



Crafting Your Cloud-Native Strategy

Or, beyond “survival is not mandatory”

@cote
2017

Hello!



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- Former software developer
- *Register* DevOps, agile, etc. column
- Podcasts: cote.io/podcasts
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What's in the box?

Digital transformation.





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The desire to "do agile" often distracts from the need to stop doing dumb shit.

RETWEETS

89

LIKES

104



12:57 PM - 31 Jan 2017

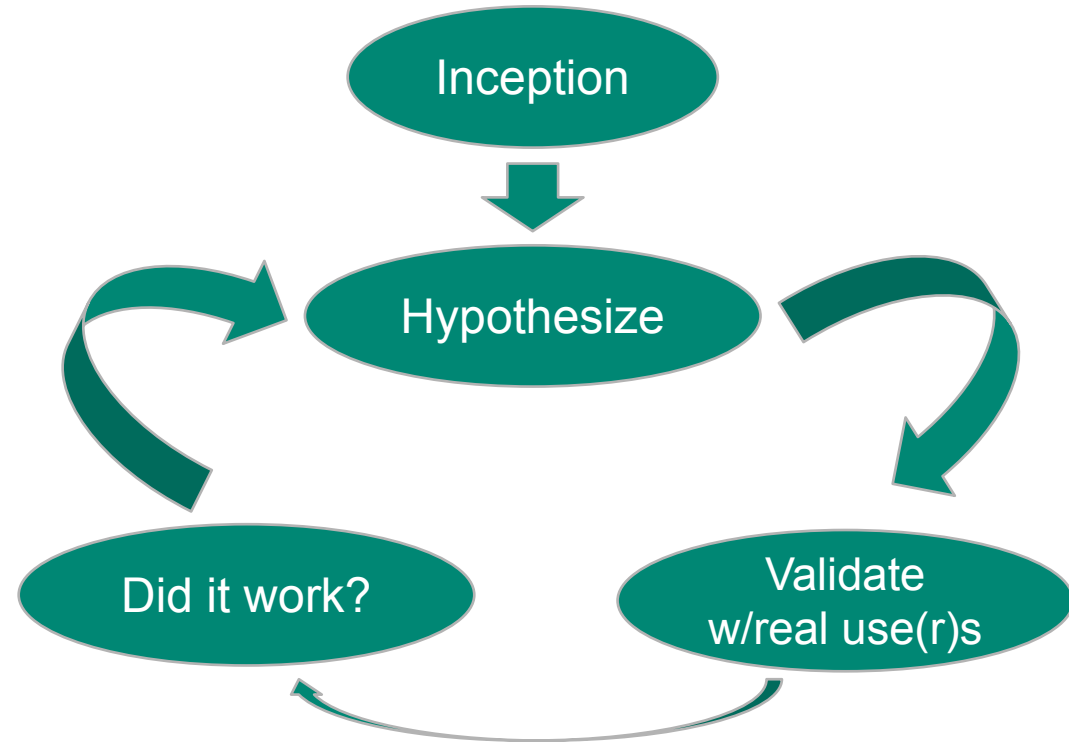
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89 104



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 >

Source: "[Minimum Viable Taxes: Lessons learned building an MVP inside the IRS.](#)" slides , Andrea Schneider & Lauren Gilchrist, 2015.
See also "[Delivering Simpler, Clearer, Faster Government Services.](#)" Lindsay Holmwood, Oct 2016

It's actually working in mainstream, large shops



40%+ productivity/cost, rebooted member facing app



From 30% time coding to 90%



3+ week to 3 days, 50% reduction in incidents



Vitality drove engagement from 3% to 30%+



100% visibility into app portfolio



Delivered 3x features year/year

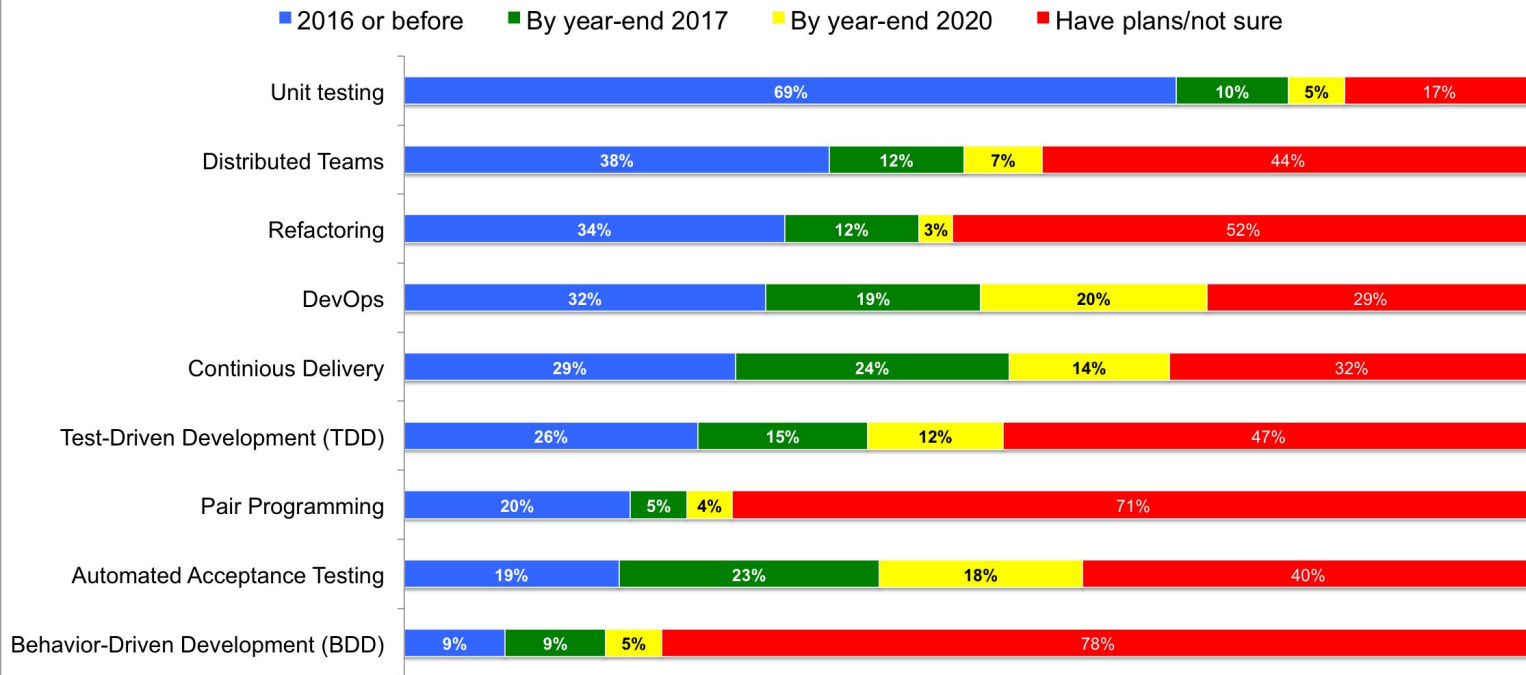


Source: <http://tirefi.re/>

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

When did or will your organization begin to use each of the following agile enterprise practices?

Base: n=176 Gartner Research Members, survey conducted Oct. 2016



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.

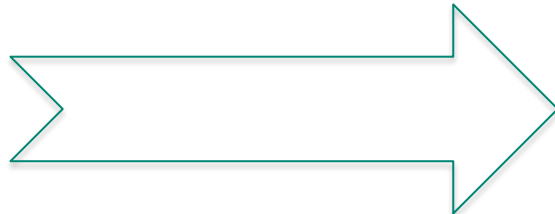
Management will be the first to fail



“I can’t tell you what having a leader stand-up in front of an organization with a hoodie and t-shirt does to cultural change. It all the sudden makes it OK for everyone within that organization to participate in change.”

-Matt Curry, Allstate

Organizations can't be changed, they can only be created

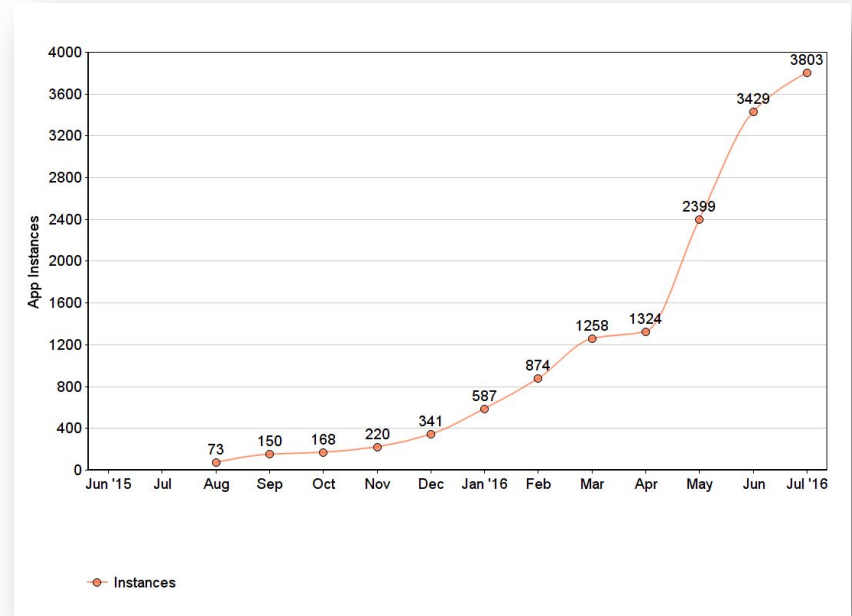
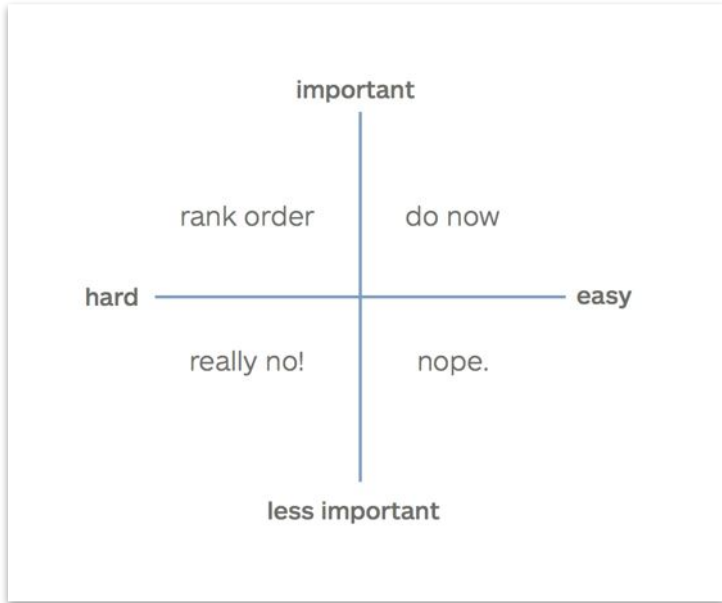


- Team-by-function
- “Sync” meetings
- Requirements-centric
- Project
- Gated phases

- Balanced Team
- Pairing
- User-centric
- Product-minded
- Full ownership

Ramping up: “Pilot low-risk apps, and ramp-up”

Picking your initial apps, according to Comcast, Humana, Ford, & Home Depot



Sources: [Home Depot meetup, Oct 2015](#); [Humana at CF Summit 2015](#); EU payday loan company; Pivotal Labs on large auto company; [“Getting started.” Coté, Oct 2016](#); [Comcast’s Christopher Tretina at SP1 2016](#); [“Cloud-Native at Home Depot. With Tony McCulley.”](#) Number of AI’s equates to ~130 apps composed on ~900 services. See also a general pattern [applied to analytics from BCG, July 2016](#).

Managing the change: pace yourself

- Liberty Mutual 10 (simple) apps in 10 weeks
- Allstate 16 apps in a year
- THD ~130 apps in a year
- Auto manufacture ~115 after two years
- BUT! If you don't start, you'll suffer analysis paralysis.

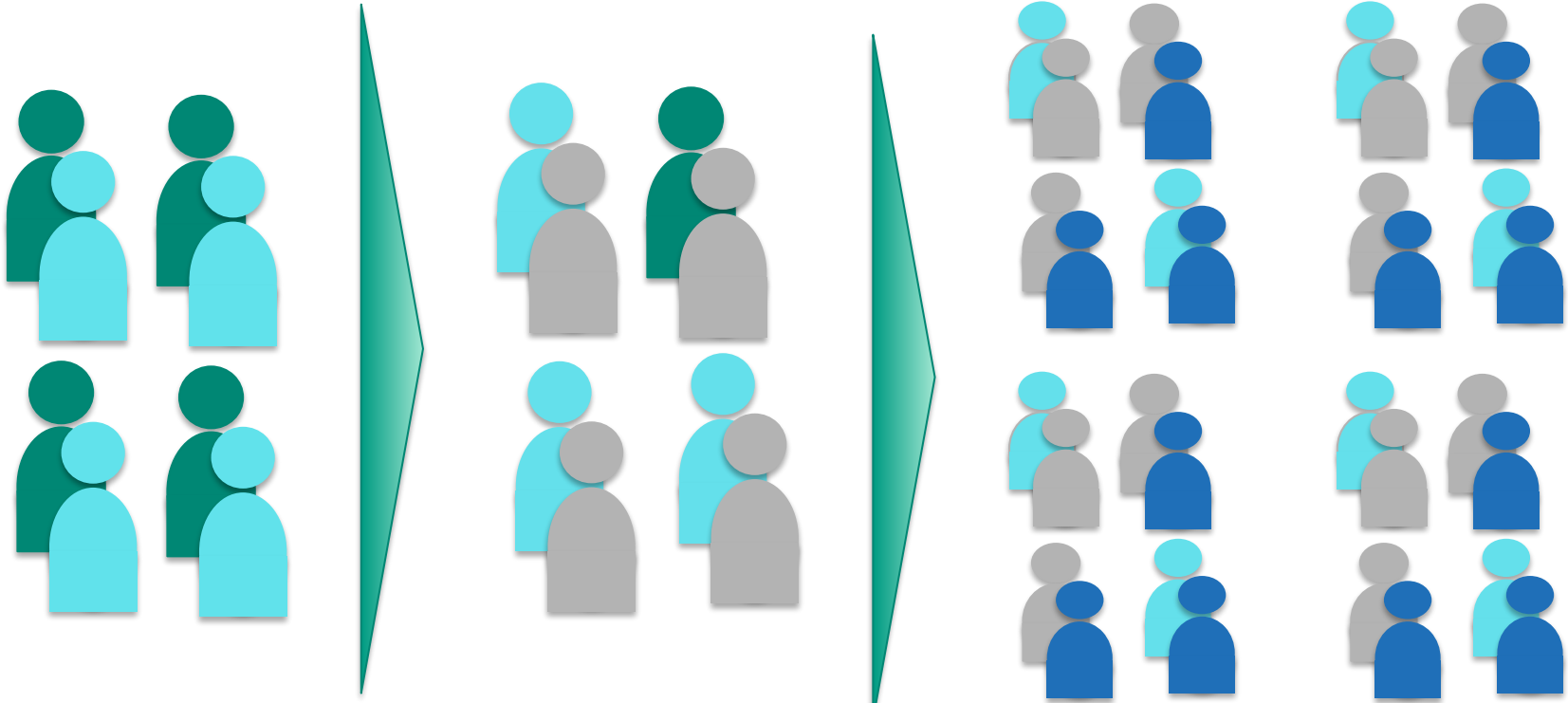
Internal marketing: everything, frequently



Pairing: across roles, geographies, rotating



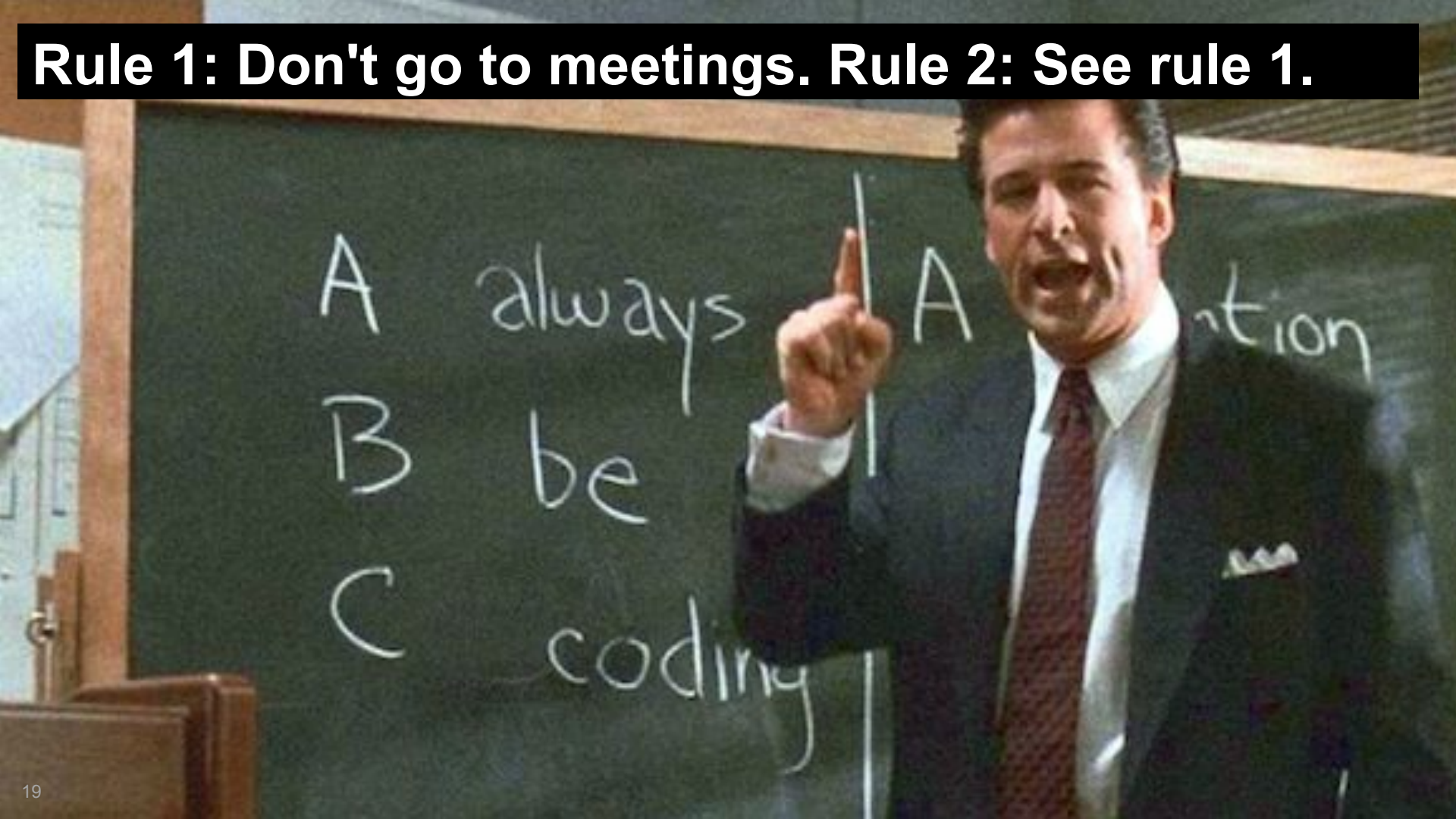
Pairing to spread skills & cloud native culture



Year 0

Year 2

Rule 1: Don't go to meetings. Rule 2: See rule 1.

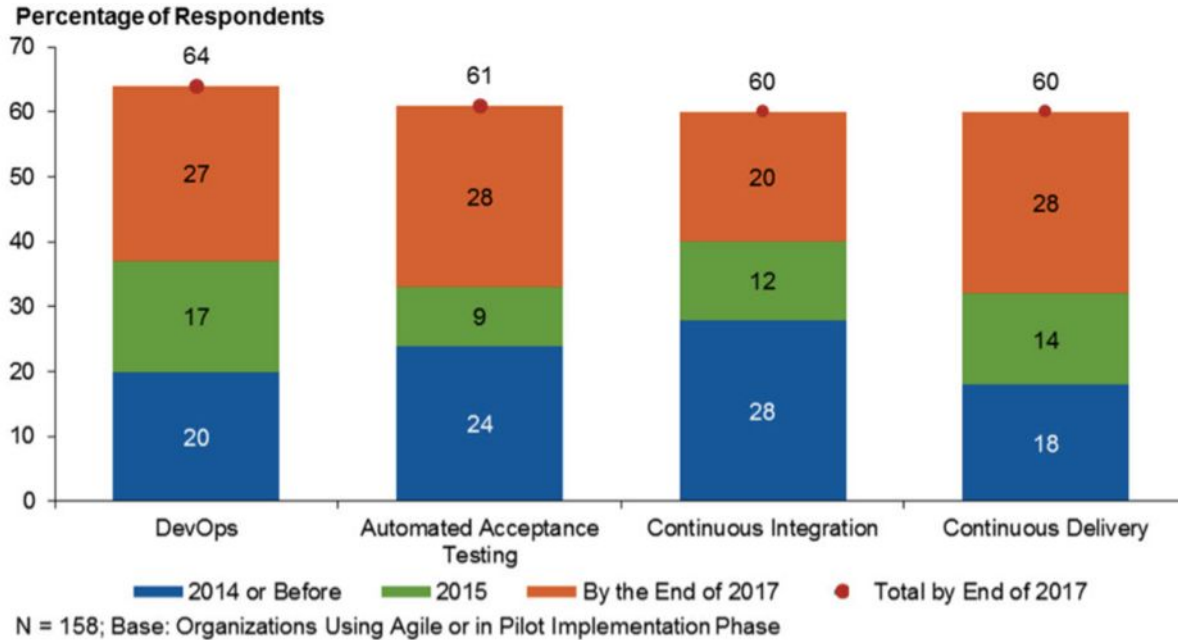
A man in a dark suit, white shirt, and red tie stands in front of a chalkboard. He is pointing his right index finger upwards. The chalkboard has handwritten text in white chalk. The text is arranged in three rows, separated by a vertical line. The first row says 'A always', the second row says 'B be', and the third row says 'C coding'. To the right of the vertical line, the word 'A' is written in the first row and 'ntion' is written in the second row.

A always | A
B be |
C coding | ntion

A pair of silver-rimmed glasses is resting on a stack of papers and a laptop keyboard. The background is a soft-focus office setting with a yellow sticky note visible at the top. A semi-transparent grey box is overlaid on the center of the image, containing text.

“You can type anything you want in a Word document!” Mark Ardito, HCSC

60% of organizations still don't have CI in place, only ~15-25% have full CD

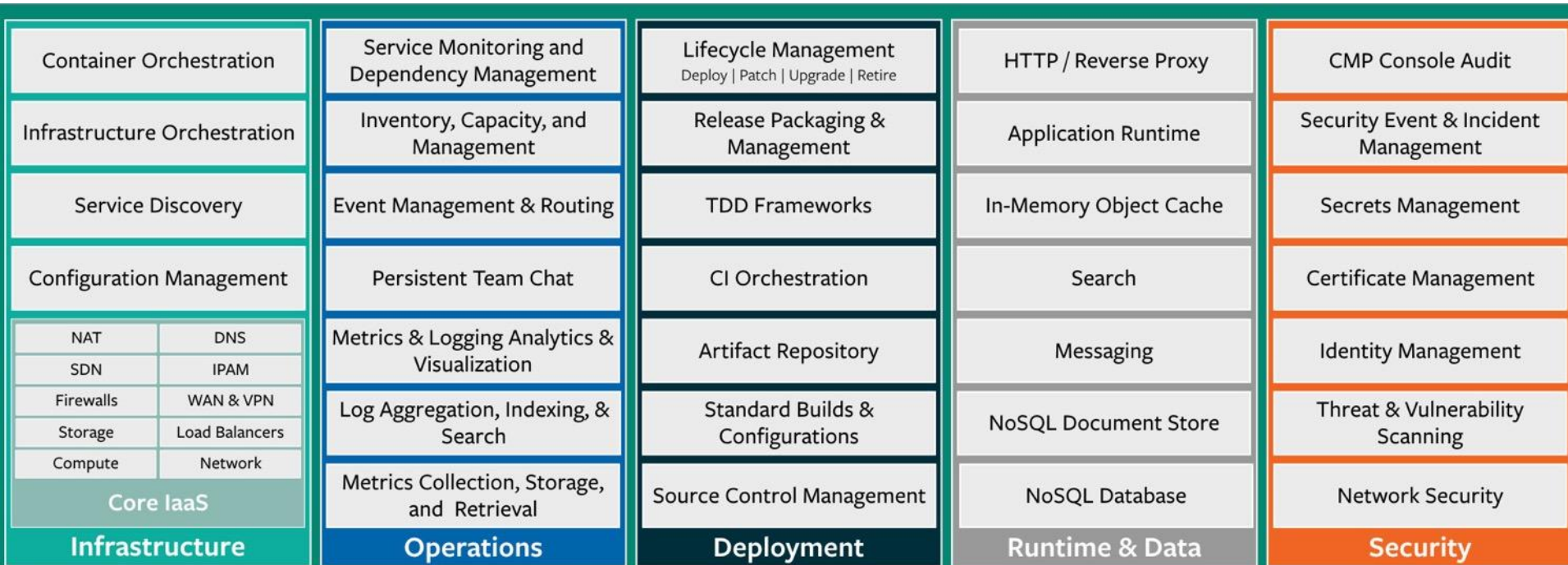


“I think that’s one of the biggest things that needs to be built up over time when you’re talking about deep ingrained cultures around managing risk by slowing everything down. To speed things up you need to have trust and complete transparency through that process which you get through enforcing continuous delivery pipelines.”

Dave Ehringer, Liberty Mutual

Source: ["A Guidance Framework for Continuous Integration: The Continuous Delivery 'Heartbeat.'" William R Holz, Gartner, Jan 2016.](#) See also ["CI/CD from a donkey perspective"](#) for a more depressing perspective, and [Gary Gruver's books for the importance of CI.](#)

Standardize on a platform: special snow flakes are slow, expensive, & error-prone

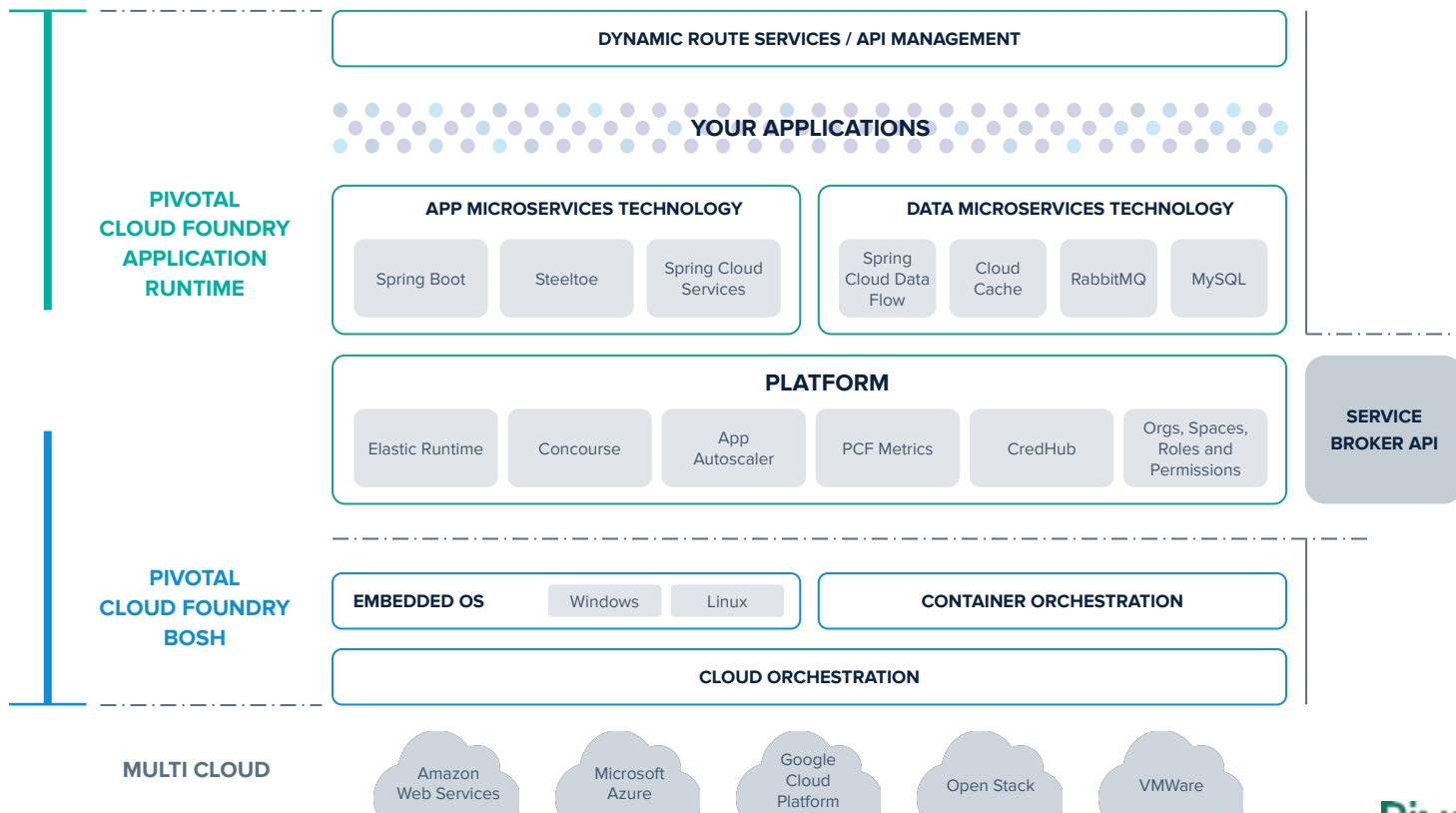


Reference Architecture for Cloud-Native Platforms



Pivotal Cloud Foundry®

MODERN CLOUD NATIVE PLATFORM



Crafting Your Cloud-Native Strategy

by Michael Coté

Pivotal

EBOOK

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<http://cote.io/cloud2> and <http://cote.io/cloud3>

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

- *The Agile Manifesto*, 2001

Thanks!

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