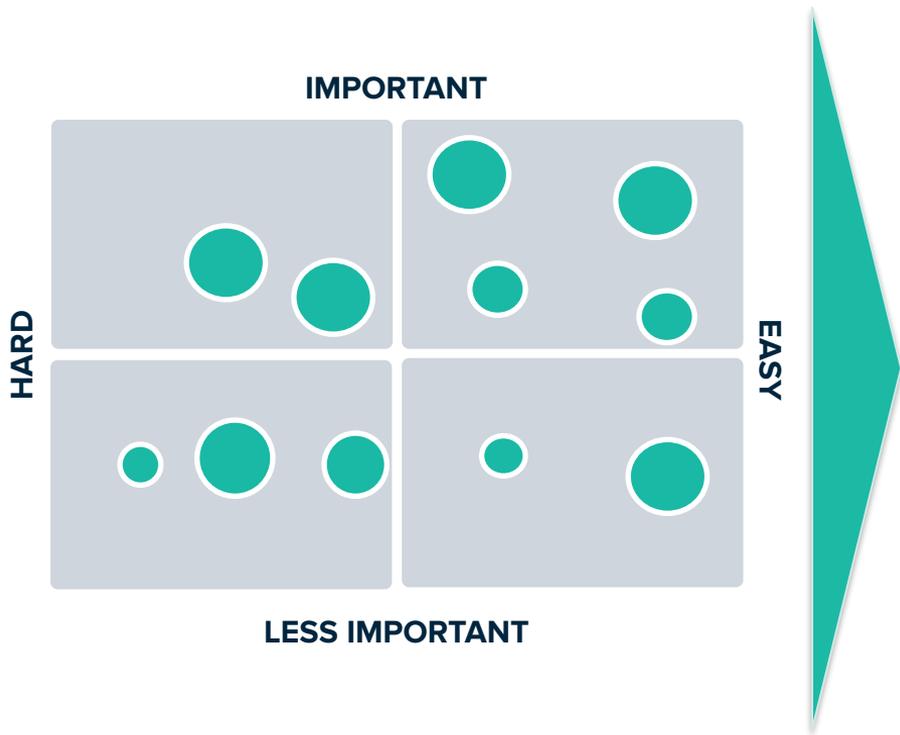
Leading the change to a culture of innovation



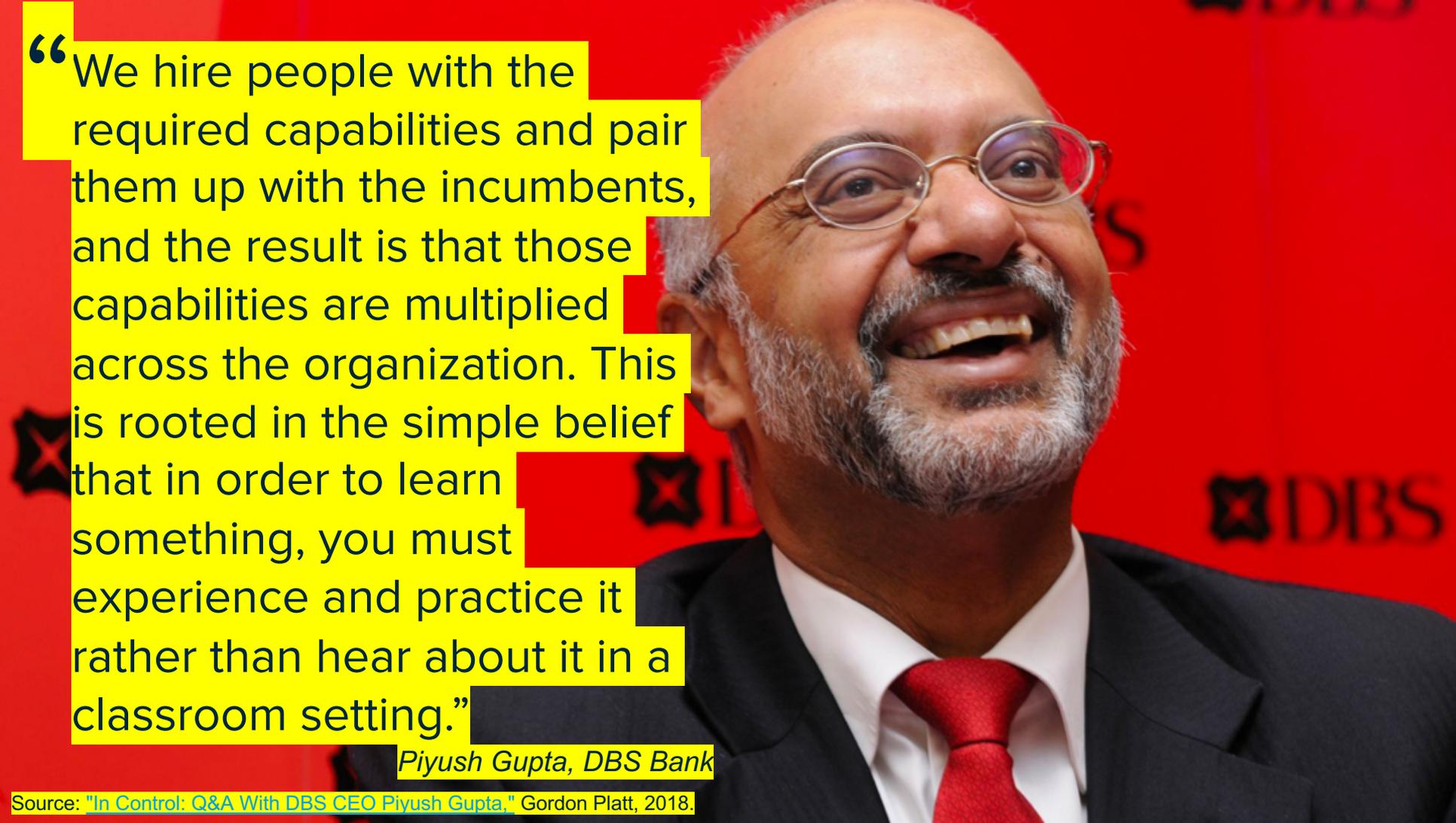
- Vision, strategy, & fighting stupid
- Create a culture of innovation, risk taking, and focusing on people (“users”)
- Give product teams autonomy, trust, and voice
- Establish trust by doing what you say, delegating, and celebrating failure learning.
- Feedback loops: OKRs, surveys (ENPS), silence, churn, results.

Sources: [“Don’t Forget People and Process in Your Digital Transformation,”](#) Allstate case study, March, 2017; [“How Insurance Giant Allstate Is Using Cloud Tech to Build New Businesses,”](#) Barb Darrow, June, 2017; [“Allstate Technology Chief Develops The Uber Of Roadside Assistance,”](#) Perer High, Oct, 2017; sticky-staring team from USAF Kessel Run Group; More: [work-in-progress book on Leading Digital Transformation](#), see [the culture section](#).

Starting: “pilot low-risk apps, and ramp-up.”



Sources: [Home Depot meetup, Oct 2015](#); [Humana at CF Summit 2015](#); “Getting started,” Coté, Oct 2016; [Comcast’s Christopher Tretina at SP1 2016](#); “Cloud-Native at Home Depot, With Tony McCulley”; “Bottom Up Enterprise Transformation,” Kyle Campos, CSAA Insurance, CF Summit EU, Oct 2017. Number of AI’s equates to ~130 apps composed on ~900 services.



“We hire people with the required capabilities and pair them up with the incumbents, and the result is that those capabilities are multiplied across the organization. This is rooted in the simple belief that in order to learn something, you must experience and practice it rather than hear about it in a classroom setting.”

Piyush Gupta, DBS Bank



Internal marketing: Everything, frequently

A woman with long dark hair, wearing a grey sleeveless dress, sits at a conference table. She has a skeptical expression and her right hand is raised in a shrug. In the background, three other people are slumped over the table, appearing to be asleep. A large yellow thought bubble is positioned above her, containing two lines of text. The setting is a modern office with a light-colored wall and a window with blinds on the right.

Sounds great!

But no one cares.

Focus on cost reductions with un-motivated executives

82% average reduction in 'path to production' time (from 84 days to 15 days)

Software Development Lifecycle



Provisioning
90% faster

90% time reduction

87% process time reduction

Total time: from 65 to 6 days

Process time: from 81 to 11 hours



Developing
37% more time coding
E.g.: \$4.80m/year

37% relative improvement in time spent coding (from 56% to 77%)

21% absolute improvement in time spent coding (from 56% to 77%)



Releasing
61% faster
Time-to-market

61% time reduction

82% process time reduction

Total time: from 14 to 5 days

Process time: from 115 to 21 hours



Operating (Day 2)
69% more efficient
E.g.: \$7.35m/year

69% time reduction

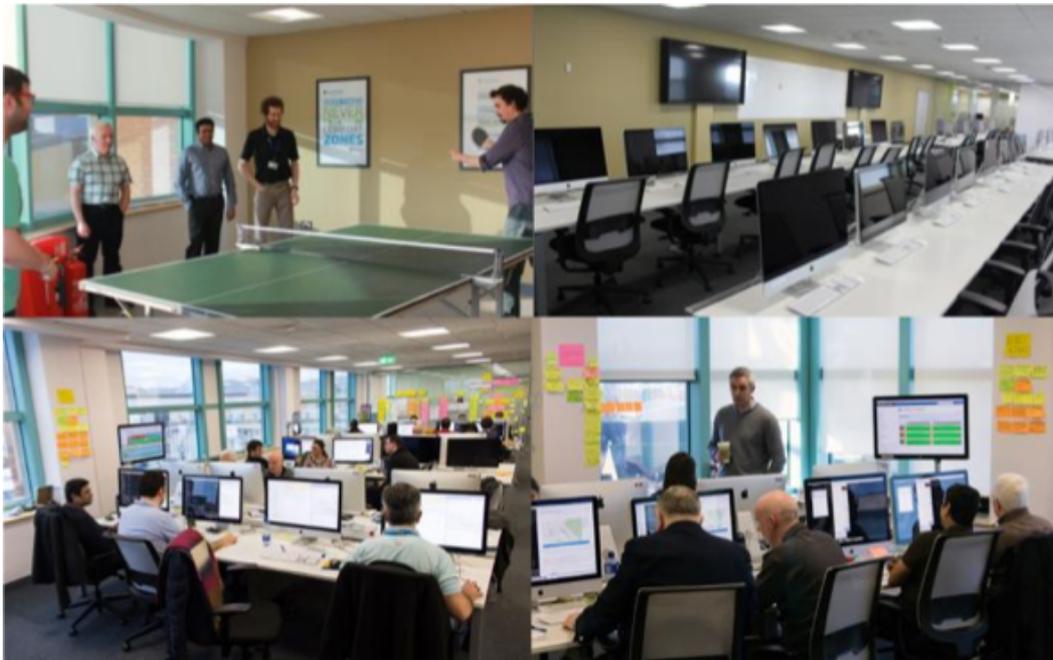
74% process time reduction

Total time: from 79 to 24 hours

Process time: from 34 to 9 hours



Changing is often too hard, so create a new organization



- CompoZed Labs now handles 40% of Allstate's software development
- Road-side assistance app delivered in 6 months
 - 25k rescues/month
 - 30 minute wait to 15
 - +\$10m, +\$100m planned

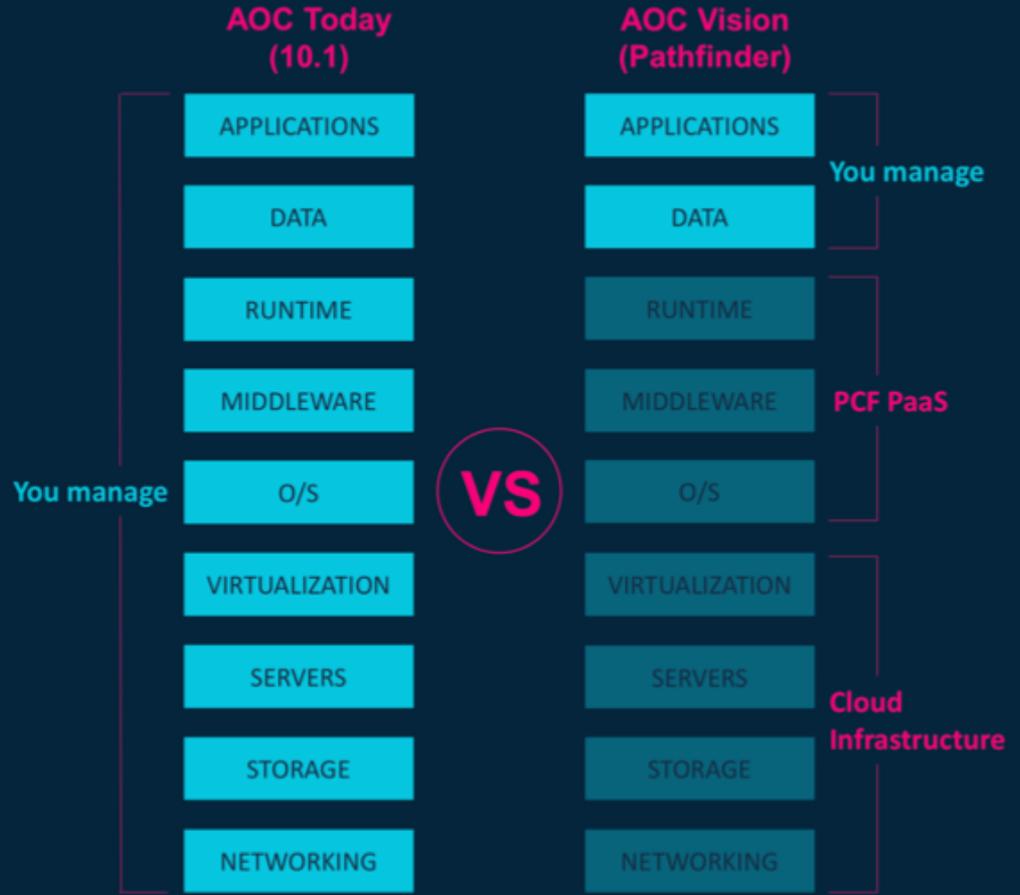
“If that crusty, old .Net developer can do it, anyone can,” transforming people

1. Most people are skeptical for good reasons
2. They enjoy doing IT if it's rewarding
3. Volunteer based at first, building up peer-to-peer marketing
4. Also, there's plenty of more comforting IT for grumpy people to work on



automategrc

- 80-90% of Risk Management Framework **controls inherited** via IaaS/PaaS
- Cut **Authority-to-Operate process** from ~10 months to <1 week for ~40 remaining controls at application layer



“Digital transformation” == creating better software



50% B2B customer engagement, shipped in 6 months vs. 18.



Idea to production in 2 days; fix production incidents in 2 hours.



Small teams deploying to production in minutes, not days.



Modernized app, rolled out 20 countries in 5 months

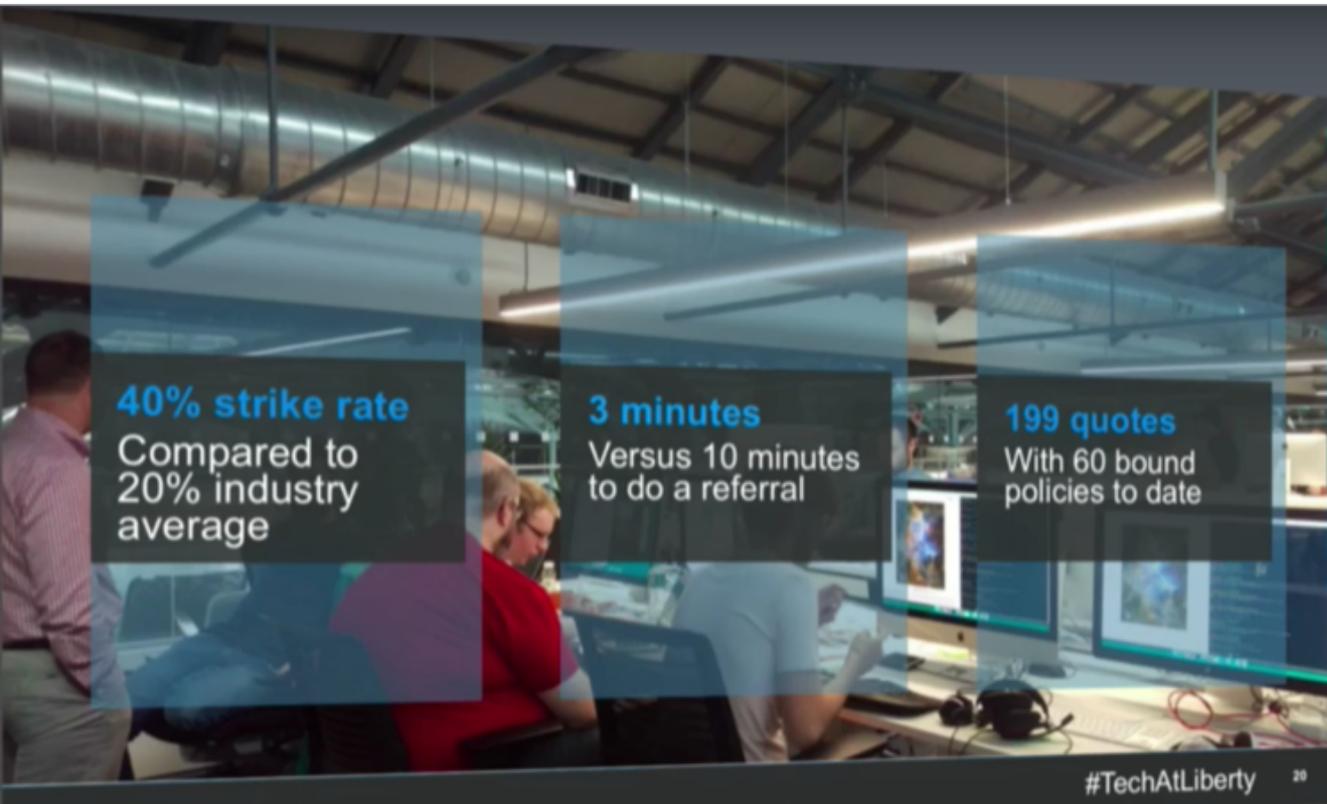


40%+ productivity/cost, rebooted member facing app.



40% policy strike rate, vs. 20% industry average.

A new business in 6 months, doubling avg. sales rate

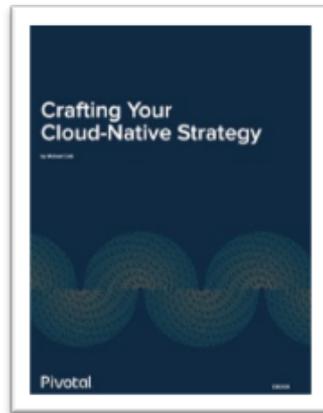


Liberty Mutual Insurance

#TechAtLiberty 20

“We are uncovering better ways of developing software by doing it and helping others do it.”

- [The Agile Manifesto](#), 2001



<http://cote.coffee/bettersoftware/>