

"Digital Transformation"
just means creating
better software

@cote
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Hello!



- [@cote](#) – Director, Marketing for Pivotal Cloud Foundry
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- Register [DevOps, agile, etc. column](#)
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A photograph of a modern, open-plan office space. The office has a high ceiling with exposed pipes and lights. In the foreground, several people are seated at desks, working on computers. The desks are equipped with multiple monitors and laptops. A teal-colored horizontal band is superimposed over the middle of the image, containing the text "Why 'digital'?".

Why “digital”?



“Since 2000, 52 percent of the names on the Fortune 500 list are gone, either as a result of mergers, acquisitions or bankruptcies.” [R. Ray Wang](#)

Expected BigCo Lifespan

1960s: 60 years on S&P 500

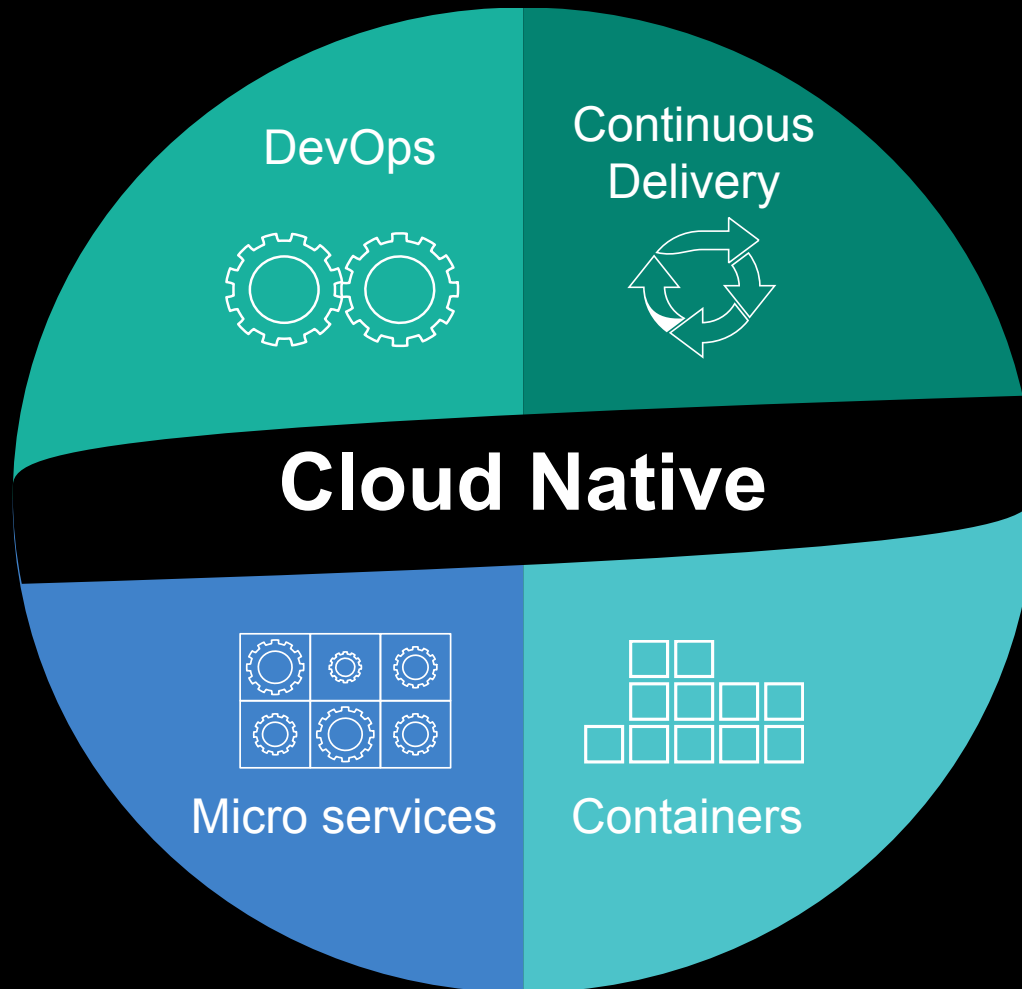
2020s: 12 years on S&P 500

Source: [“Fortune 500: it’s do-or-die time for digital disruption,”](#) 2015. Also, [“Digital transformation: Three technology aspirations to help change work execution culture,”](#) Christ Marsh, 451 Research, August 2017.



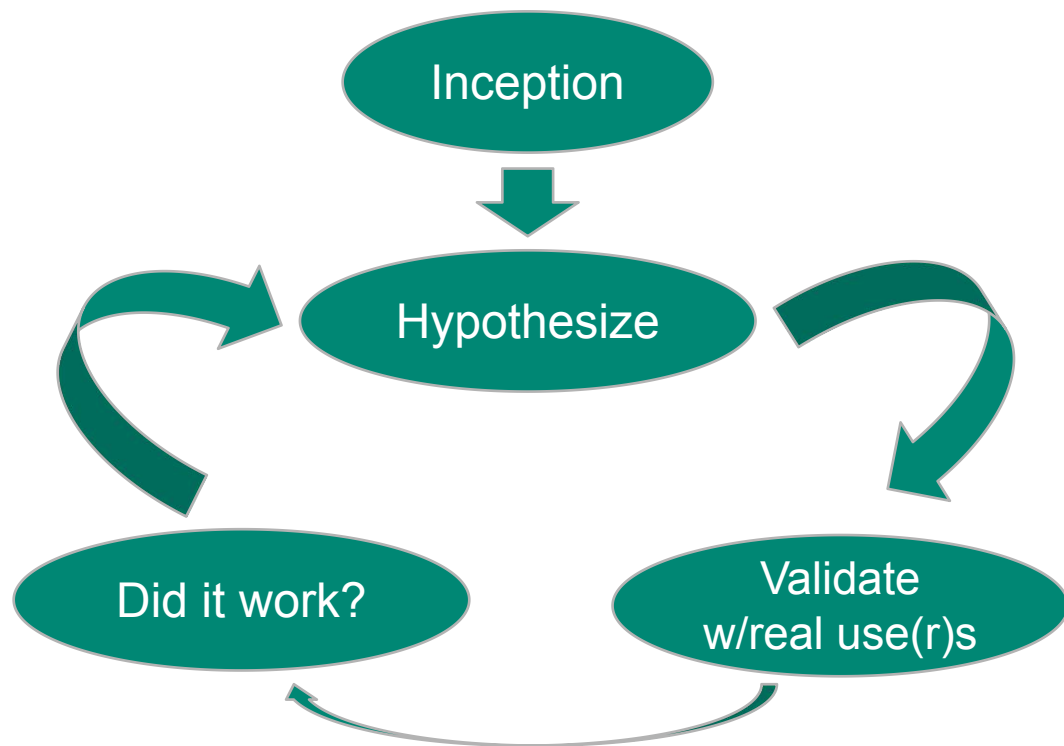
“In order to grow Citi, we first have to grow our own perspective, skills and capabilities... Our curiosity, our openness to learning and trying new things, our ability to adjust and adapt quickly and our willingness to fail fast and fail small are the essence of a culture that innovates and exposes new value to our clients in real time.”

Stephen Bird, CEO Citi Global Consumer Group



Goal: deliver value, ~~weekly~~ reliably, with small batches

“We did an analysis of hundreds of projects over a multiyear period. **The ones that delivered in less than a quarter succeeded about 80% of the time, while the ones that lasted more than a year failed at about the same rate.** We’re simply not very good at large efforts.”



Large financial institution

Sources: [“Good Software is a Series of Little Failures,”](#) Coté, April 2016; [The Lean Startup](#), Eric Ries, 2011. [The Lean Enterprise](#), Barry O’Reilly, Jez Humble, and Joanne Molesky. See [also overview of this approach at the IRS from Dec 2015](#). [“Application Modernization, Service By Microservice,”](#) Kurt Bittner and Randy Heffner, Forrester, Dec 2015; [“Best Practices For Agile-Plus- Architecture,”](#) Randy Heffner, Forrester February, 2015.

Small batches & 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 >

It's actually working in mainstream, large shops



40%+ productivity/cost, revitalized member facing app



Claims from a week or more to less than a day



Releases 3+ week to 3 days, 50% incident reduction



Vitality drove engagement from 3% to 30%+



40% policy sales closed, vs. 20% industry average



Delivered 3x features year/year

Sources: [Crafting your cloud-native strategy](#), Winter 2016/2017, Coté; [Humana keynote, CF Summit 2015](#); ["From Commit to Production in 10 Minutes at a Century Old Insurance Company"](#), Liberty Mutual, David Ehringer.

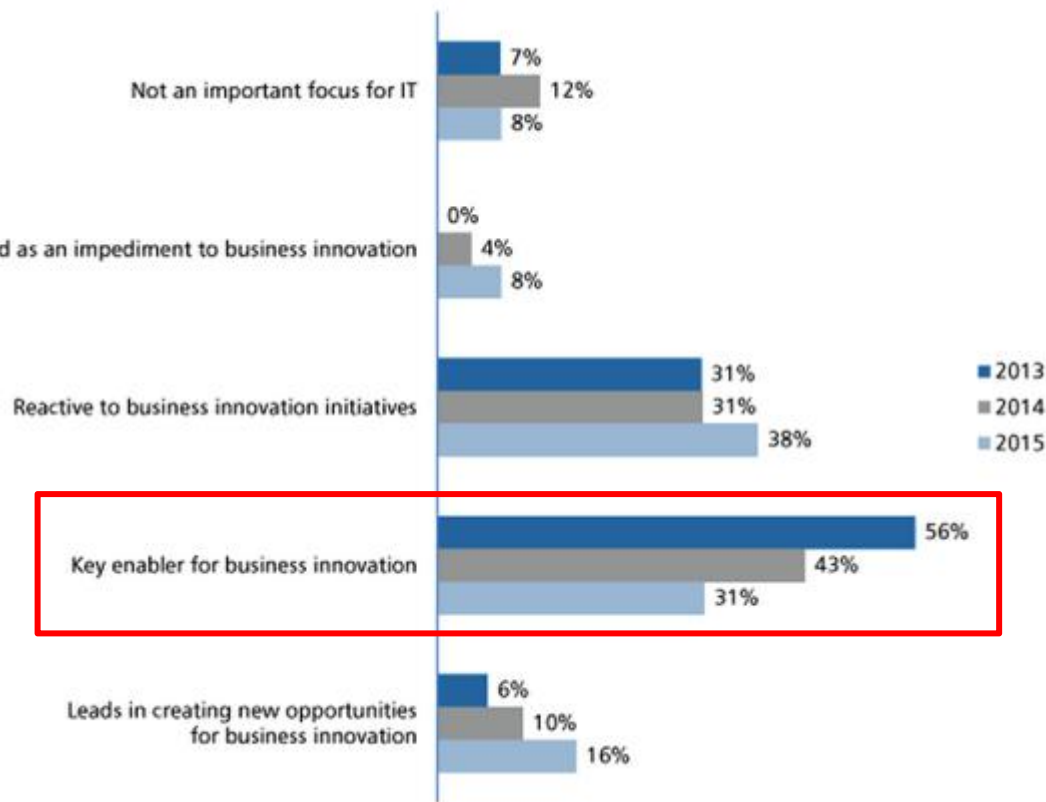


But, IT is behind



Organizations are held back by an IT agility gap

*What is your
IT
organization's
role in
business
innovation?*

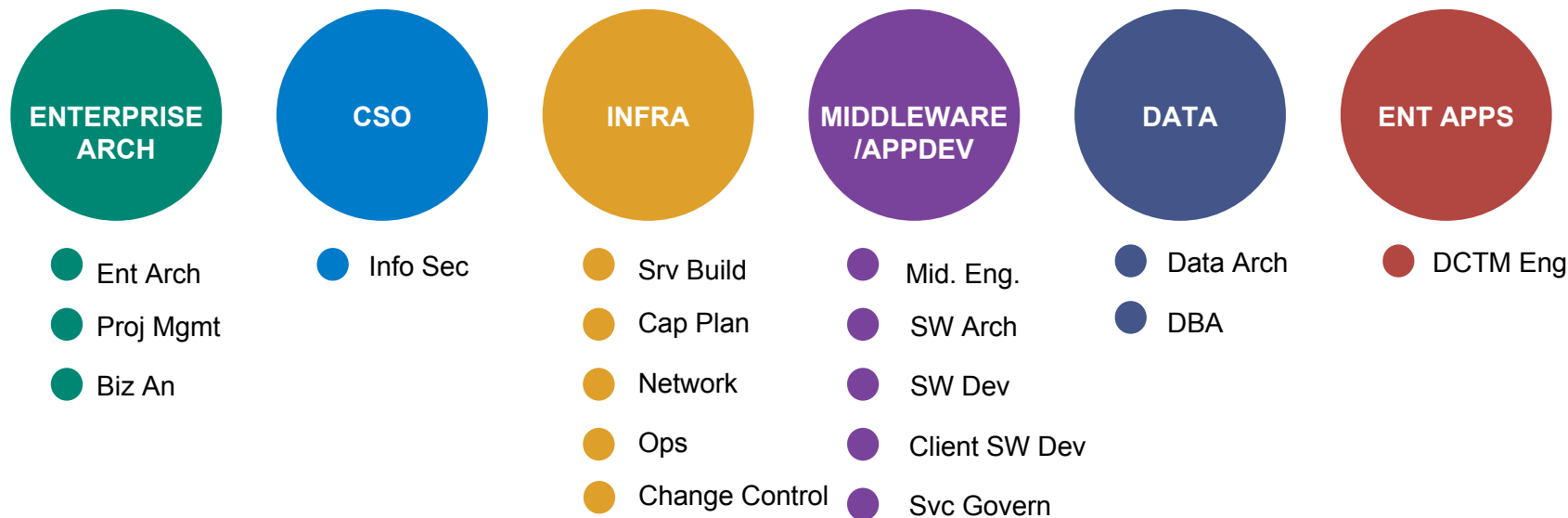


“We’ve been doing AGILE since vacuum tubes.”



Source: “Survey Analysis: Agile Now at the Tipping Point - Here's How to Succeed,” Mike West, Gartner, June 2017; [“Pair programming – you’ll never guess what happens next.”](#) Coté, Oct 2016.

Functional organizations once were comforting



Humana

Antonio Melo

*Practice Director
Digital Experience Center
Humana*



“

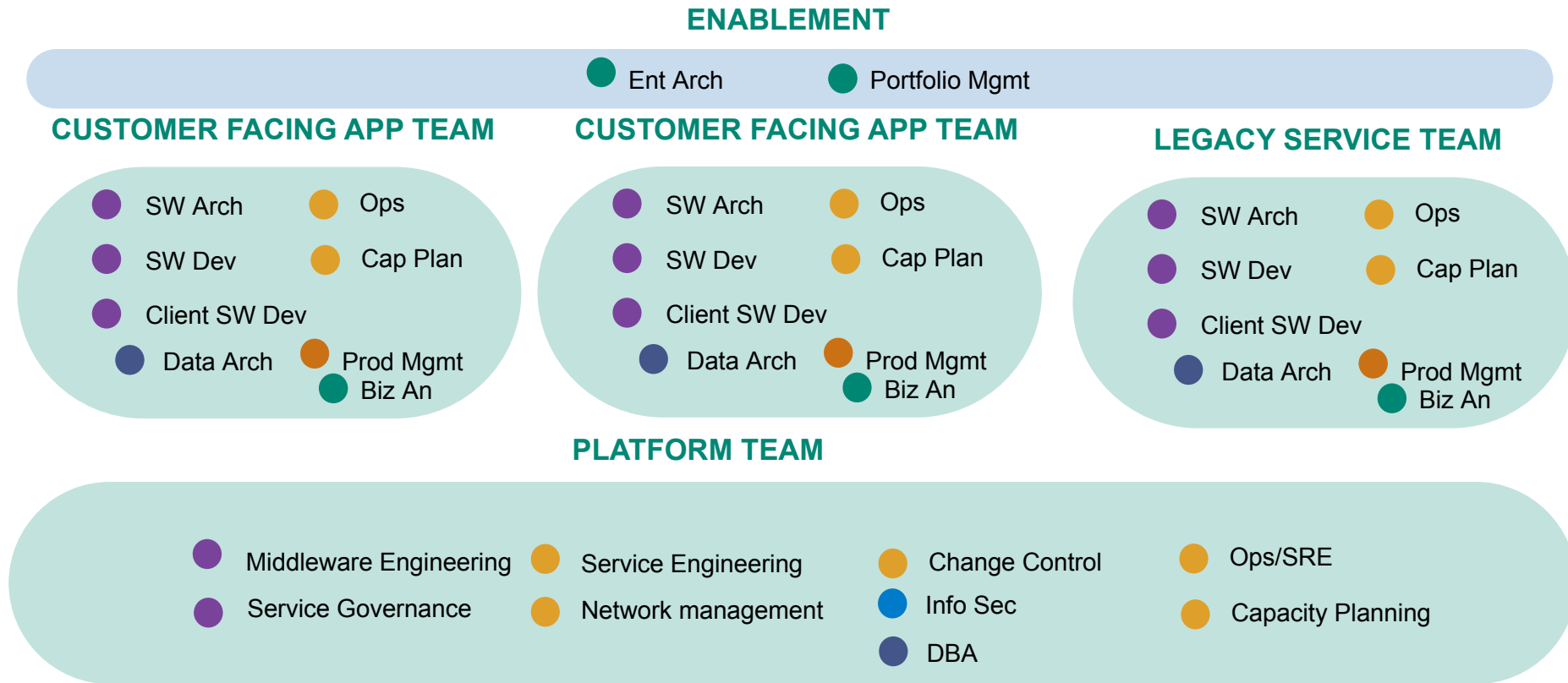
The way that we work, the tools that we use, the culture that we have been able to create, that really flies in the face of this big bang approach to development otherwise. It just must become common.

”

A photograph of a modern office space with a teal overlay. The office has a high ceiling with exposed pipes and lights. In the foreground, several people are seated at desks, working on computers. The background shows a staircase and more office equipment. The text "Catching up" is centered in the middle of the image.

Catching up

The organization supports the product teams



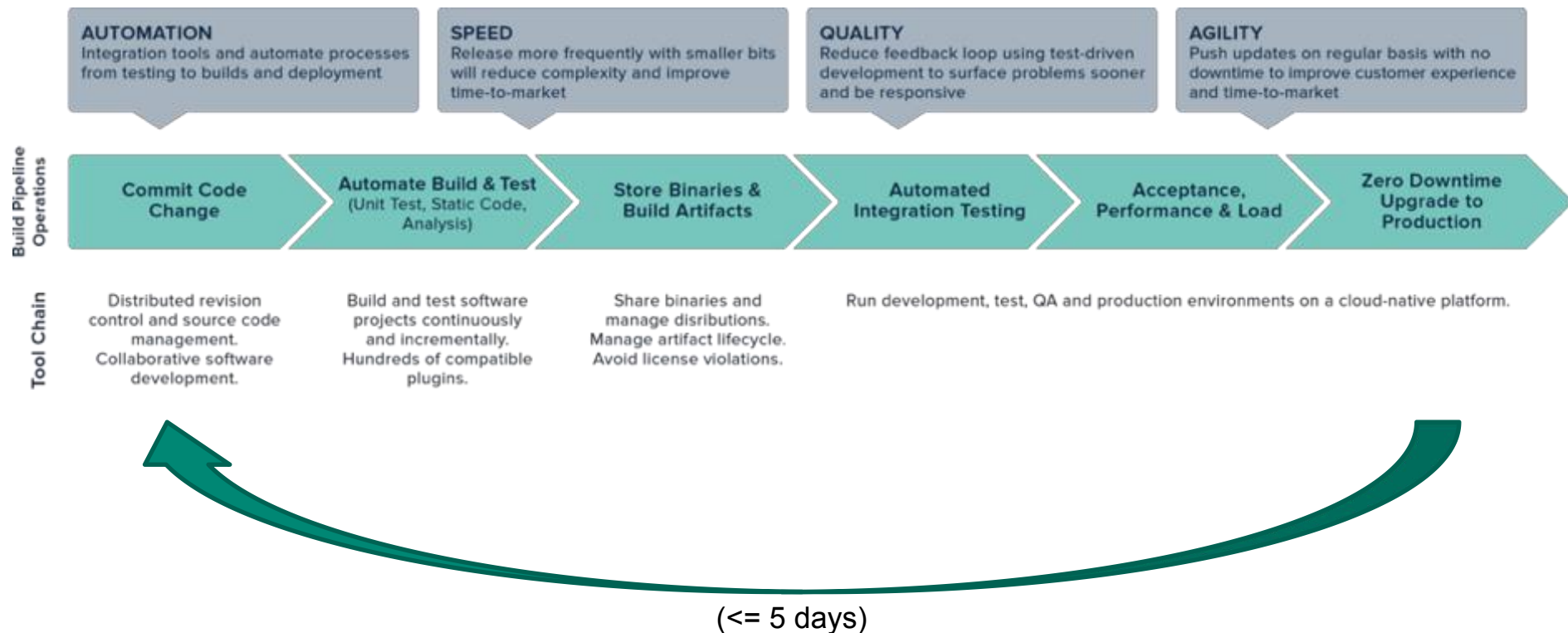
Source: "[DevOps: Who Does What?](#)", Cornelia Davis, Nov 2016. Pivotal Cloud Foundry Solution team, "[Crafting the Cloud Native Organization](#)," Coté, March 2016. discussions with [GSA-cum-Pivotal's Diego Lapiduz](#).

Balanced teams focus on user experience & resilience



Picture: WOCinTech Stock

A fully automated build pipeline & cloud platform



A platform breaks the silo slowdown

cf push

↓

**Speed &
Consistency**

↓

~45 seconds

Code Complete & Tested

Find available hosts	2 Days
Install & configure runtime	1 Day
Install & configure middleware	1 Day
Pull application source code	1/4 Day
Retrieve dependent libraries	1/4 Day
Create application package	1/4 Day
Install, configure dependent service(s)	2 Days
Deploy container to host(s)	1/2 Day
Load environment variables	1/4 Day
Configure load balancer	2 Days
Configure firewalls	2 Days
Update service monitoring tools	3 Days
Configure log collector	1 Day
...	...

Application in Production

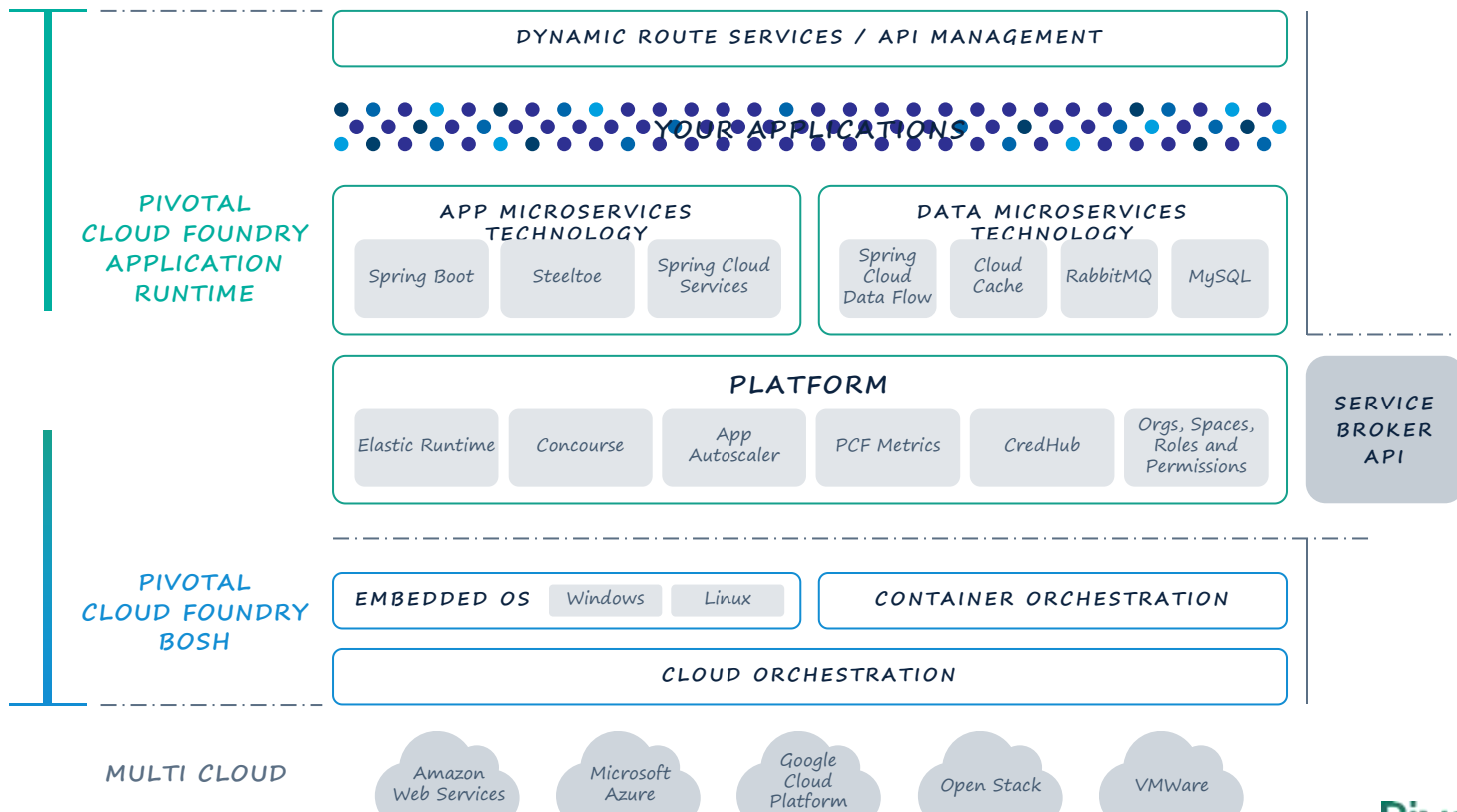
~15+ Days

Platforms: “A lot of effort went into making this effortless.”

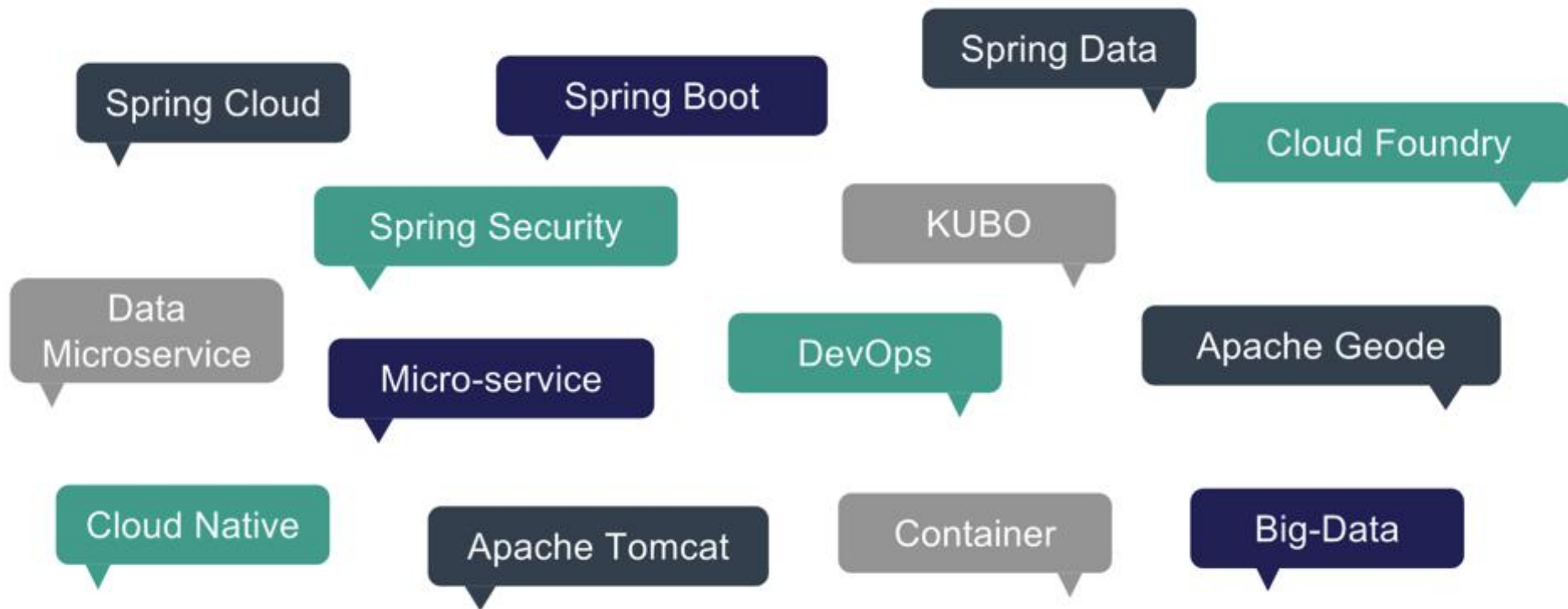
- Canary deployment
- A/B testing
- Container orchestration
- Health checks & remediation
- Scale out/scale in
- Across multiple IaaS
- Day 2 operations
- Integrated middleware



MODERN CLOUD NATIVE PLATFORM



How to start? That's today's agenda...



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

Thanks!

- [The Agile Manifesto](#), 2001

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More: <https://cote.io/cloud3/>

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