



DevOpsGuys
Web Management. **Simplified!**

THE NEED FOR SPEED

March 2015

ABOUT STEVE

2

- Co-founder @ DevOpsGuys
 - “Application Management Provider (AMP)”
- 25 years in Infrastructure & Operations
- Twitter - [@TheOpsMgr](#) & [@DevOpsGuys](#)
- Blog - <http://blog.devopsguys.com/>

What is DevOps?

3

According to today's speakers...

WHAT IS DEVOPS? – DAVE

4

“**DevOps** is about developers and operations people working collaboratively to release software to users.

Continuous Delivery is about making businesses more experimental through the early and continuous release of valuable software.”

Dave Farley, Continuous Delivery Ltd.



WHAT IS DEVOPS? - MATTHEW

5

“Highly effective, daily collaboration between software developers and IT operations people to produce relevant, working systems.”

Matthew Skelton, Skelton Thatcher Consulting



WHAT IS DEVOPS? - ANNA

6

“DevOps means a culture where developers and web operations engineers communicate and work together, as opposed to a siloed organisation where developers throw code over the wall to operations and expect web operations engineers to make sure it runs in production.”

Anna Shipman, GDS



WHAT IS DEVOPS? - AMY

7

“I'm afraid I'm a tester...
so have pretty much no idea
what DevOps is about.”

Amy Phillips, Songkick



WHAT IS DEVOPS (MY VERSION)

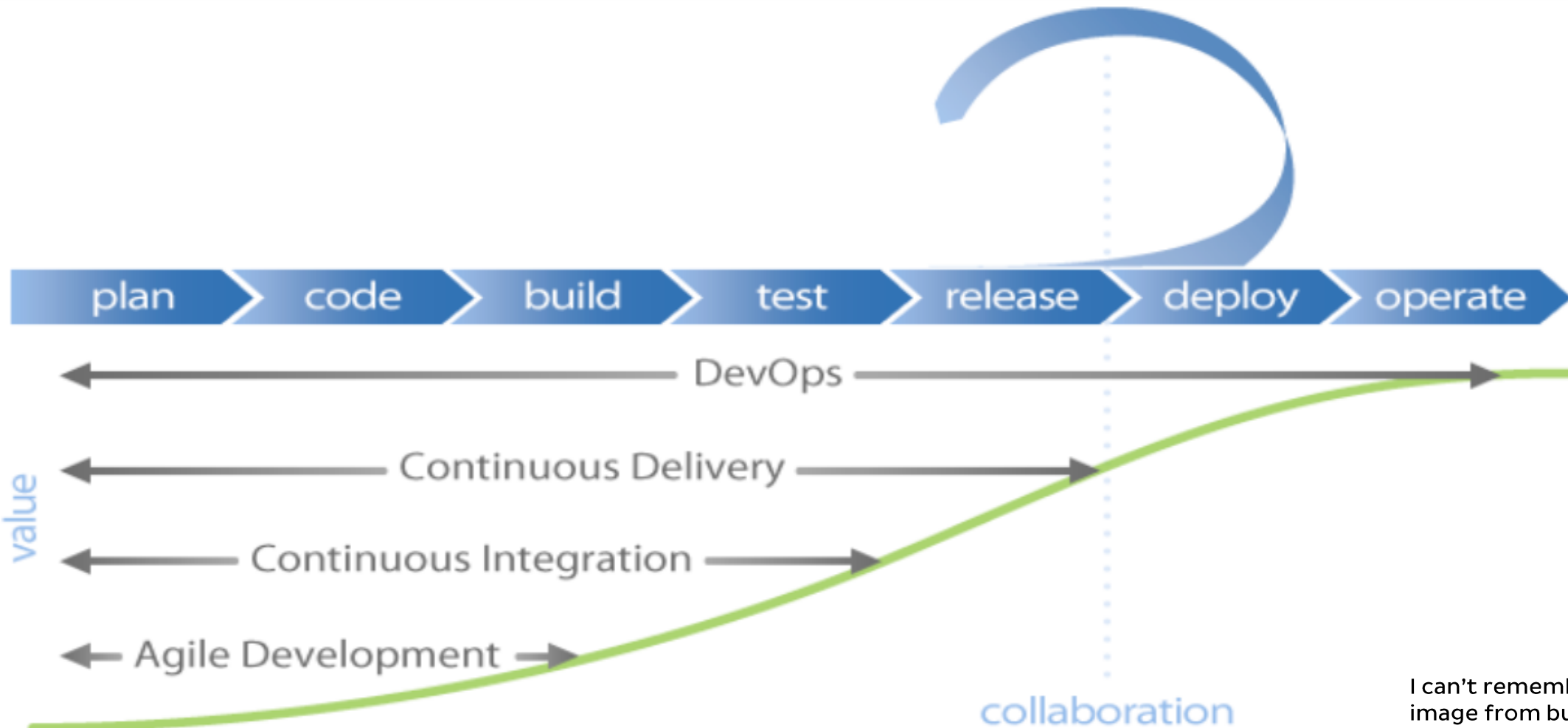
DevOps is an alternative model for the creation of business value from the software development life-cycle that encompasses a product-centric view across the entire product life-cycle (from inception to retirement) and recognises the value in close collaboration, experimentation and rapid feedback.”

– <http://blog.devopsguys.com/2014/04/16/devops-organic-versus-transformational-devops/>



DEVOPS > CD OR DEVOPS < CD?

9



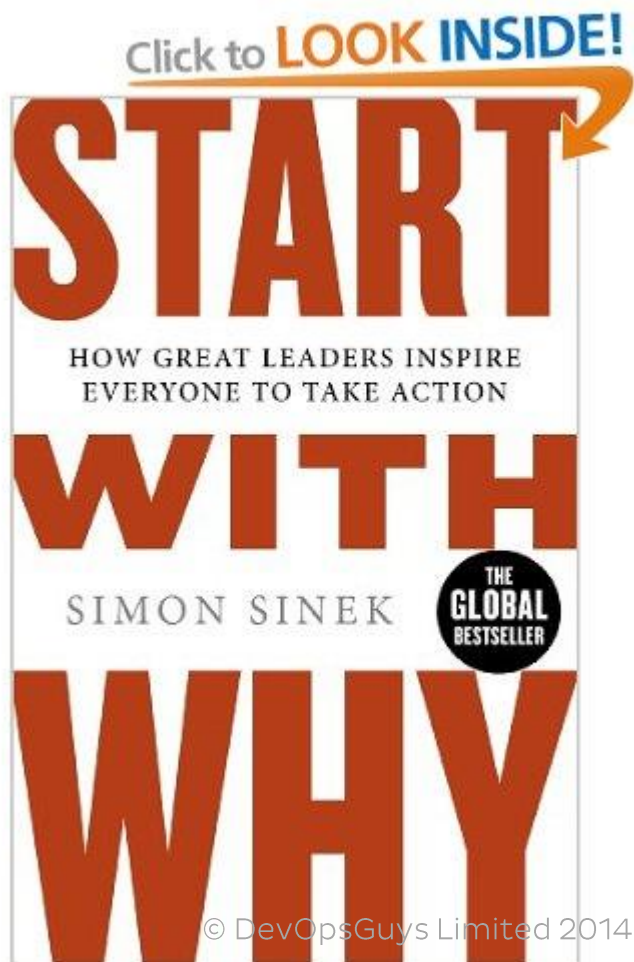
I can't remember where I got this image from but thanks, it's awesome ☺

Start with Why

10

If you want to change your company, start with Why!

START WITH WHY



Log in

TED

Simon Sinek
Start With Why
How Great Leaders Inspire Action

Simon Sinek:
How great leaders inspire action

TEDxPuget Sound · 18:04 · Filmed Sep 2009
Subtitles available in 42 languages

View interactive transcript

21,216,814 Total views

Share this talk and track your influence!

WHY #1 – BUSINESS WANTS IT FASTER

12

Design &
Plan

Code

Integrate

Test

Release

Deploy

Operate

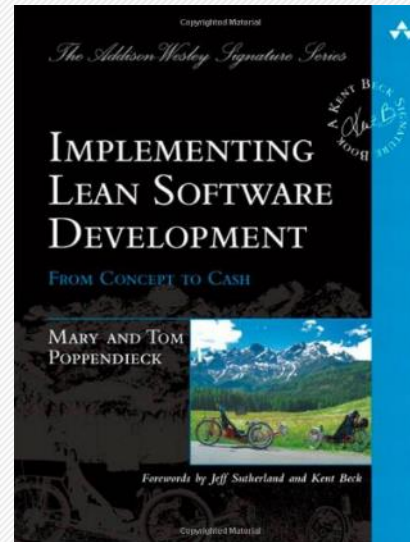
Reduce “Cycle Time”

Idea

“Concept”

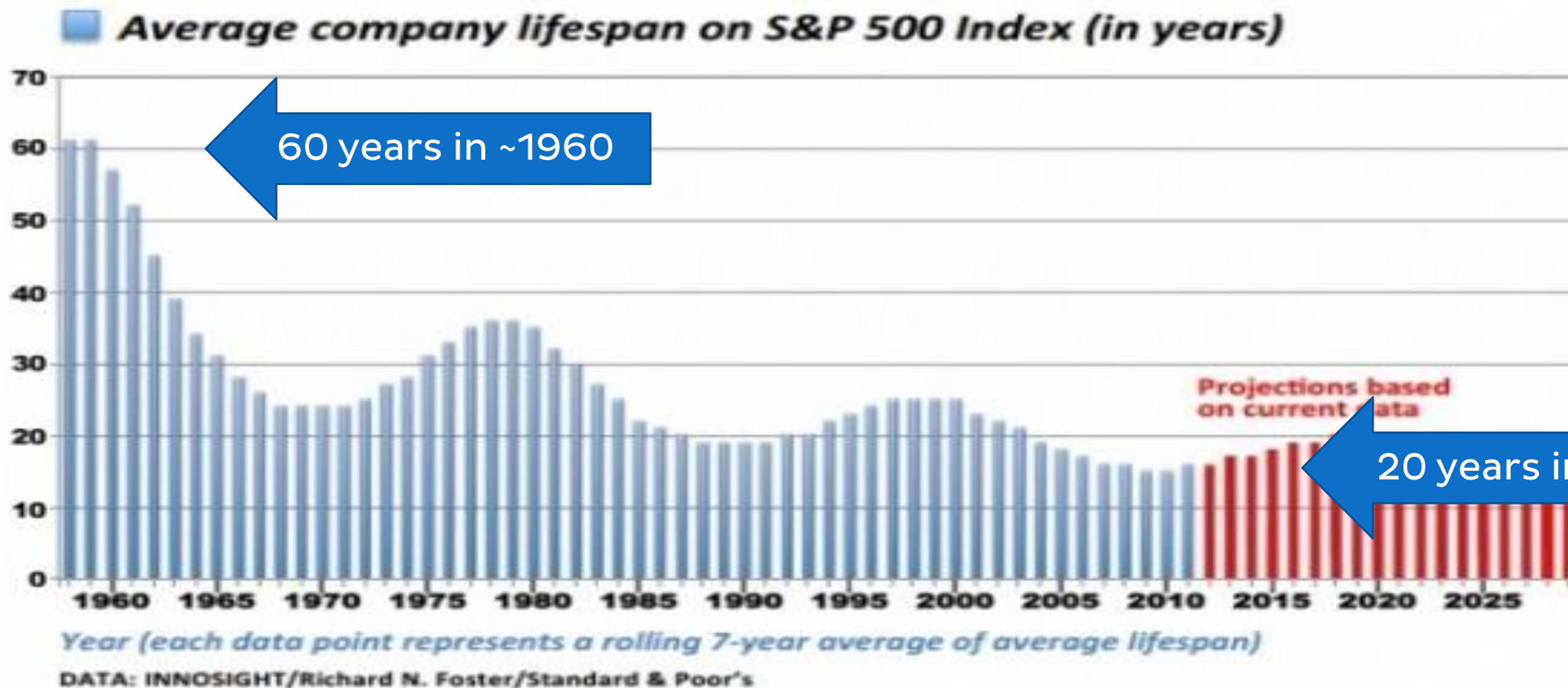
Business value

“Cash”



WHY #2 – COMPANIES LIFESPAN

13



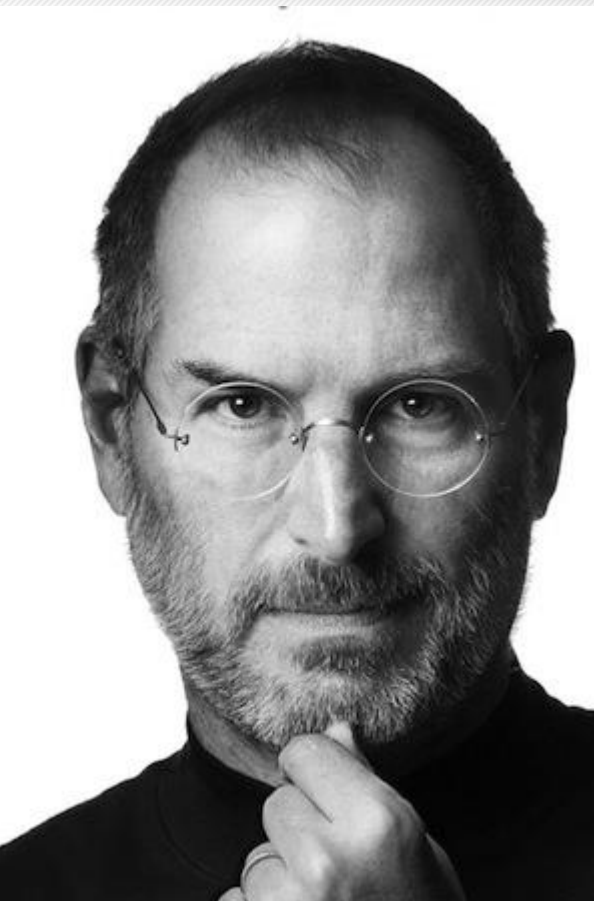
WHY #3 - “HYPER-COMPETITION”

14

- Reduced “Barriers to Entry”
 - Internet & Cloud “levelling playing field”
- Switch from Capex to Opex
 - Cloud makes it easy to start small and grow but still address a global market
- Reduction in “information asymmetry”
 - Customers are better informed (on price, quality via price engines & online reviews!)

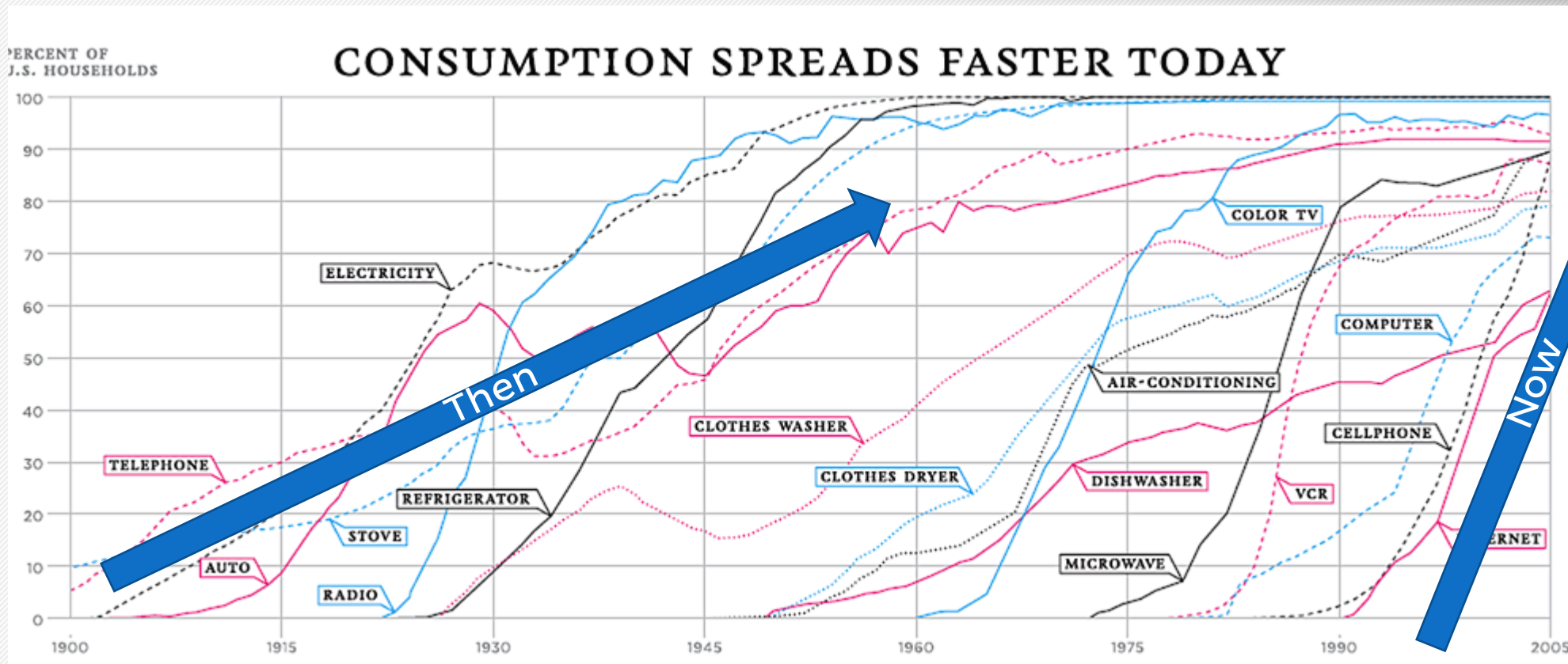
WHY #4 – CONSUMER BEHAVIOUR

15



I want it NOW!!!

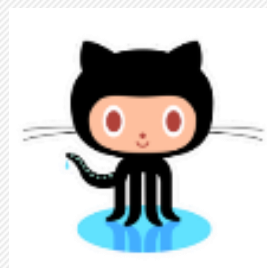
Consumer rates of Adoption



<http://andrewgelman.com/wp-content/uploads/2012/04/history-of-products.gif>

WHY #5 TECHNOLOGY ENABLERS

17



“The hierarchical structures and organizational processes we have used for decades to run and improve our enterprises are no longer up to the task of winning in this faster-moving world”

**John P. Kotter,
Konosuke Matsushita Professor of Leadership,
Emeritus at Harvard Business School**

HOW THE MOST INNOVATIVE
COMPANIES CAPITALIZE ON TODAY'S
RAPID-FIRE STRATEGIC CHALLENGES—
AND STILL MAKE THEIR NUMBERS.

BY JOHN P. KOTTER

ACCELERATE!

And on a personal note...

19

“I’m getting too old for this... stuff” 😊

**If you want a picture
of the future, imagine
a boot stamping on a
human face - forever.**

~George Orwell 1984



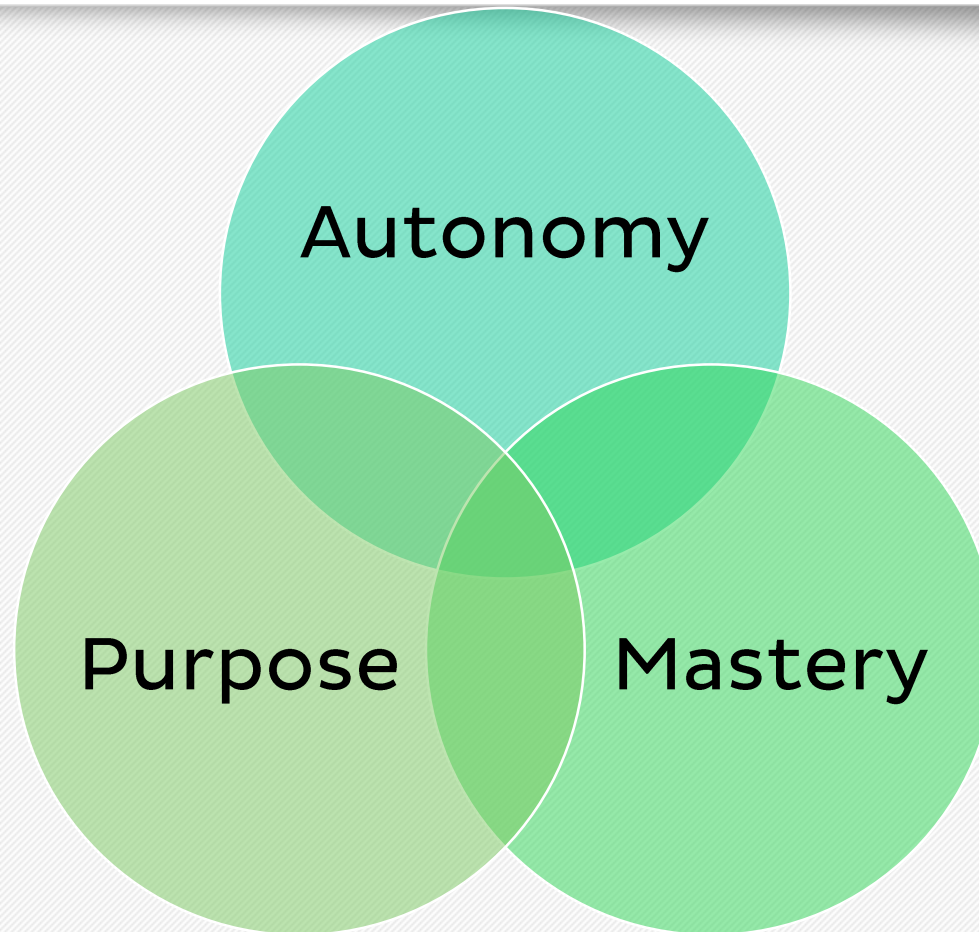
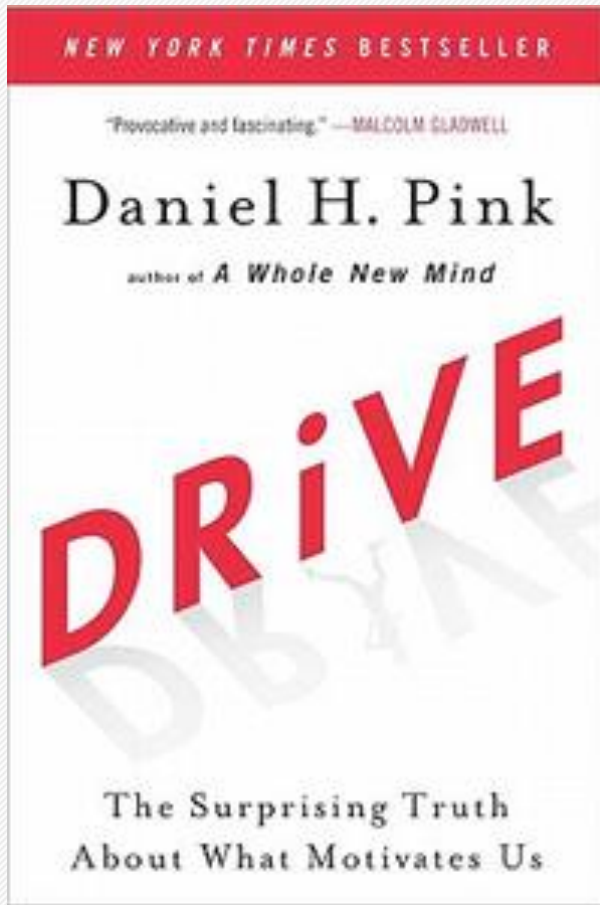
FOR “BOOT” SUBSTITUTE...

- “Management” not “Leadership”...
- Being called a “resource”...
- Outsourcing...
- Prince 2* ...
- ITIL* ...
- Six Sigma* ...

* Yes I know this is a bit unfair but allow me rhetorical license to rant against silos 😊

JOB SATISFACTION

22



1. *Autonomy* – the desire to direct our own lives.

2. *Mastery* – the urge to get better and better at something that matters.

3. *Purpose* – the yearning to do what we do in the service of something larger than ourselves.

SILOS SUCK

23

“Nothing tends to materialize man,
and to deprive his work of the
faintest trace of mind, more than
extreme division of labour.”

Alexis de Tocqueville (1841)



I feel the need...

24

**THE NEED
FOR SPEED.
-TOP GUN**

DANDELIONQUOTES.COM

**THE NEED
FOR SPEED.
-TOP GUN**

DANDELIONQUOTES.COM

RATES OF SOFTWARE DEPLOYMENTS

25



300 Deployments / Year



10+ Deployments / Day



50-60 Deployments / Day



Every **11.6 seconds**

THE DEVOPS MODEL

26

Culture

- Hearts & Minds
- Embracing Change

Automation

- Automate everything
- Software, Infrastructure, Manual Tasks

Lean

- Focus on producing value for the end-user
- Small batch sizes

Metrics

- Measure everything
- Show the improvement

Sharing

- Share everything
- Open Information, Collaboration

Accelerating via Culture

27

How can we improve delivery by improving culture?

CREATE A “HIGH TRUST” CULTURE

28

“In a low-trust culture, supervision is associated with words like *control, monitor, hover over, and check up.*”

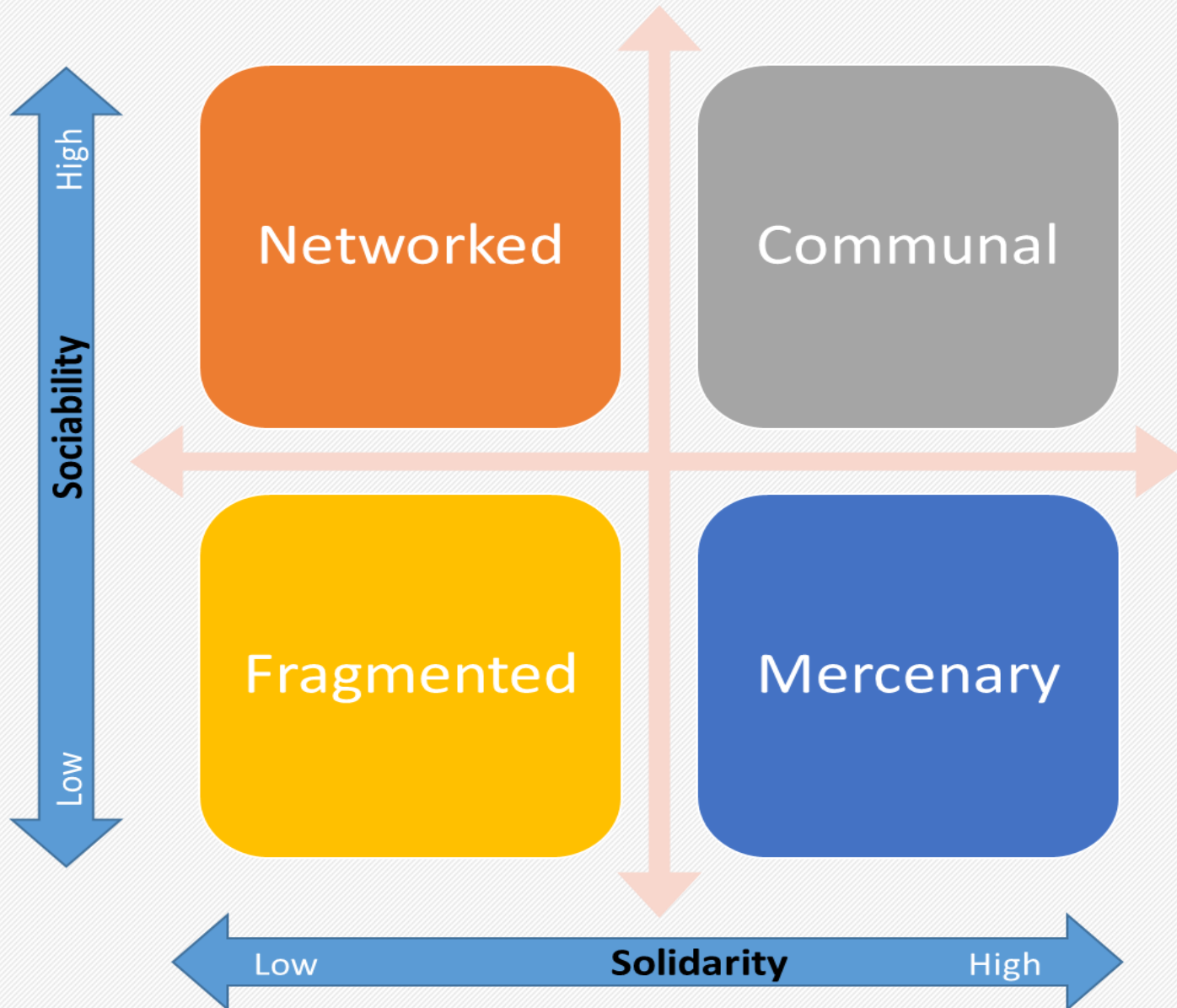
In a high-trust culture, people supervise themselves according to the agreement.

The criteria are clear, the consequences are set.

There’s common understanding of what’s expected.

A manager, leader, or parent becomes a source of help”
– Stephen R. Covey – “First Things First”

<http://www.amazon.co.uk/gp/product/0684858401>



What does YOUR organisational culture look like and is it the right fit for your market sector, products/services, staff and customers?

THE INFLUENCE OF ORGANIZATIONAL STRUCTURE ON SOFTWARE QUALITY

30

Table 1: Summary of organizational measures

Assertion	Metric
The more people who touch the code the lower the quality.	NOE
A large loss of team members affects the knowledge retention and thus quality.	NOEE
The more edits to components the higher the instability and lower the quality.	EF
The lower level is the ownership the better is the quality.	DMO
The more cohesive are the contributors (organizationally) the higher is the quality.	PO
The more cohesive is the contributions (edits) the higher is the quality.	OCO
The more the diffused contribution to a binary the lower is the quality.	OOW
The more diffused the different organizations contributing code, the lower is the quality.	OIF

Table 4: Overall model accuracy using different software measures

Model	Precision	Recall
Organizational Structure	86.2%	84.0%
Code Churn	78.6%	79.9%
Code Complexity	79.3%	66.0%
Dependencies	74.4%	69.9%
Code Coverage	83.8%	54.4%
Pre-Release Bugs	73.8%	62.9%

<http://research.microsoft.com/pubs/70535/tr-2008-11.pdf>

Accelerating via Automation

31

How can we improve delivery by improving Sharing?

AUTOMATE YOUR PIPELINE!

32

Design & Plan

Code

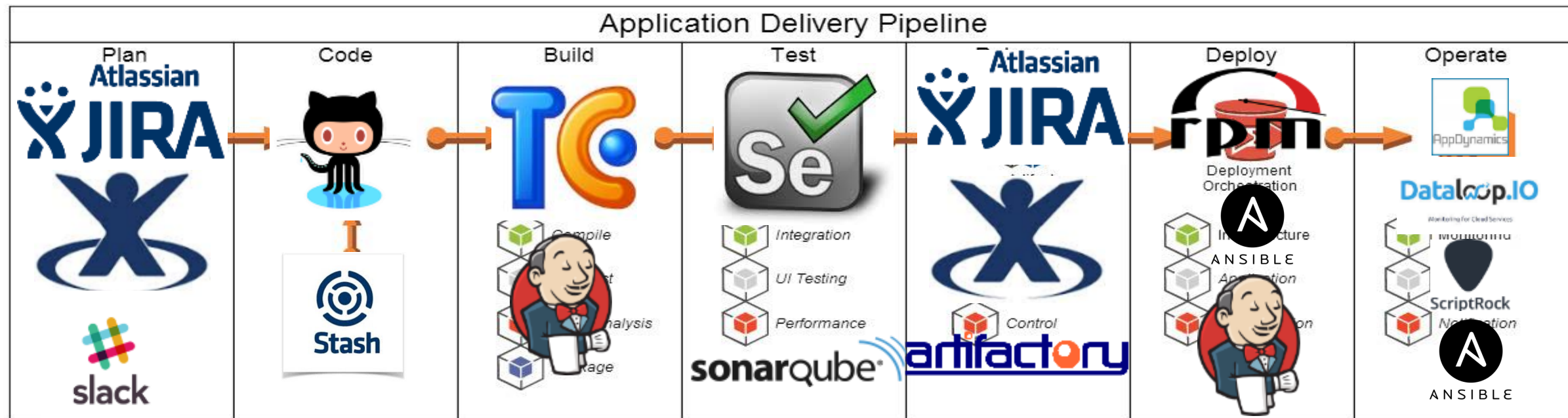
Integrate

Test

Release

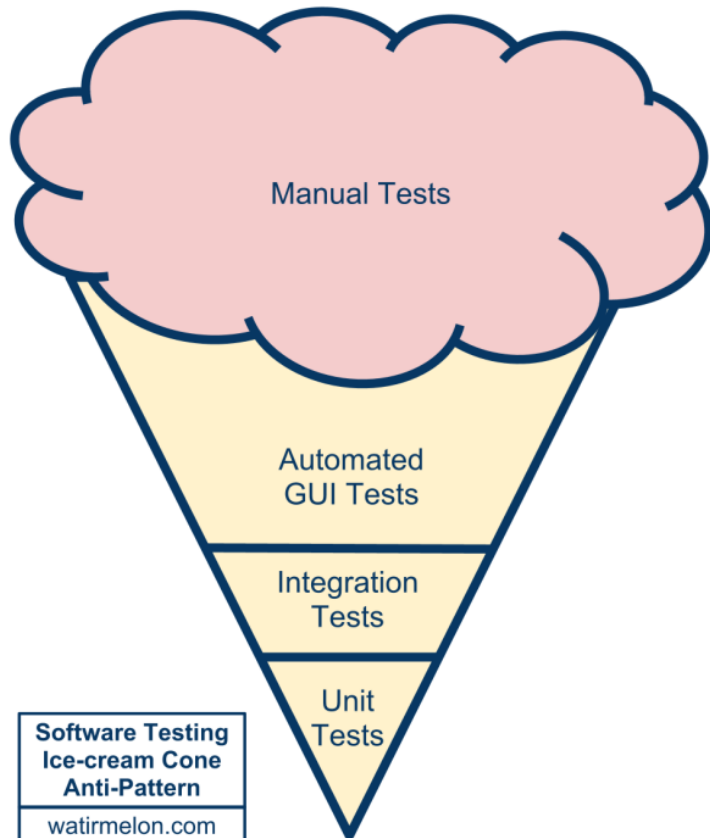
Deploy

Operate

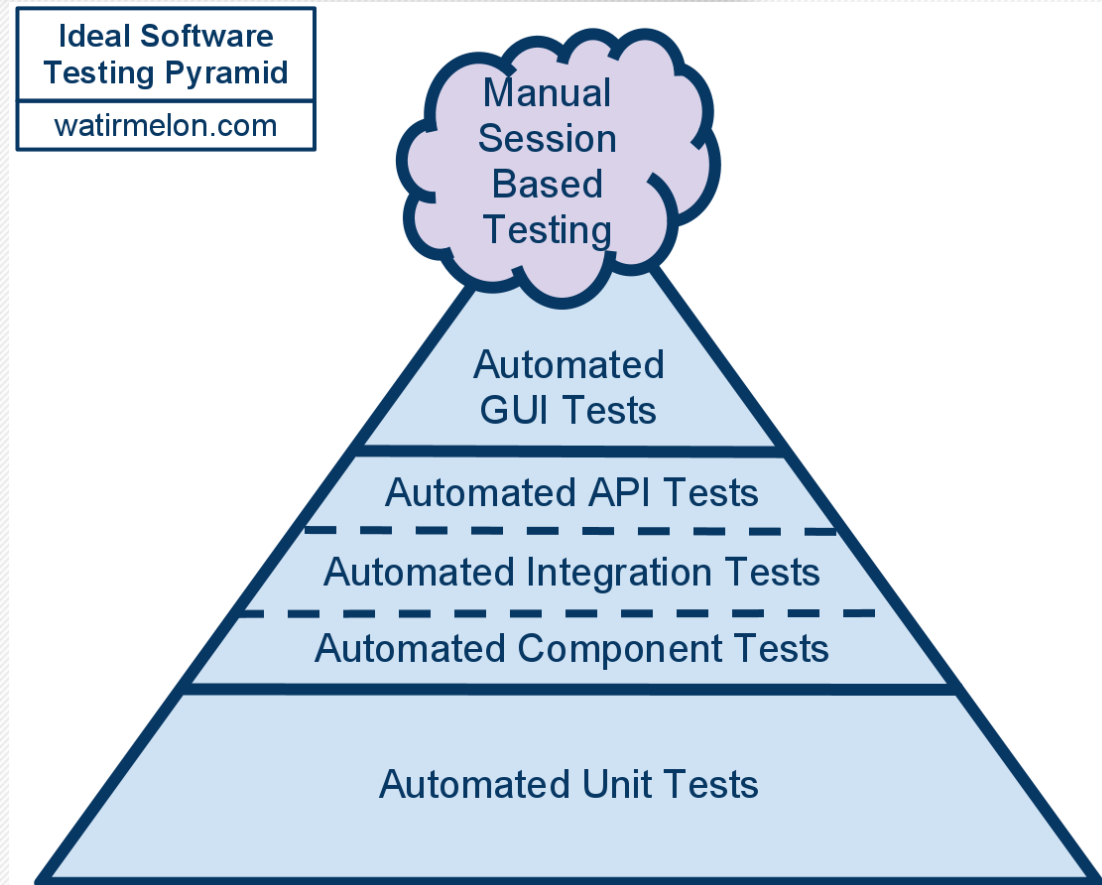


FROM ICE-CREAM TO PYRAMID

33



Via Automation



Accelerating via Metrics

34

How can we improve delivery by improving Metrics?

Top 5 Predictors of IT Performance

35

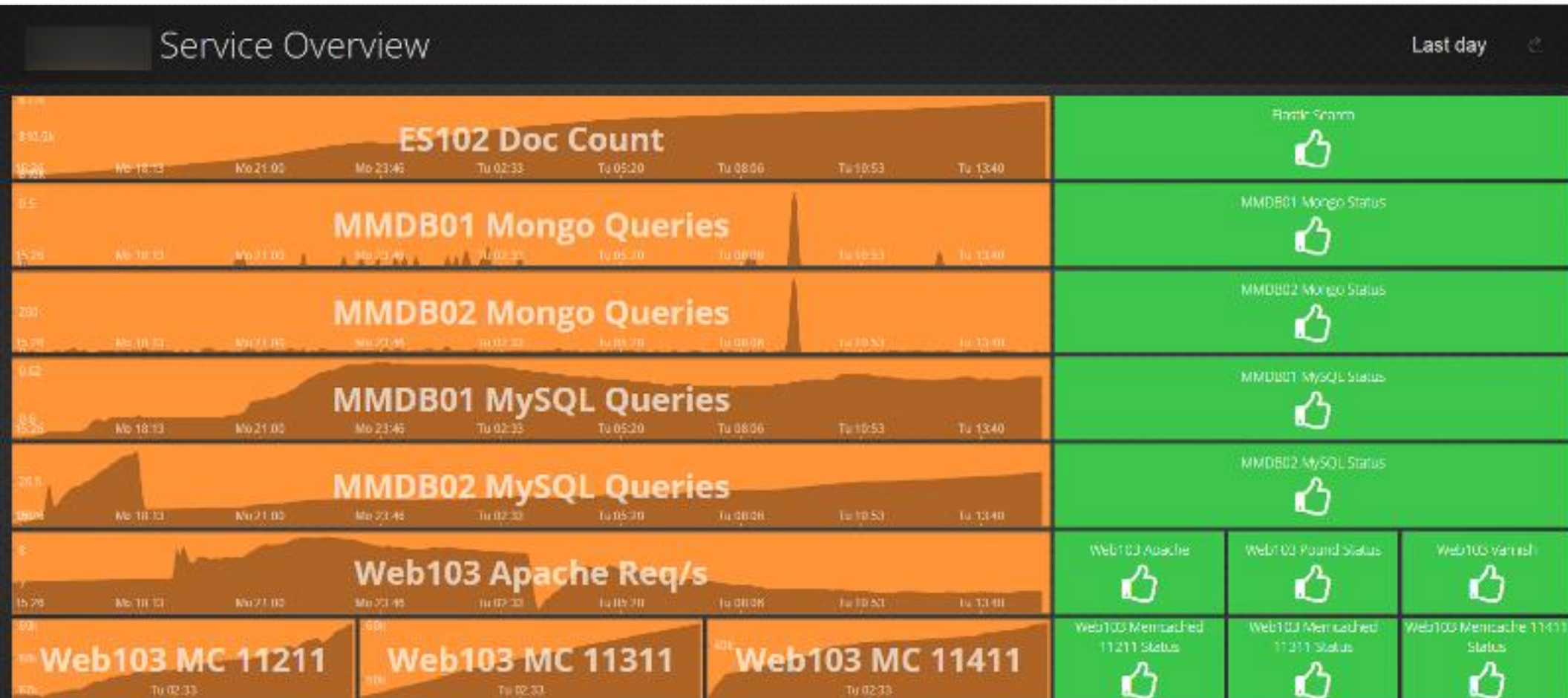
“#3 – Proactive monitoring.

Teams that practice proactive monitoring are able to diagnose and solve problems faster, and have a high degree of accountability. When failures are primarily reported by an external source, such as the network operations center (NOC) – or worse, by customers – IT performance suffers”

<https://puppetlabs.com/sites/default/files/2014-state-of-devops-report.pdf>

Monitoring Data (Dataloop)

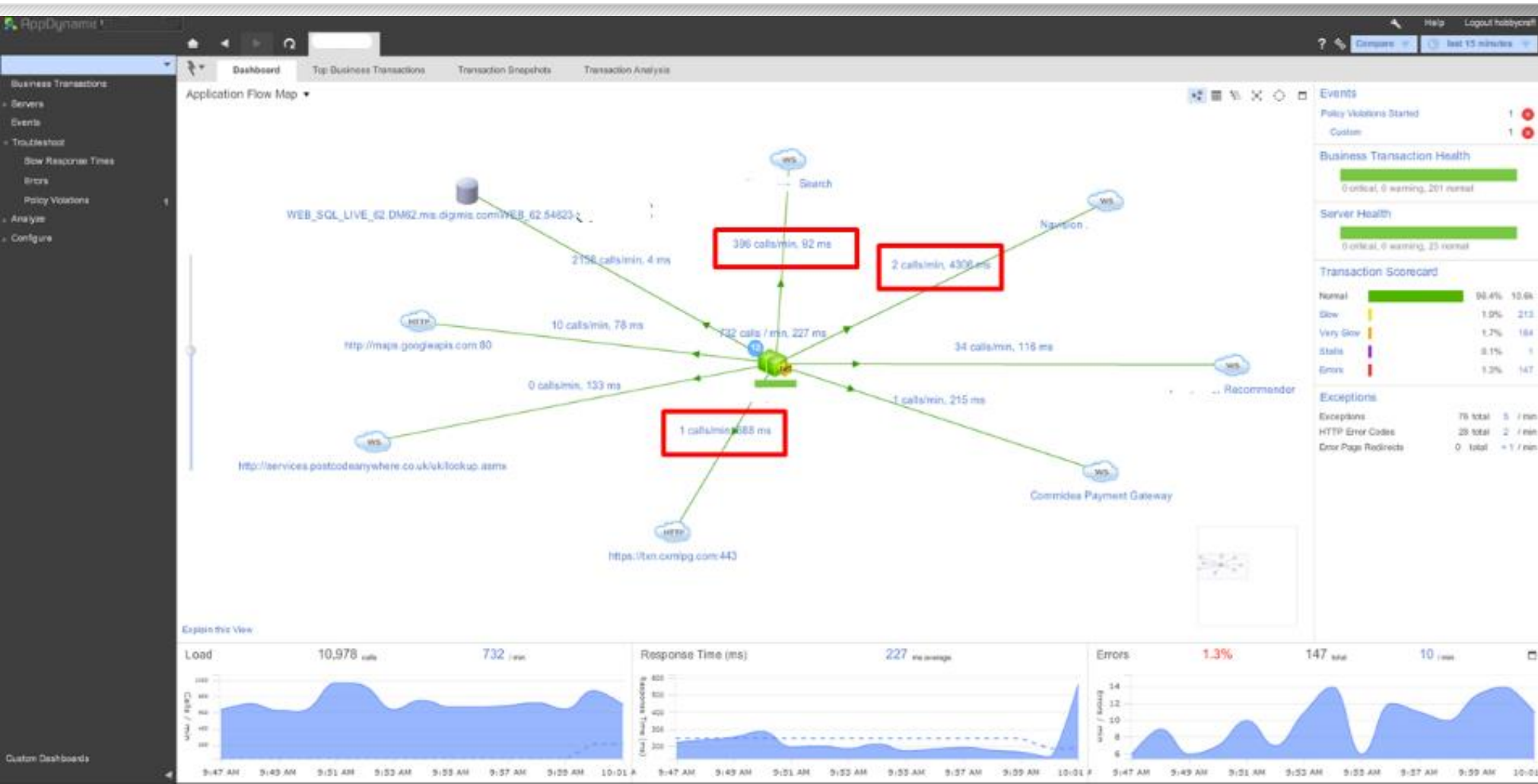
36



www.dataloop.io

APM TOOLS (APPDYNAMICS)

37



www.appdynamics.com

ELK STACK LOG ANALYSIS DASHBOARD

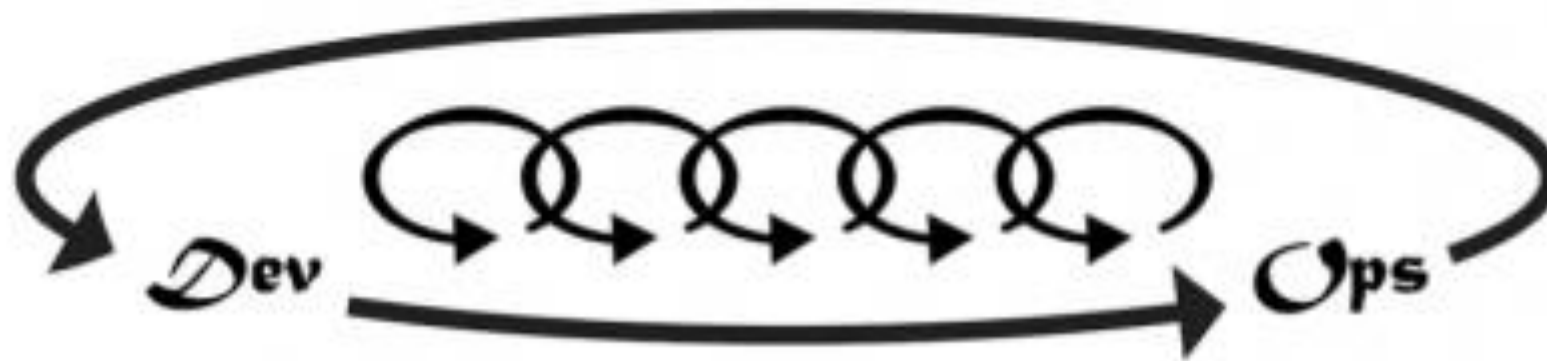
38



3RD WAY IMPLIES MEASUREMENT!

39

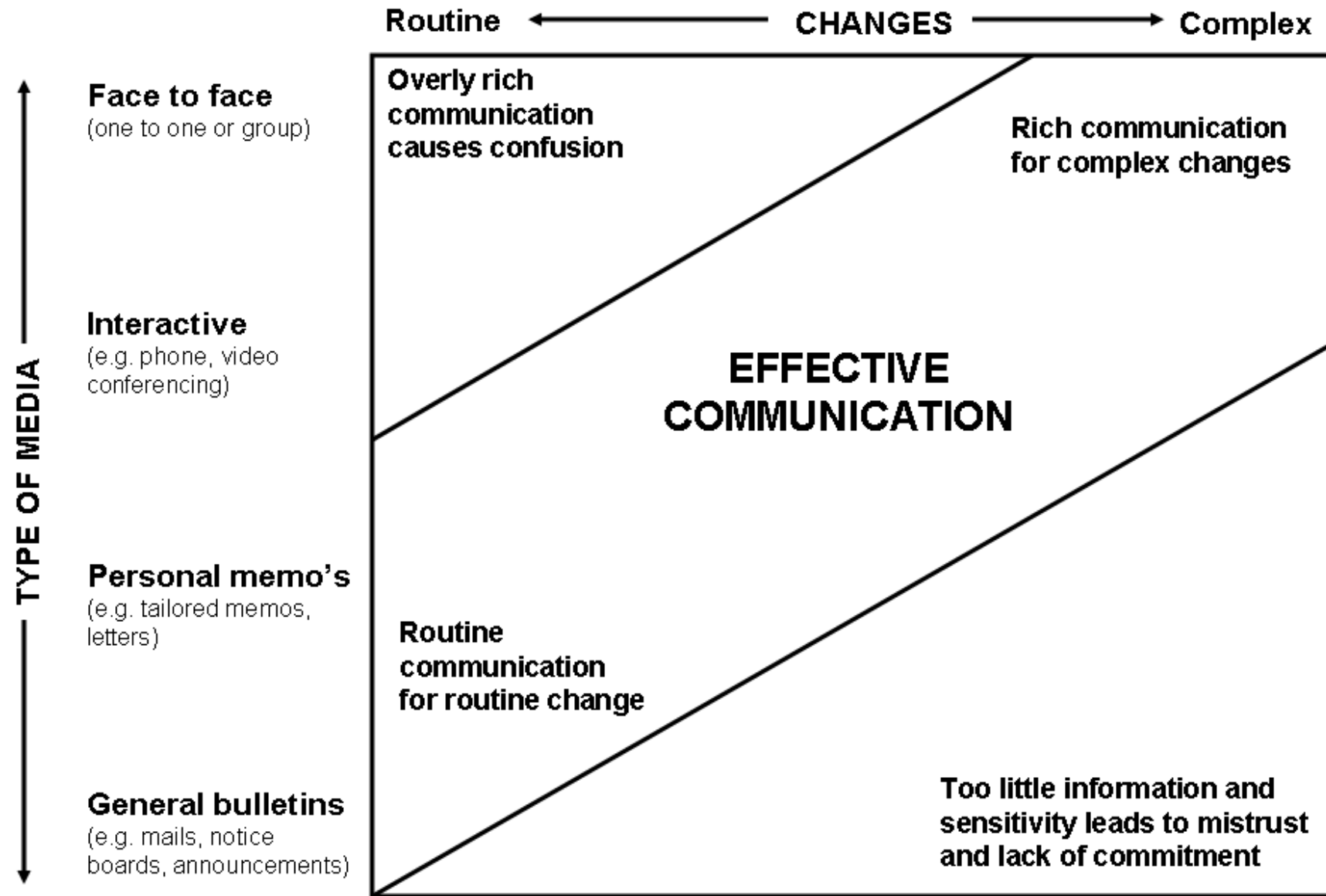
**The Third Way:
Culture Of Continual Experimentation And
Learning**



Accelerating via Sharing

40

How can we improve delivery by improving Sharing?



matching the medium to the message (Lengel & Daft, 1988)

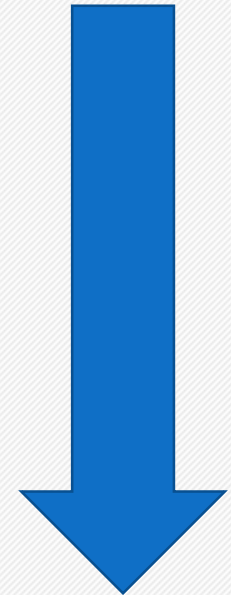
- right communication channels
- match the “medium to the message”

WAYS OF SHARING & COMMUNICATING

42

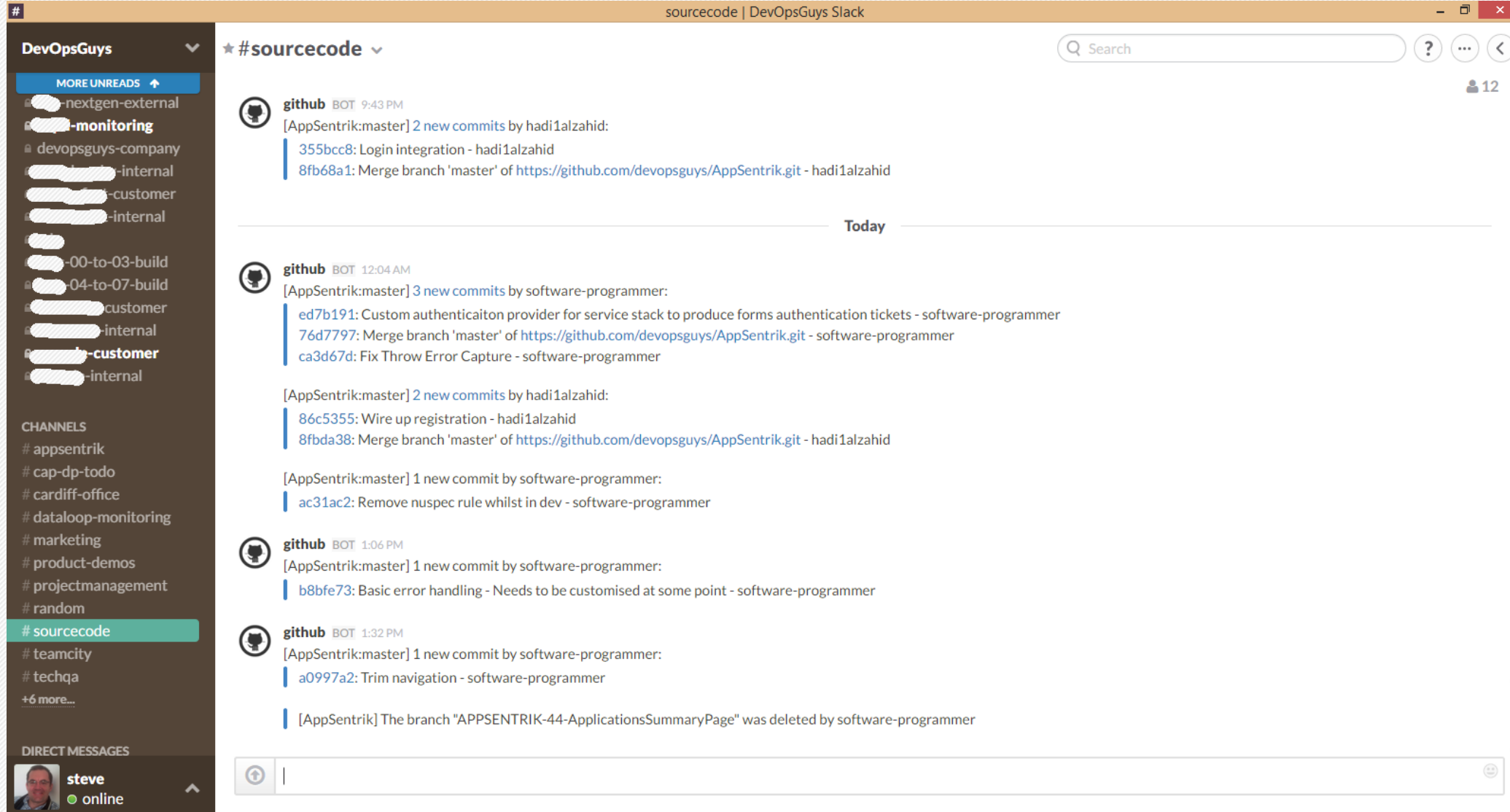
1. Daily Stand-ups
2. Group & 1:1 Chat e.g. Slack, Google Hangouts or Lync
3. Video Chat e.g. Skype, Google Hangouts or Lync
4. Formal Video Conferencing systems e.g. Cisco, Polycom
5. “Radiator Screens”
6. Email
7. Newsletters
8. “Town Hall Meetings”
9. Internal conferences and Communities of Practice
10. Intranets & Wiki’s e.g. Confluence
11. Document Management Repositories

Informal



Formal

Github automatically posts to Slack on Commit



The screenshot shows a Slack window for the channel #sourcecode. The interface includes a search bar, a list of members (12), and a series of automated messages from the 'github' bot. Each message reports new commits to the 'AppSentrk:master' branch, listing commit hashes and descriptions. A 'Today' separator is visible between the first and second messages. The channel sidebar on the left shows various other channels and direct messages.

sourcecode | DevOpsGuys Slack

Search

12

github BOT 9:43 PM
[AppSentrk:master] 2 new commits by hadi1alzahid:
355bcc8: Login integration - hadi1alzahid
8fb68a1: Merge branch 'master' of <https://github.com/devopsguys/AppSentrk.git> - hadi1alzahid

Today

github BOT 12:04 AM
[AppSentrk:master] 3 new commits by software-programmer:
ed7b191: Custom authenticaiton provider for service stack to produce forms authentication tickets - software-programmer
76d7797: Merge branch 'master' of <https://github.com/devopsguys/AppSentrk.git> - software-programmer
ca3d67d: Fix Throw Error Capture - software-programmer

[AppSentrk:master] 2 new commits by hadi1alzahid:
86c5355: Wire up registration - hadi1alzahid
8fbda38: Merge branch 'master' of <https://github.com/devopsguys/AppSentrk.git> - hadi1alzahid

[AppSentrk:master] 1 new commit by software-programmer:
ac31ac2: Remove nuspec rule whilst in dev - software-programmer

github BOT 1:06 PM
[AppSentrk:master] 1 new commit by software-programmer:
b8bfe73: Basic error handling - Needs to be customised at some point - software-programmer

github BOT 1:32 PM
[AppSentrk:master] 1 new commit by software-programmer:
a0997a2: Trim navigation - software-programmer

[AppSentrk] The branch "APPSENTRIK-44-ApplicationsSummaryPage" was deleted by software-programmer

Channels: # appsentrik, # cap-dp-todo, # cardiff-office, # dataloop-monitoring, # marketing, # product-demos, # projectmanagement, # random, # sourcecode, # teamcity, # techqa, +6 more...

Direct Messages: steve (online)

So what are the benefits

44

(same old stats from the Puppet Labs Report, again... 😊)

THOSE WHO HAVE CHANGED...

45

HIGH PERFORMING IT ORGANISATIONS DEPLOY 30 TIMES MORE FREQUENTLY, WITH 50% FEWER FAILURES WITH 8000X FASTER LEAD TIMES THAN THEIR PEERS.

THEY ARE ALSO TWO TIMES MORE LIKELY TO EXCEED PROFITABILITY, MARKET SHARE & PRODUCTIVITY GOALS

THEY EXPERIENCE 50% HIGHER MARKET CAPITALIZATION GROWTH OVER 3 YEARS

<https://puppetlabs.com/sites/default/files/2014-state-of-devops-report.pdf>

QUANTIFIABLE BENEFITS I

What Has Been the Percentage Improvement, Increase or Reduction for Each of the Quantifiable Benefits You Have Seen?

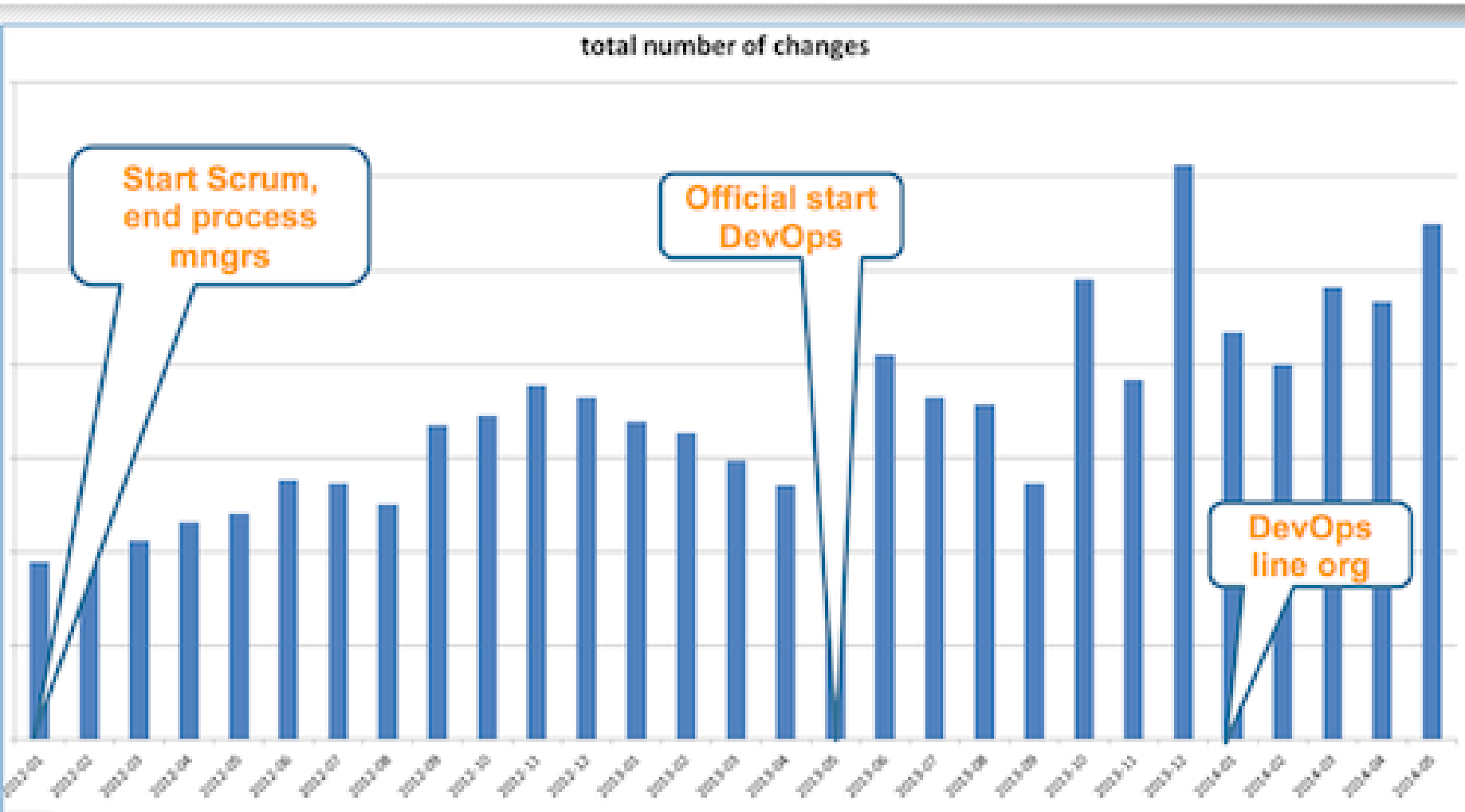
-  **20%**
Improvement in time-to-market
-  **22%**
Improvement in quality
-  **17%**
Improvement in frequency of deployments



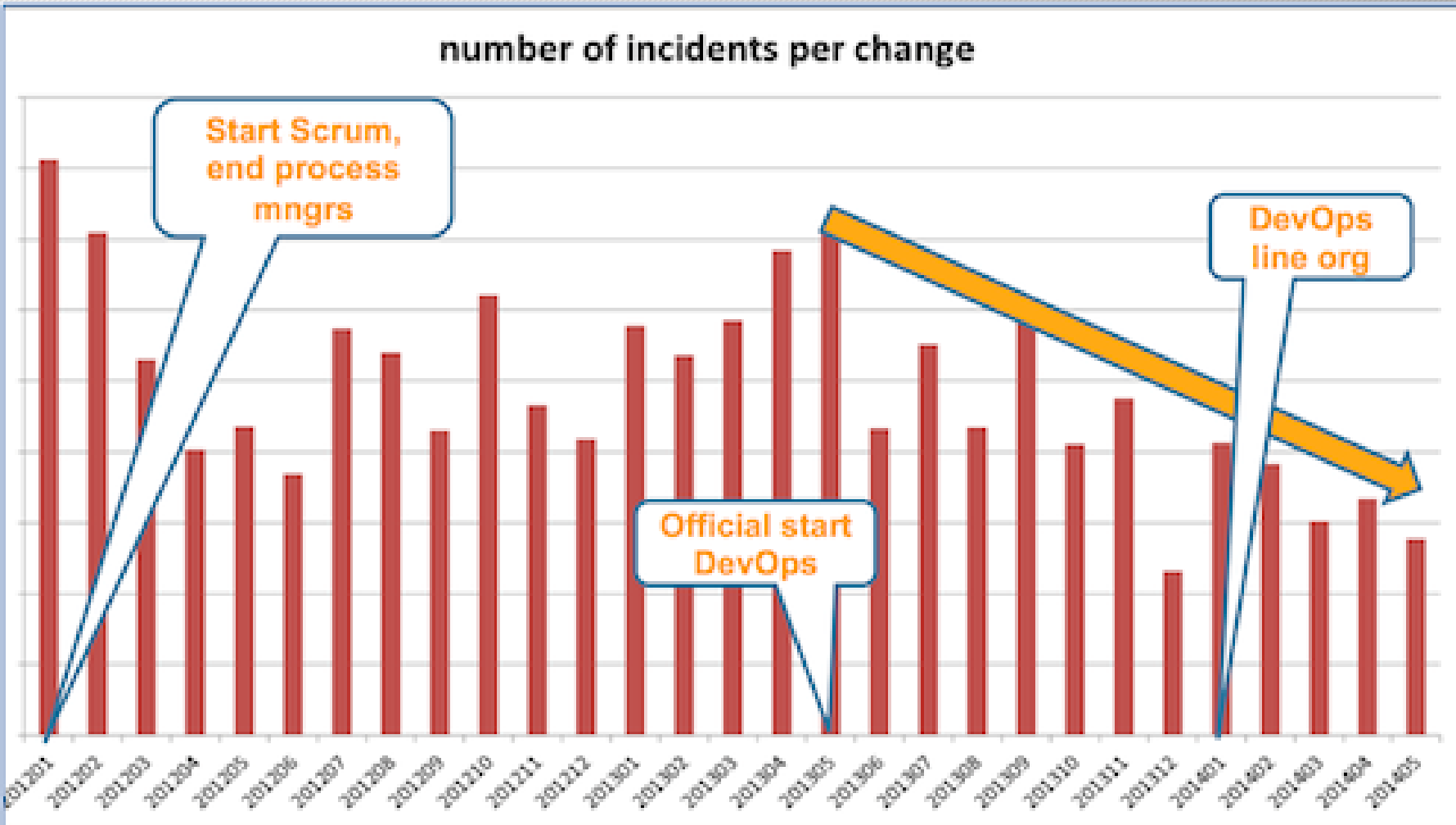
<http://visual.ly/what-smart-businesses-need-know-about-devops>

ING RETAIL NL – MORE CHANGE...

47



ING RETAIL NL – LESS INCIDENTS



AND SO FINALLY...

49

**DevOps offers a new way of delivering
business value across the product
lifecycle.**



50

**"DevOps: It's a mindset
not a technology."**

Questions?

THANK YOU!

52



Don't forget we have the DevOps & CD "Open Spaces" session at 1430 so please come along, propose a session, ask questions etc 😊

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www.devopsguys.com

@devopsguys