

DevOps for Normals

@cote

DevOpsDays DFW, September 2016

Slides: <https://cote.io/DevOps-for-Normals>

Hello!



- [@cote](#) – Director, Marketing at Pivotal
- Former industry analyst at 451 Research and RedMonk
- Corporate strategy and M&A at Dell
- Former software developer
- More: cote.io/podcasts, <http://cote.io>, cote@pivotal.io, Register [DevOps column](#).

It's not much of an IT department, but I'm sorta attached to it...



How we got here

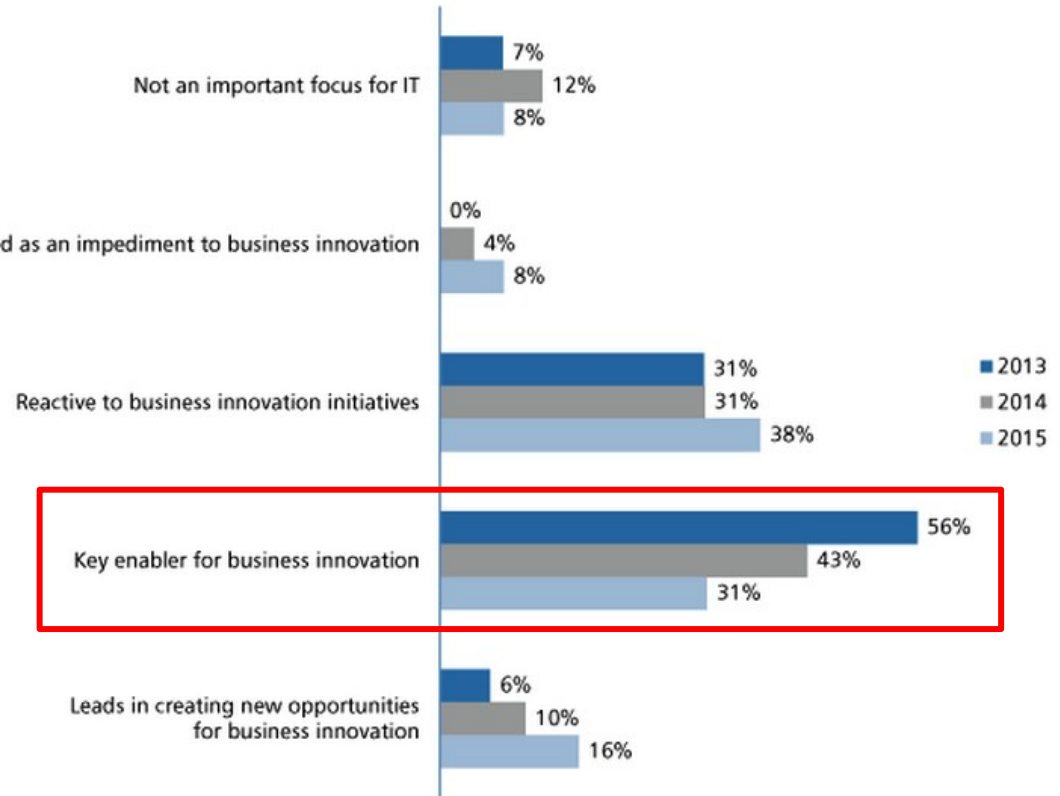


“Silicon Valley is coming....
We are going to work hard to make our services as seamless and competitive as theirs.”

-Jamie Dimon, CEO@JPMC,
2015 letter to shareholders

Organizations are held back by an IT agility gap

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





The Cloud Native Theory

(1.) In an era of transient advantage, the inherent agility of software is one of the best strategic tools.

(2.) However, software in large organizations does not currently “work like that.”

(3.) The fix is changing how we think of the process of software, supported by cloud native technologies & practices.

Making IT Matter With Small Batches



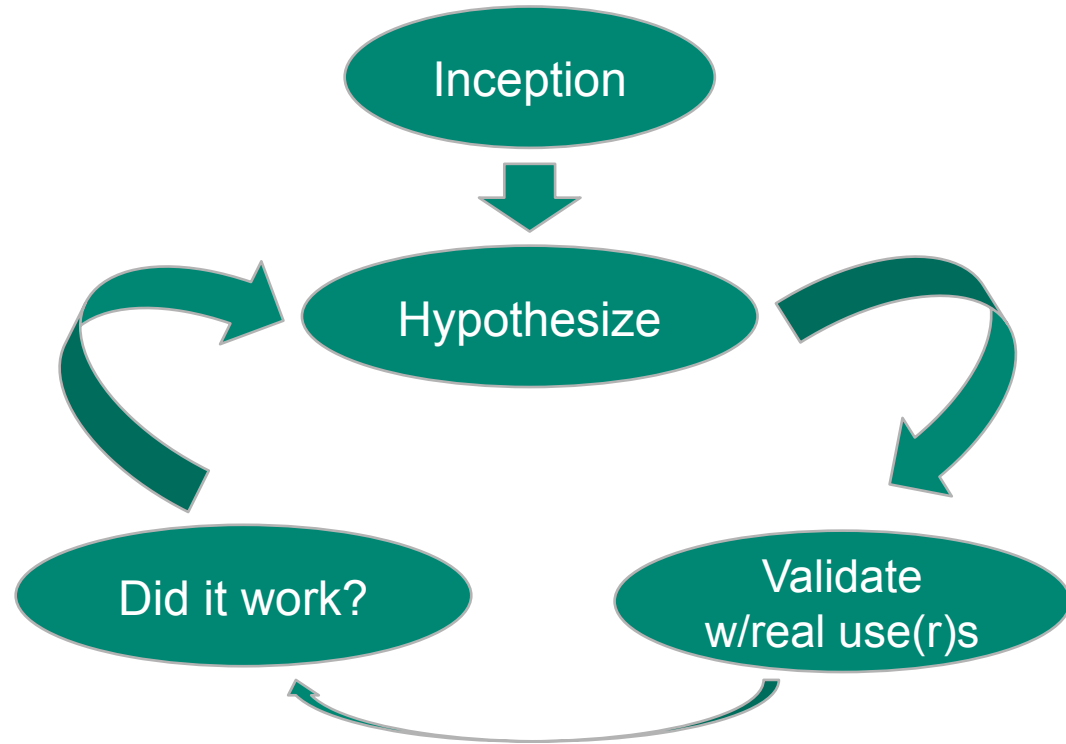
*How most
businesses
think they're
doing*



*How smart
businesses
know they're
doing*

Use small batch thinking, at all levels

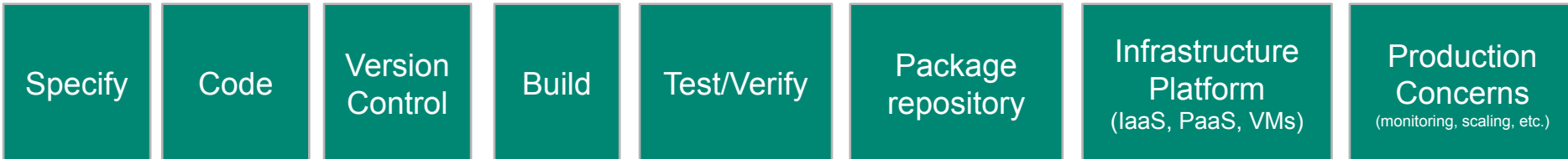
“We did an analysis of hundreds of projects over a multiyear period. **The ones that delivered in less than a quarter succeeded about 80% of the time, while the ones that lasted more than a year failed at about the same rate.** We’re simply not very good at large efforts.”



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.

How a small batch process works



Feedback Loop

User-centric Design



User-centric design

How Projects Really Work (version 1.5)

Create your own cartoon at www.projectcartoon.com



How the customer explained it



How the project leader understood it



How the analyst designed it



How the programmer wrote it



What the beta testers received



How the business consultant described it



How the project was documented



What operations installed



How the customer was billed



How it was supported



What marketing advertised



What the customer really needed

How much do I owe the IRS?

Before

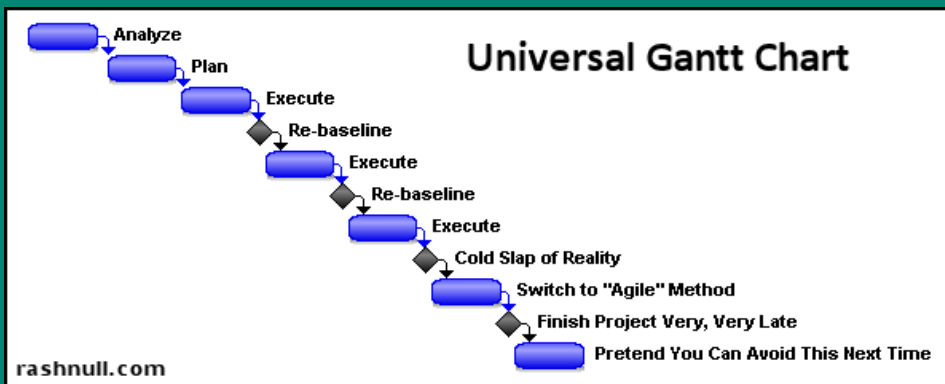
Overview by Year			
YEAR	STATUS	AMOUNT	
2014	Balance Due	\$644	>
2013	Taxes Paid	\$685	>
2012	Refund/Applied	\$100	>
2011	No Information Available	--	

After

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

Agile & DevOps

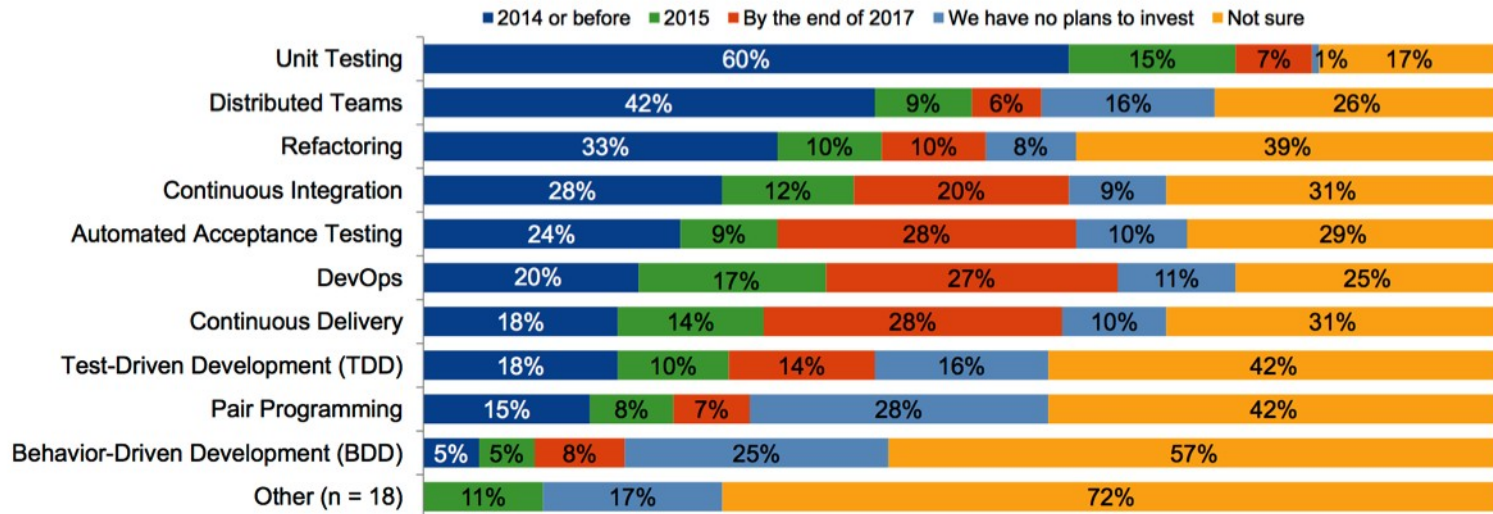
(Low-level Meatware)



After 17 years, “Agile” is not as wide-spread as we think it is – make sure you’re actually doing it

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

n = 155; Base: Organization uses agile or is in pilot implementation phase

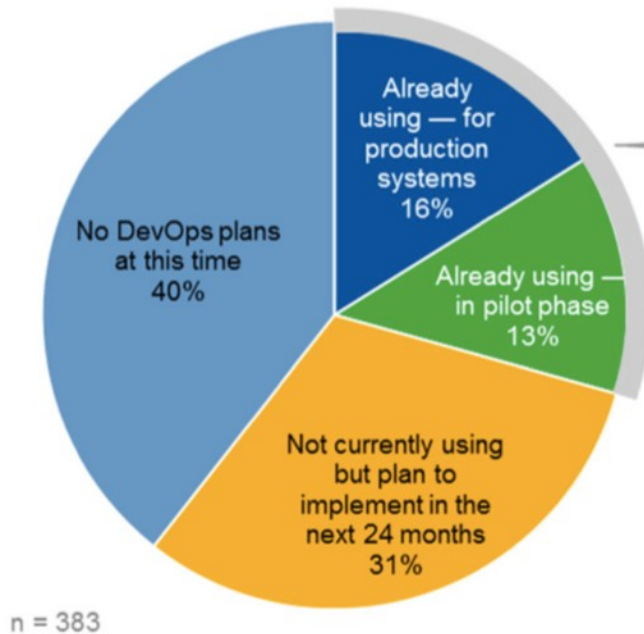


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Gartner

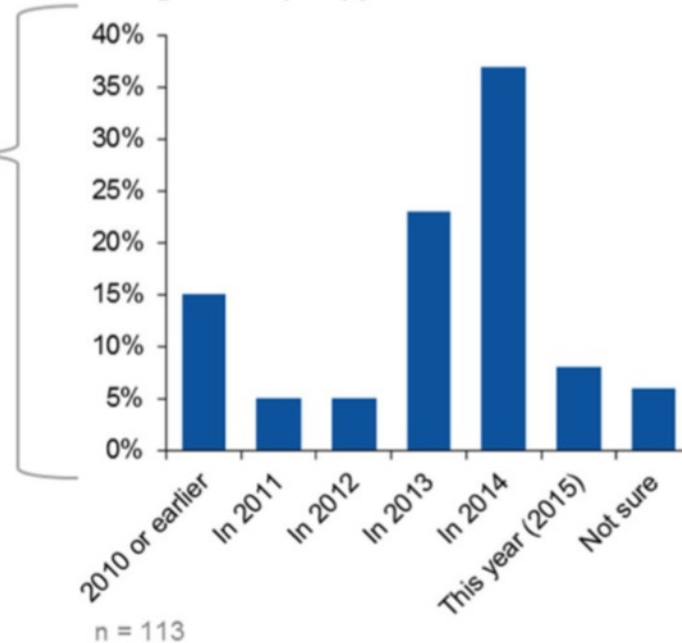
It's finally happening! Most surveys show wide use and belief in DevOps

Does your organization use, or plan to use a DevOps approach to IT?



Source: Gartner (September 2015)

When did your organization first start using a DevOps approach to IT?



Source: ["Survey Analysis: DevOps Adoption Survey Results,"](#) Gartner, Sep 2015. Also see ["You, yes YOU: DevOps' people problem"](#) for more momentum figures.

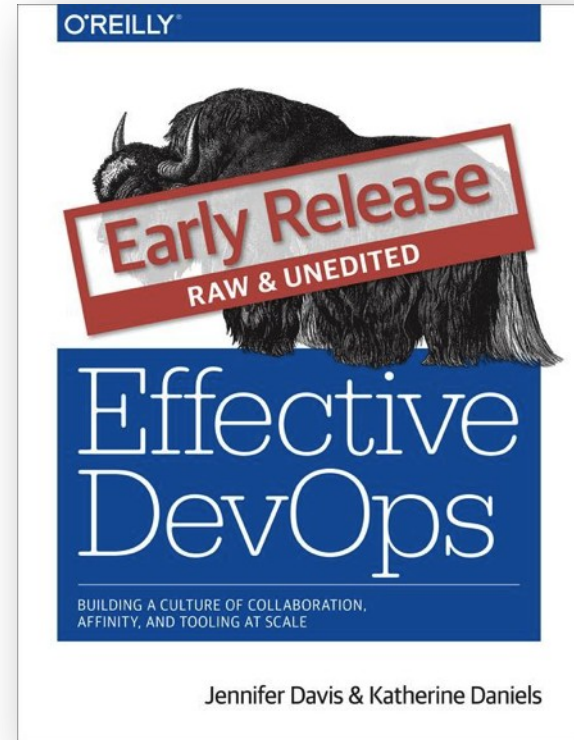
DevOps, the word defines itself

(1.)

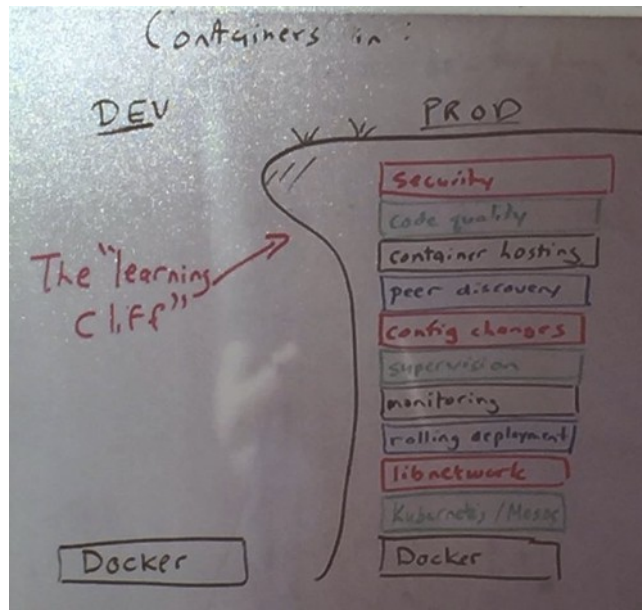
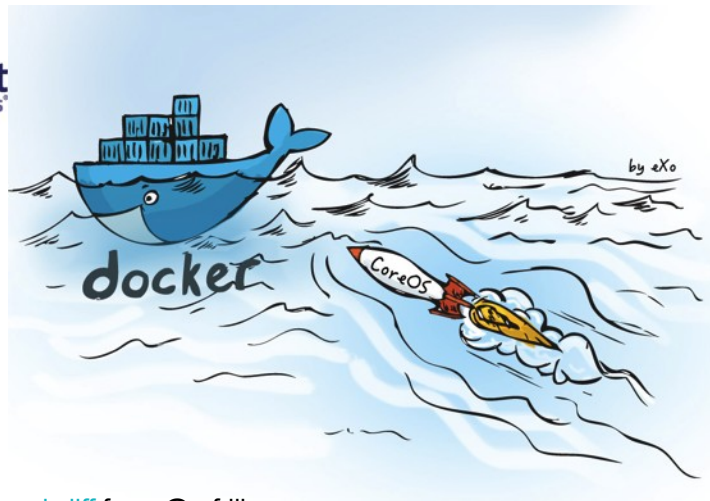
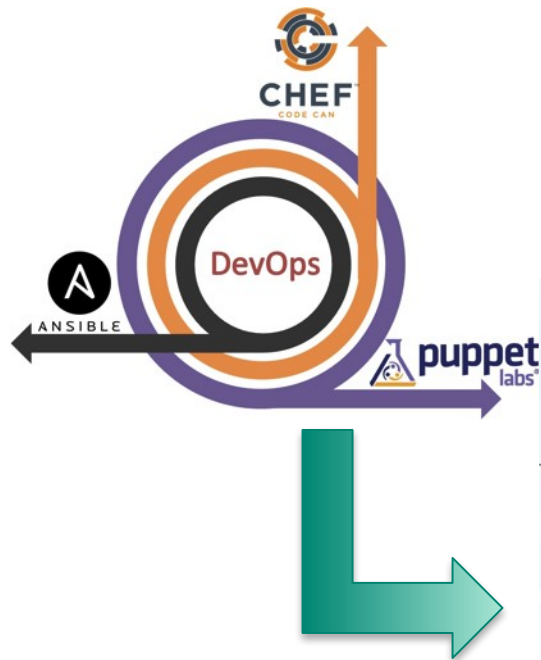
DevOps is the practice of operations and development engineers participating together in the entire service lifecycle, from design through the development process to production support.

(2.)

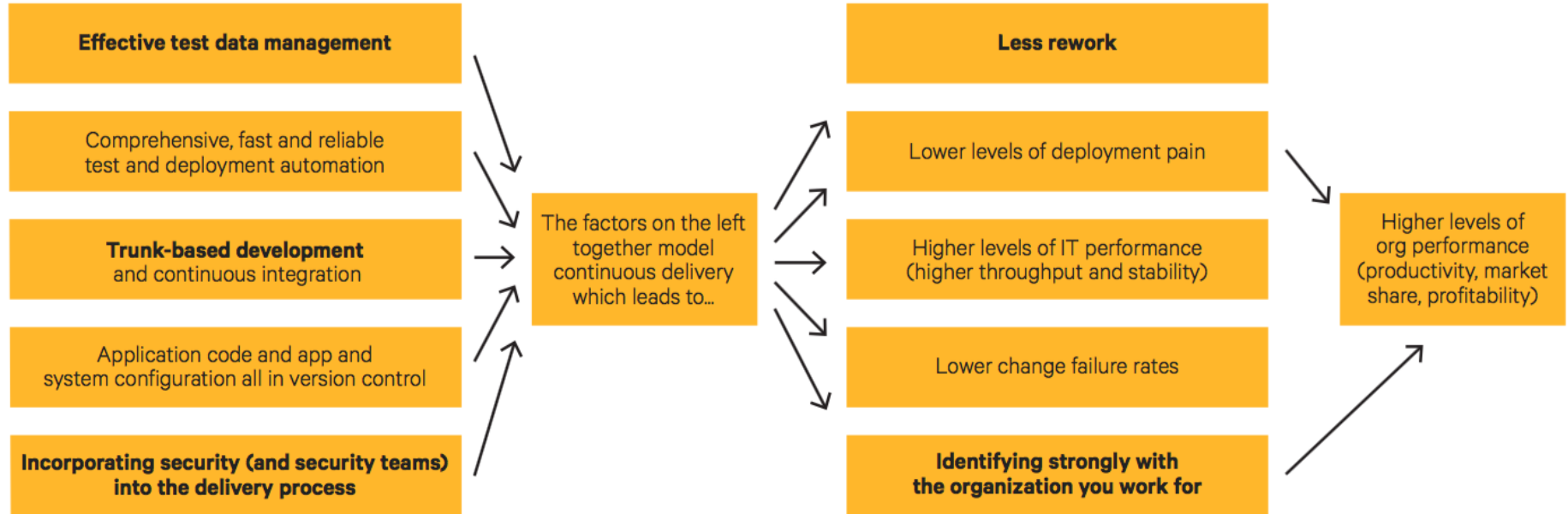
DevOps is also characterized by operations staff making use of many of the same techniques as developers for their systems work.



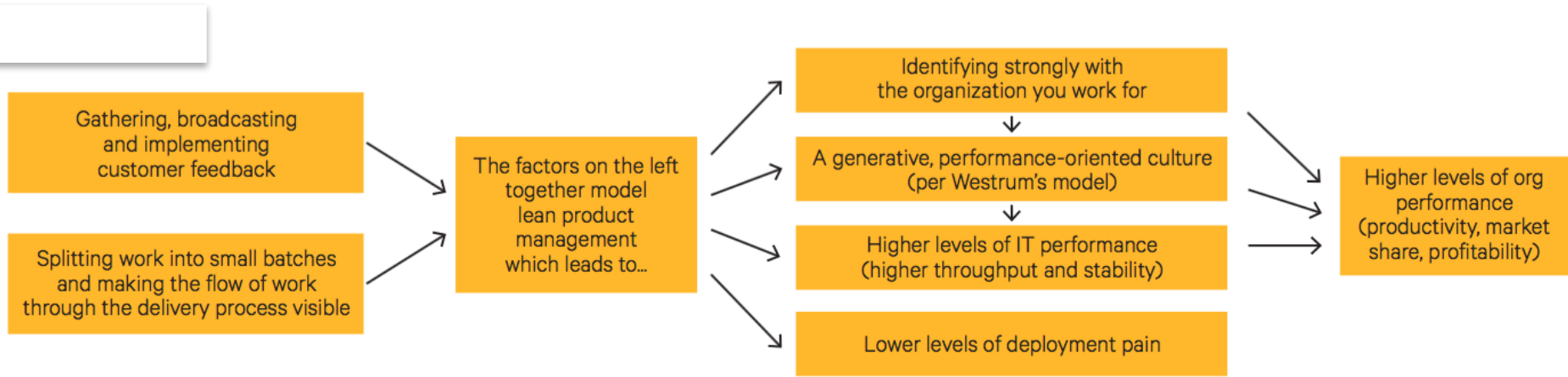
Technology-driven definitions of DevOps are easy, but not resilient over time



Goals, practices, and process are more durable



Goals, practices, and process are more durable

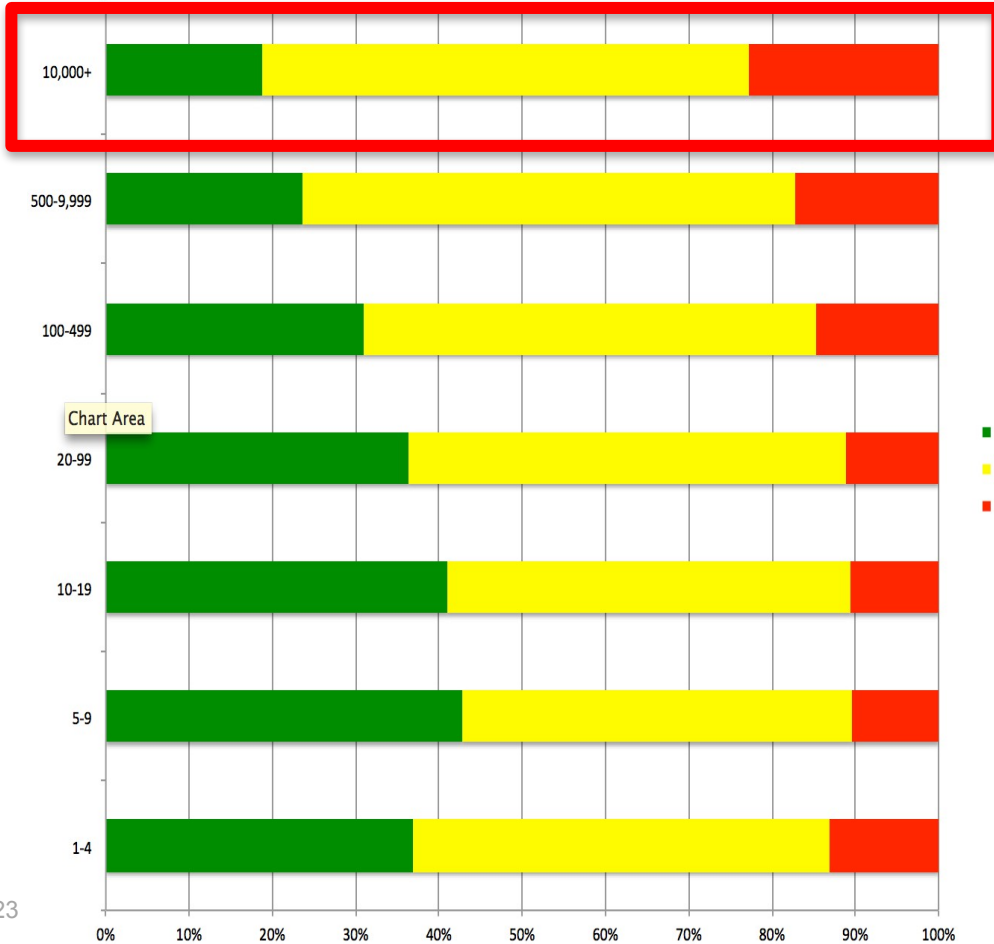


Cultural Transformation

(High-level Meatware)



Can large organizations do the DevOps?



Sort of.

*But orgs with
10,000+ employees
40% less likely to be
high performing vs.
500 employee
orgs...*

Source: ["DevOps Means Business."](#) Nicole Forsgren Velasquez, Jez Humble, Nigel Kersten, Gene Kim, June 2014. Question from Donnie Berkholz.

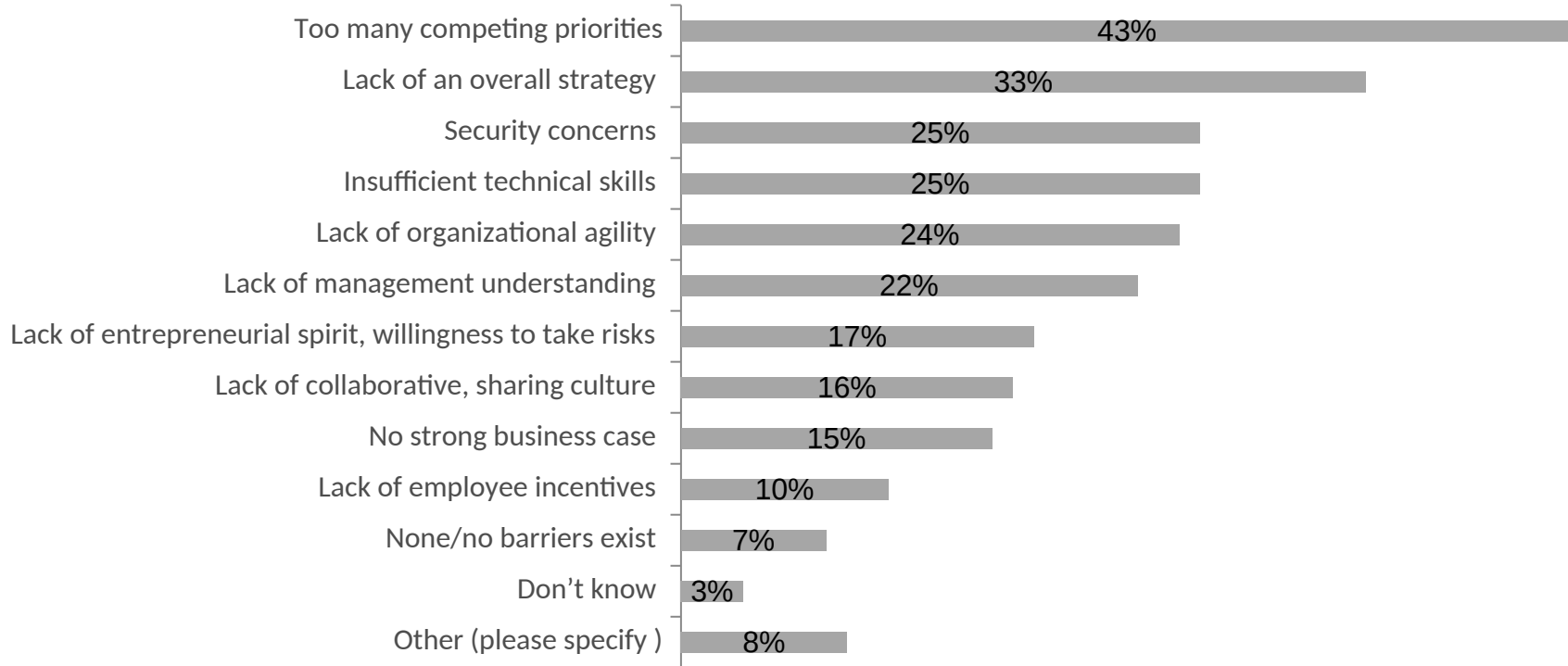
Anti-pattern: DevOps Theater

You have to actually do the work of changing



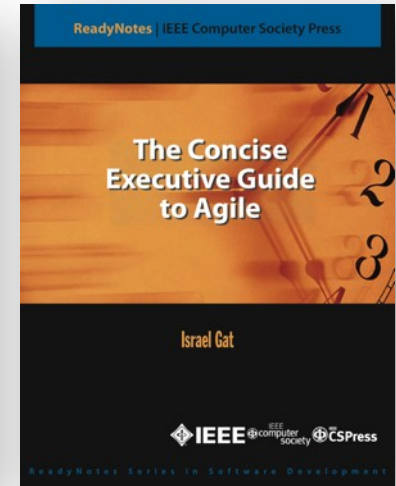
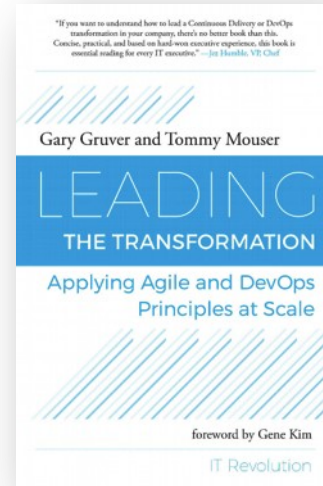
Most problems are in the meatware

What barriers are impeding your organization from taking advantage of digital trends? (select up to three)



Management creates the game

- Leading change management
- Setting, communicating, tracking goals
- Dramatic organization change, gradually
- E.g.: from autocrat to self-directed teams



To change, you must actually change

Or, how t-shirts jump-start digital transformation



“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

Dealing with legacy: the stuff that makes all the money

Quarantine

- Low impact applications
- Lacks good testing, risky to change
- Change resistant priorities



Migration Strategies

- Virtualize & re-platform to control costs and maximize management
- API gateways combined with the strangler pattern
- Portfolio management (cf. The Three Horizons)

Sources: ["DevOps isn't just about the new: It's about cleaning up the old, too,"](#) Coté, April 2016; [The Cloud Native Journey](#), Coté, 2016; [Es cape Velocity](#), Geoffrey Moore, Sep 2011 and ["To Succeed in the Long Term, Focus on the Middle Term,"](#) Geoffrey Moore, August 2007.

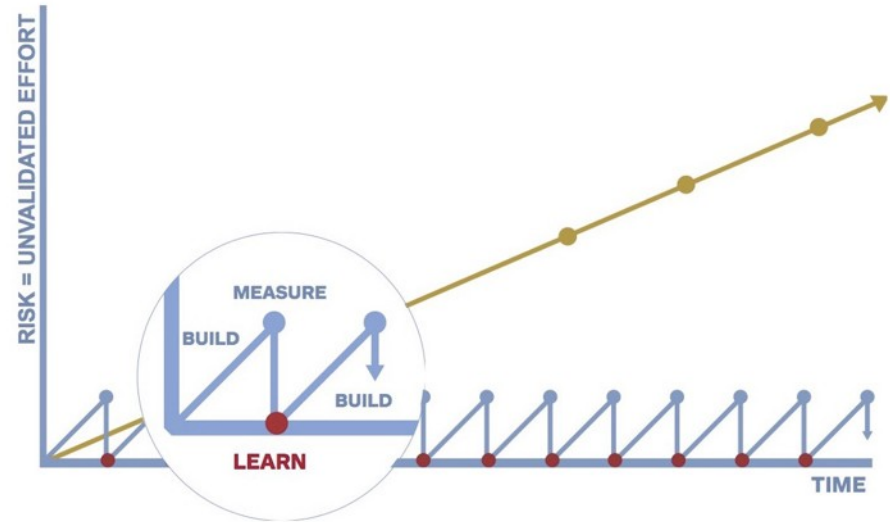
“We don’t want to pave over [old controls]...automating inefficiencies”

Dealing with GRC, according to a US Federal government agency

- Include auditors & security staff from the start, embed on the team even
- Give auditors access to the platform to “go see”
- Re-visit processes and controls that no longer apply
 - E.g.: patching “servers” and the OS

A cloud native approach improves risk management

1. Bug swarms
2. Useless software
3. Stymied innovation
4. Budget overruns
5. Schedule elongation



Two pizza teams with end-to-end involvement

“The best way to do this stuff is to get a multi-disciplinary team of people in house – designer, user researcher, developer, content person – you’re talking a team of about twelve people”



Source: “[Why Britain banned mobile apps; Interview with Ben Terrett, former design chief at the GDS,](#)” GovInsider, June 2016. See also “[From Aristotle to Ringelmann,](#)” June 2016. Picture from [Pivotal SafeMeds scrapbook;](#) “[Roles and Responsibilities for DevOps and Agile Teams,](#)” Coté, May 2016.

“Pilot low-risk apps, and ramp-up”

Picking your initial apps, according to Home Depot

- User/customer facing – something real
- Run through the whole process
- Low visibility – you’ll be learning in production
- Create “Islands of Freedom”
- In place of apps, perhaps just microservices



Theory: bootstrap with “cowboys,” run with city folk



Likes shiny objects,
gets bored easily.



Likes knowing what to do,
thrives with stability.

Staffing: There is no talent shortage

F100 CTO:

“But Netflix has a superstar dev team, we don’t!”

@adriano:

“We hired them from you.”

“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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