

# Biz-PMO-Dev-QA-Sec-Build-Stage-Ops-Biz

Shared Metrics as a Forcing Function for End-To-End Enterprise Collaboration

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# About Your Speaker



## Andi Mann – Chief Technology Advocate, Splunk

- Global experience as a strategist, technologist, innovator, and communicator with Fortune 500 corporations, software vendors, governments, and as a leading research analyst and consultant.
- Business and technology commentator appearing in *USA Today*, *New York Times*, *SkyTV*, *Forbes*, *CIO*, *InformationWeek*, *Wall Street Journal*, and more.
- Named to many 'Top ...' lists including Business Insider's [Top Thought-Provoking Enterprise Tech Execs](#), Apollo Research's [Top Technology Specialists on Twitter](#), Heller Search's [Top Recommended Twitter Accounts for IT Execs](#), Robert Half Technology's [Top 20 People Most Mentioned by IT Leaders](#), Huffington Post's [Top 100 Cloud Computing Experts](#), Gathering Clouds [Top 5 Cloud Experts - Who's Who in Cloud](#), and SAP's [Top 50 Cloud Computing Influencers](#).
- Published author of two books - '[Visible Ops – Private Cloud](#)'; and '[The Innovative CIO](#)'; blogger at '[Andi Mann – Übergeek](#)'; tweets as [@AndiMann](#)

# Abstract

Especially in larger enterprises, DevOps doesn't start with Dev, or end with Ops. Many more teams must be involved in a 'whole system' view of application delivery. Unfortunately, they don't always see eye-to-eye with each other – or even see each other at all!

This session will focus on how sharing a common set of 'metrics that matter' can help drive alignment across a 'systems view' of application delivery that both engages and reflects the whole enterprise – including the PMO, Development, QA, Security, Build Engineering, Operations, and others in IT; and perhaps even more importantly, key business stakeholders.

With:

- specific recommendations on key 'metrics that matter' for each of these separate teams
- real world examples of organizations sharing common metrics across team boundaries
- actionable next steps to document, gather, correlate, and present shared measurements

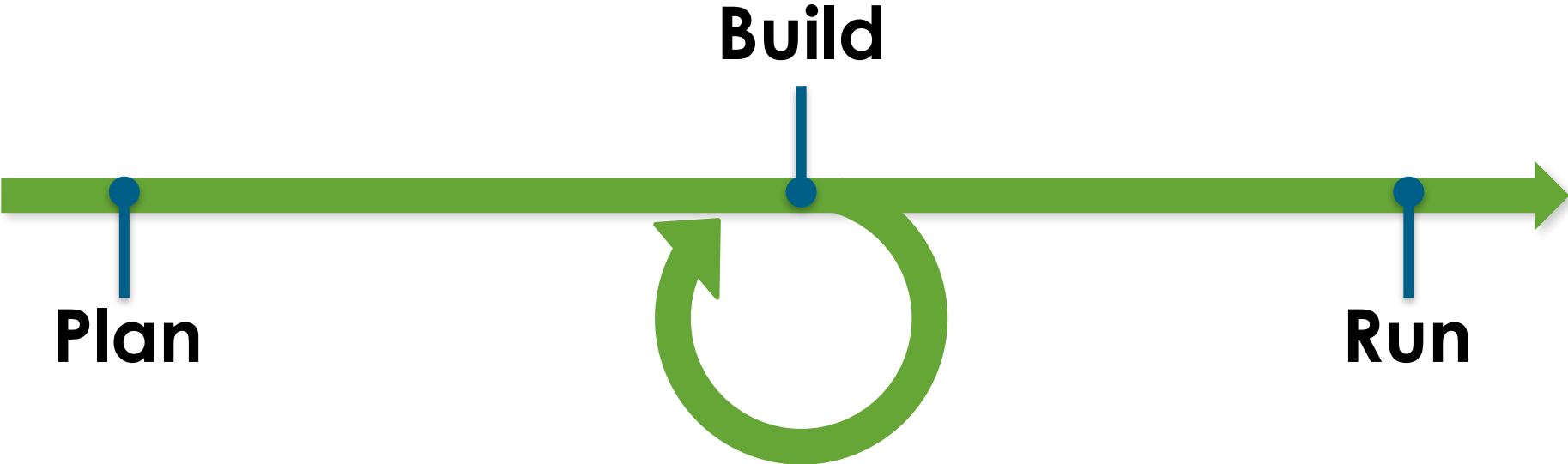
this session will help attendees to better enable the collaboration, communication, and integration that is at the heart of DevOps. Through a practical guide to at least half of the CAMS (Culture, Automation, Measurement, Sharing) guidance, and with a specific focus on larger enterprises with distributed teams, specialized departments, legacy systems, political machinations, complicated workflows, and opaque pipelines, please come along to learn how to drive alignment across the organization.

# What Does the Software Delivery Lifecycle Look Like?



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# What (Some) Pundits Think the SDLC Looks Like?





# What Your Boss Thinks the SDLC Looks Like?



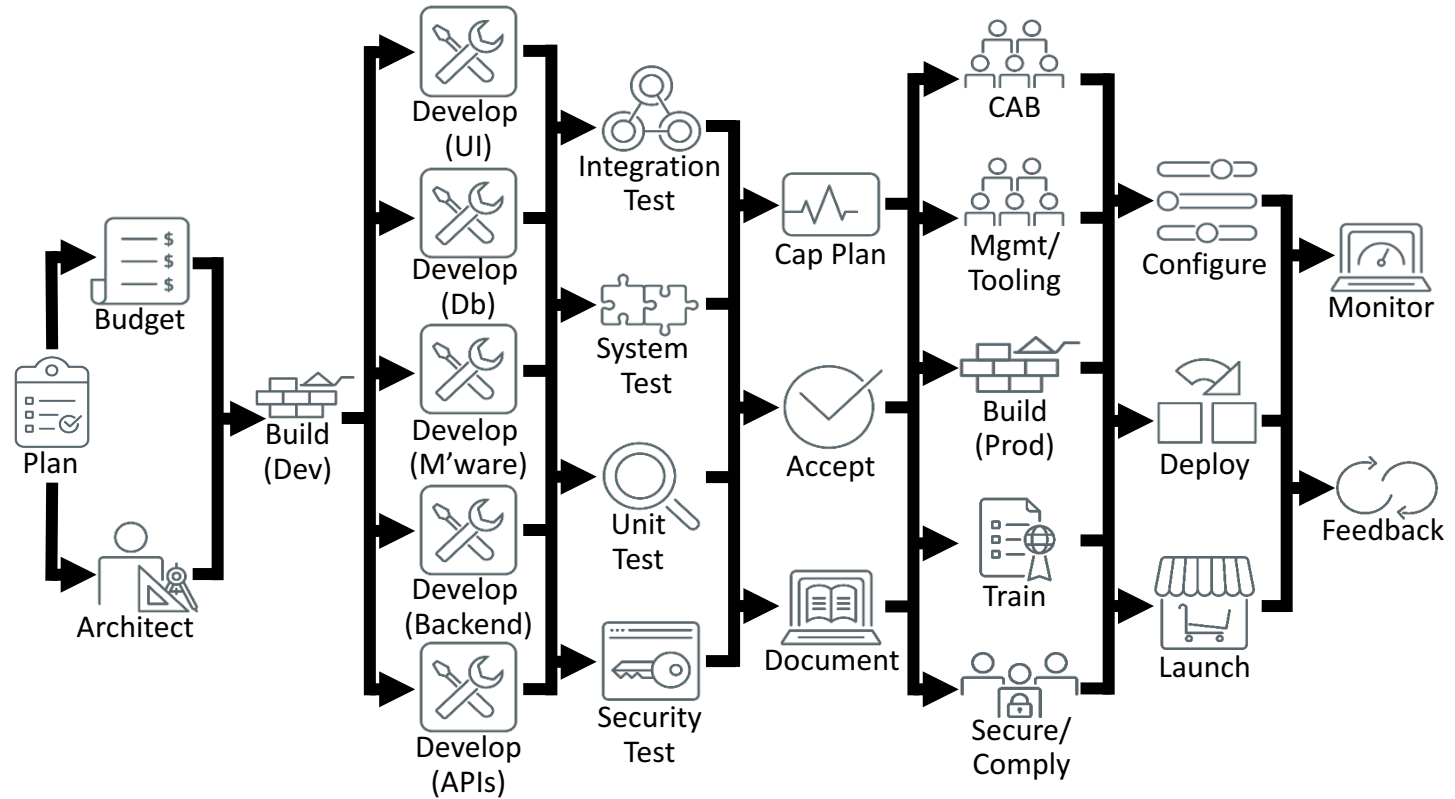
Source: Alex Brogan (Own work) [CC BY 3.0], via Wikimedia Commons



# What Your Business Thinks the SDLC Looks like?

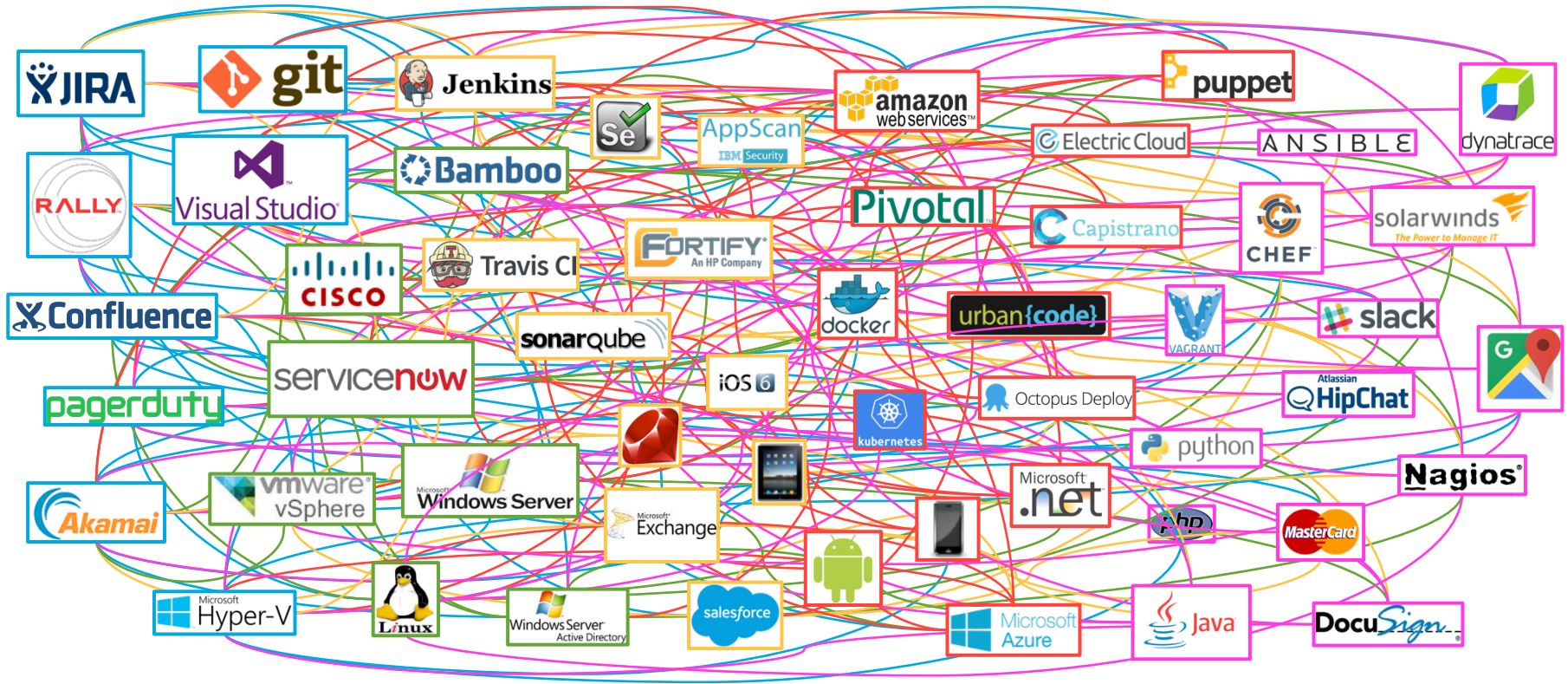


# What You Think Your SDLC Looks Like?





# What Your SDLC Really Looks Like?





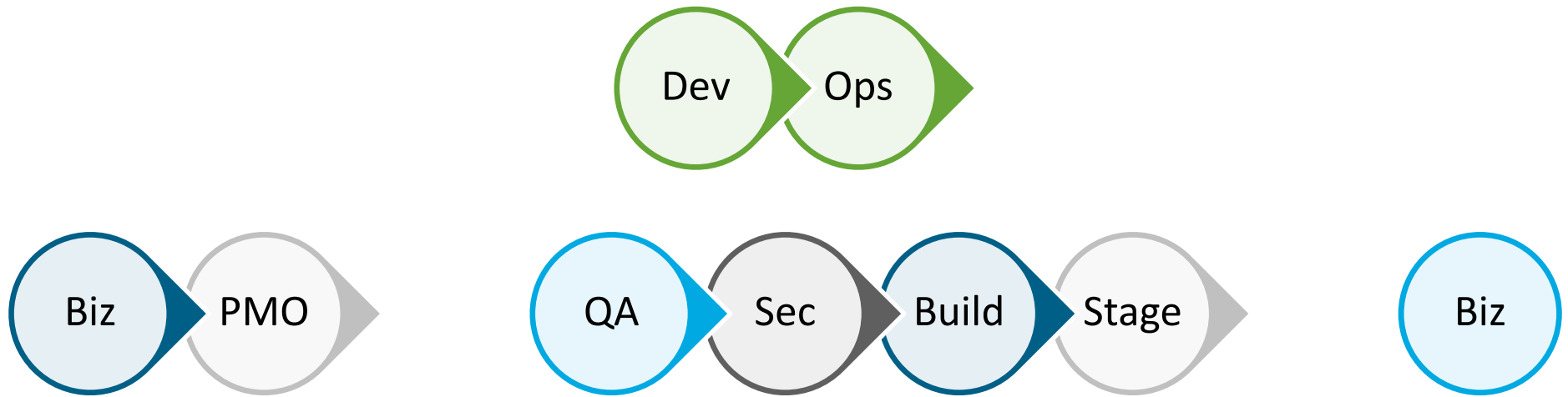
# A Systems View of IT Service Delivery



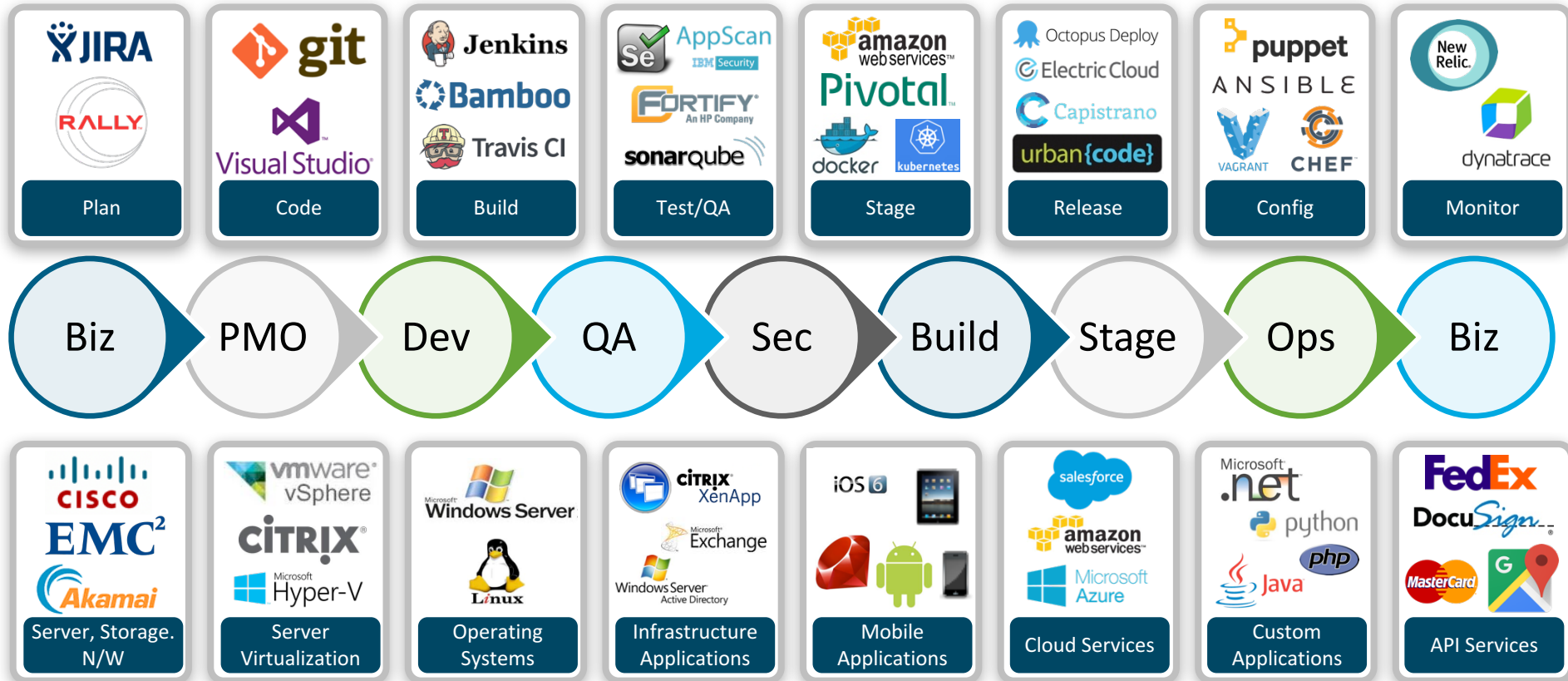
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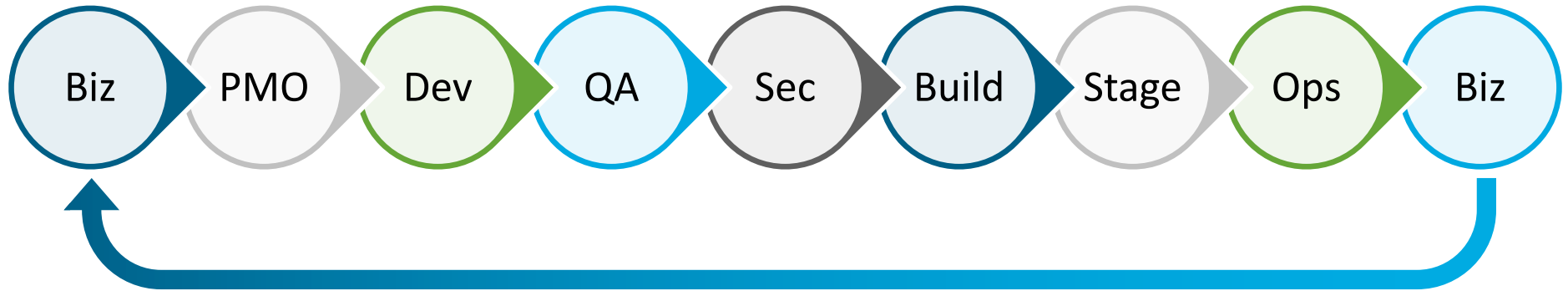
# DevOps Doesn't Start With Dev, or End With Ops



# IT Service Delivery Is Complex and Often Opaque



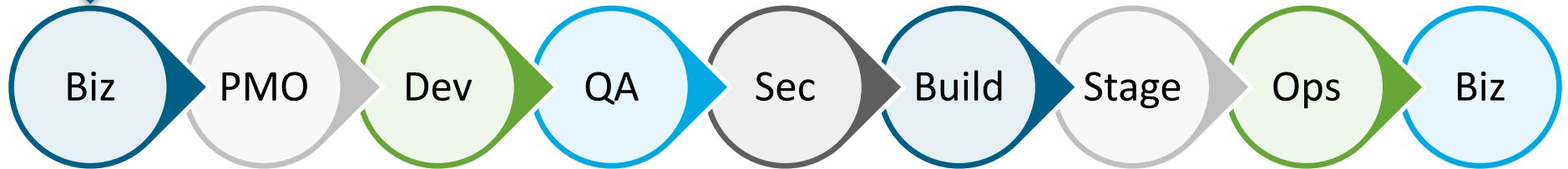
# In DevOps the Whole SDLC is Continuous





# Why Business Counts Twice

Upstream (inputs) - corporate strategy, product management, marketing, HR, finance, ...



Downstream (outputs) – sales, branch ops, training, compliance, customer satisfaction ...

# Shared Metrics to Align Teams Across the SDLC

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# CAMS: As Close to Prescriptive as DevOps Gets



Culture

Automation

Measurement

Sharing





Sales?

Downloads?

Installs?

Daily Active  
Users?

Shared measurement is  
important for collaboration!



BUT WHAT  
SHOULD  
YOU  
MEASURE?

10+ Deploys Per Day: Dev and Ops Cooperation at **flickr**

John Allspaw & Paul Hammond  
Velocity 2009

# Activity?

I'm working super hard!!

That's my stapler!

# Outcomes?

Yeah, but ...  
... what are you  
achieving?

I'm gonna  
need you to  
come in  
Sunday.

# State of DevOps 2016: 'Metrics that Matter'

High-performing teams deploy more frequently and have much faster lead times.

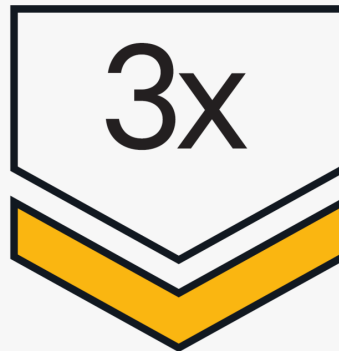


200x more frequent deployments



2,555x shorter lead times

They make changes with fewer failures, and recover faster from failures.



3x lower change failure rate



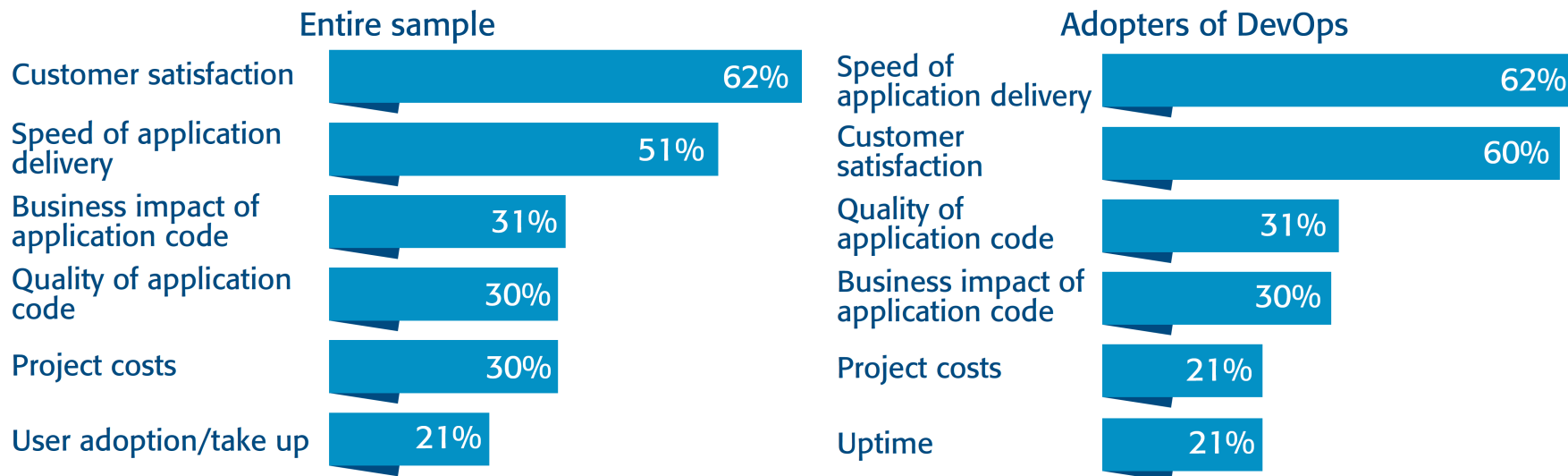
24x faster recovery from failures

Source: [2016 State of DevOps Report](#), DevOps Research and Assessment



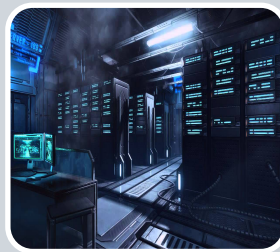
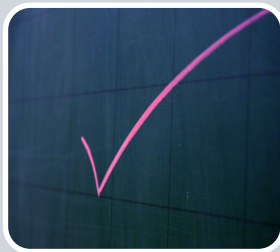
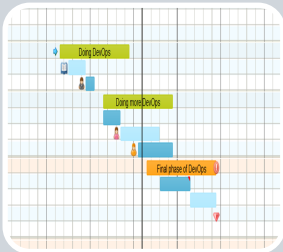
# Computing UK's 'Metrics that Matter'

**FIG. 5** Which metrics would be most useful in order to measure success of a DevOps implementation?



Source: Computing Research UK, *DevOps Review 2016: Accelerating Innovation*, July 2016

# More DevOps Metrics that *Might* Matter



## Culture

e.g.

- Retention
- Satisfaction
- Callouts

## Process

e.g.

- Idea-to-cash
- MTTR
- Deliver time

## Quality

e.g.

- Tests passed
- Tests failed
- Best/worst

## Systems

e.g.

- Throughput
- Uptime
- Build times

## Activity

e.g.

- Commits
- Tests run
- Releases

## Impact

e.g.

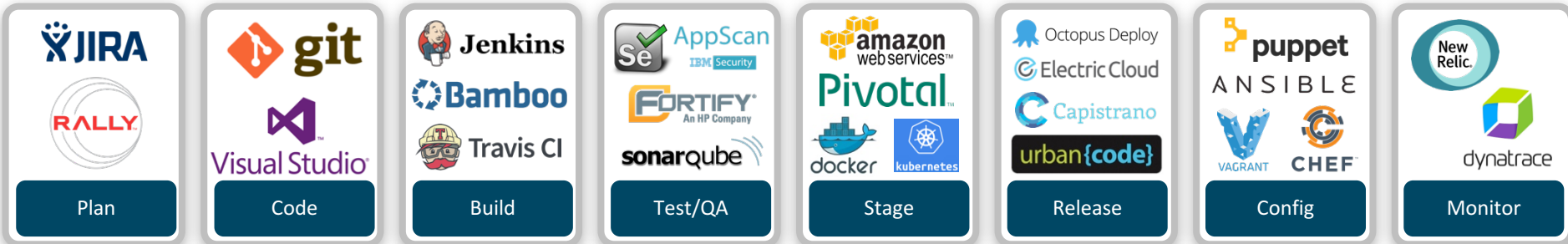
- Signups
- Checkouts
- Revenue

# Using Splunk to Measure DevOps Impact



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# Visibility Across the Dev Lifecycle



Confluence  
servicenow  
pagerduty  
Escalation/  
Collaboration



SDKs UI  
API  
splunk >

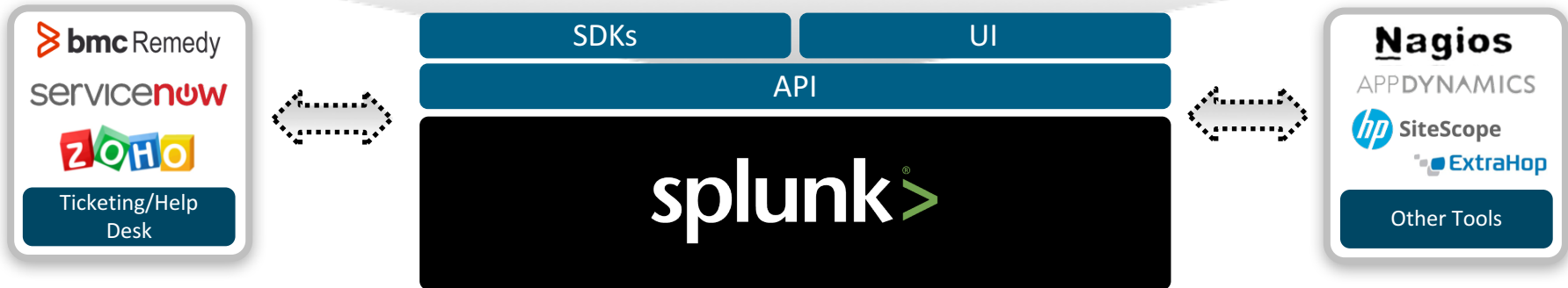


solarwinds  
The Power to Manage IT  
slack  
Nagios  
Atlassian HipChat  
Other Tools

*No rigid schemas – add in data from any other source.*



# Visibility Across the Ops Environment



*No rigid schemas – add in data from any other source.*

# Improve the Impact of Application Delivery

INCREASE APP  
DELIVERY  
VELOCITY

IMPROVE CODE  
QUALITY

INCREASE  
BUSINESS IMPACT

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# Three Key Areas to Improve Alignment Across a Complex End-to-End DevOps SDLC

**MEASURE  
PROCESS VELOCITY**

**MEASURE  
CODE QUALITY**

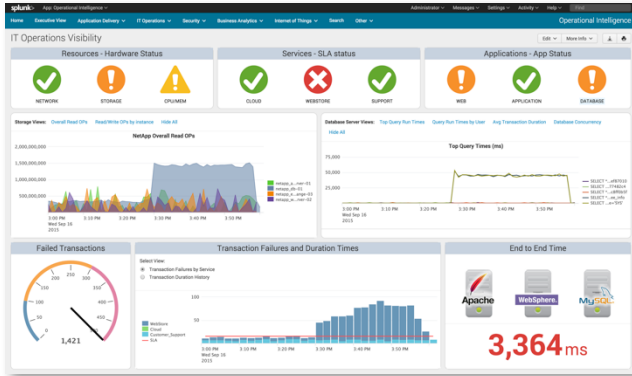
**MEASURE  
BUSINESS IMPACT**

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# Analyze the Velocity of DevOps Workflows



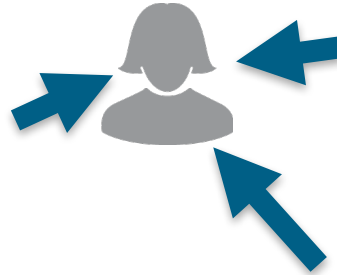
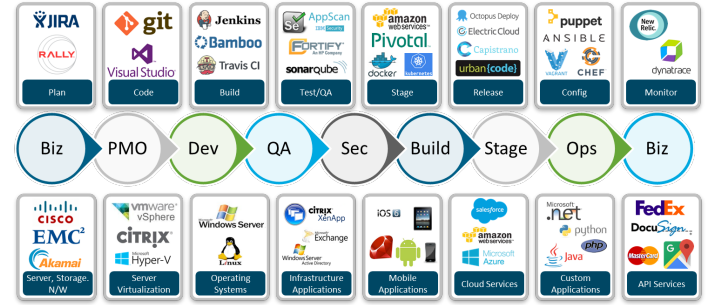
Product Owners  
identify new  
opportunities



All Teams iterate with  
continuous insights



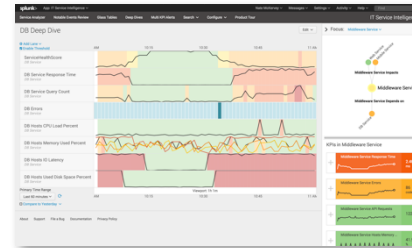
Dev & Ops deliver to market  
continuously



Managers and  
Auditors  
have visibility

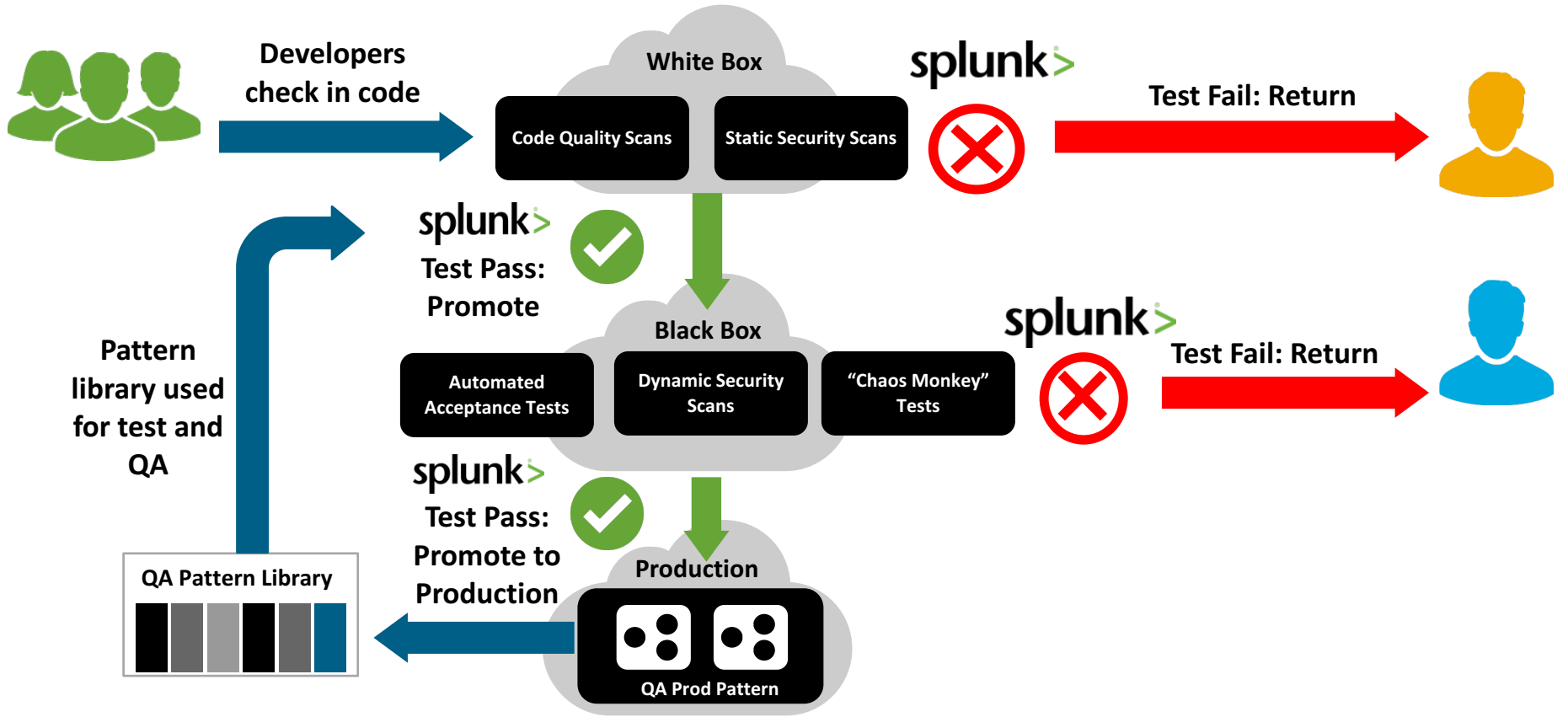


Business and  
Customers  
are happy

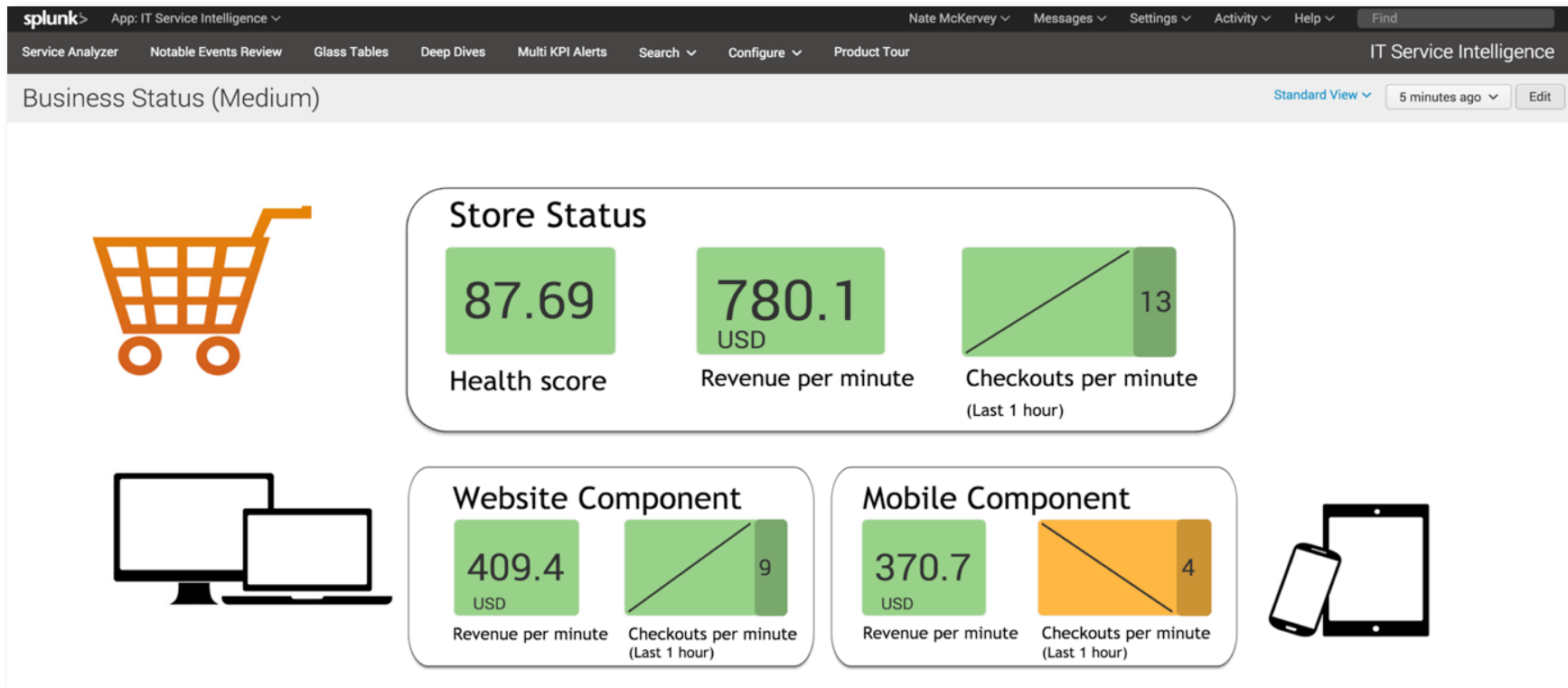




# Analyze the Quality of New Releases



# Analyze the Impact of Service Delivery



# Some Real-World ‘Metrics That Matter’



*“Web Ops can measure performance of releases in pre-prod, prod and in QA.”*

*“We measure customer sentiment on Google Play in real time and can correlate it with code releases and app performance.”*

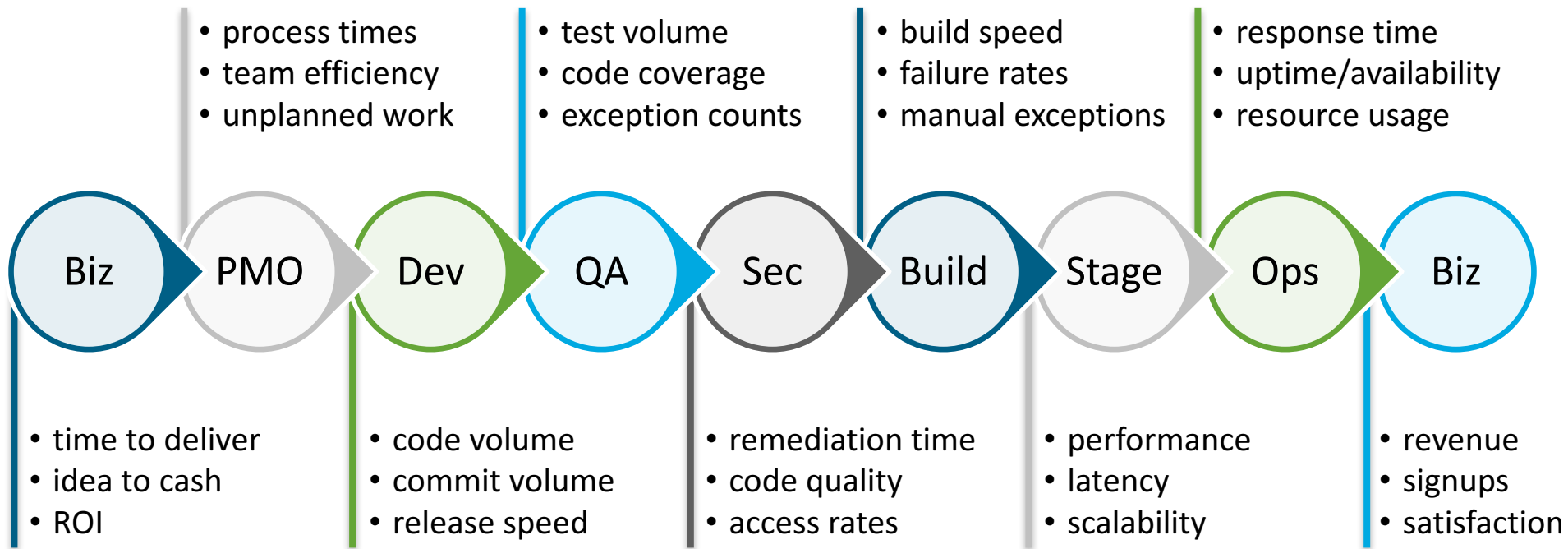


*“Gather all data, and it starts looking like one big system, instead of a bazillion teeny ones that hate each other.”*

*“Developers can focus on innovation and not on building monitoring tools.”*

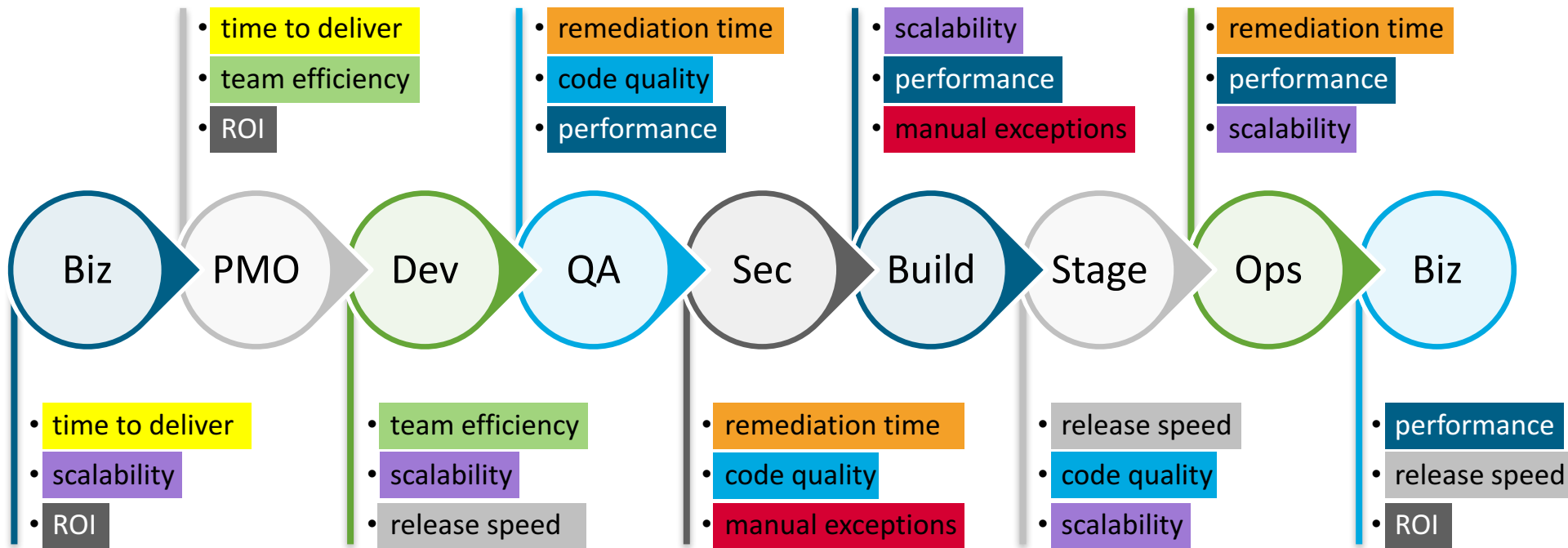


# Specific Metrics For Each Stakeholder

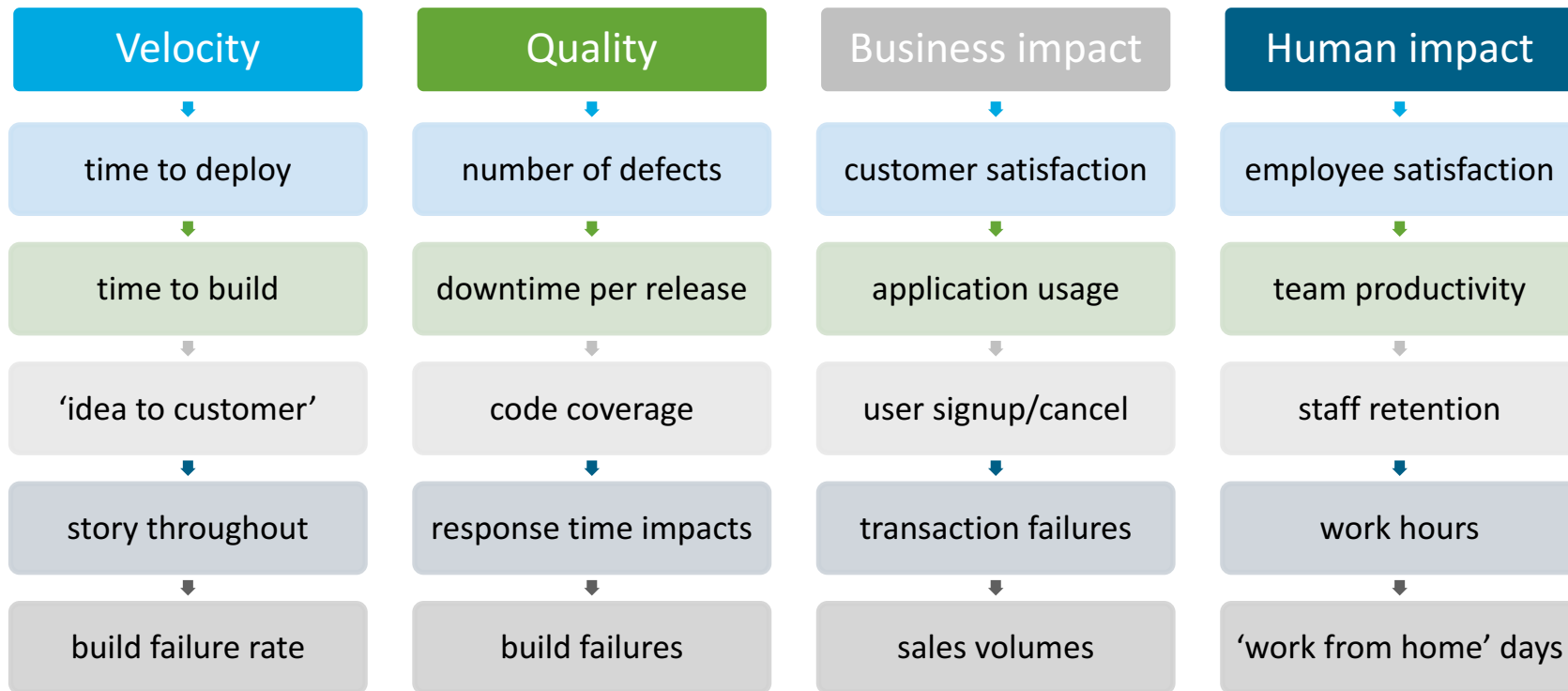




# Shared Metrics for Multiple Stakeholders



# What About Just Dev and Ops



Source: Computing Research UK, *DevOps Review 2016: Accelerating Innovation*, July 2016

# Demo Time!



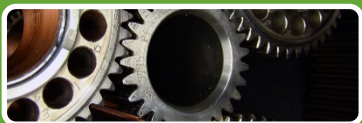
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# Other Use cases in AppDev and DevOps



Collaborative IT troubleshooting for Dev and Ops



Build machine data analytics into applications



ChatOps and Splunk for war room & post-mortems



Connect DevOps and security with data (DevSecOps)



Insight into human systems for cultural metrics



# Splunk Software in Action in the Real World of DevOps



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# Successful Businesses use Splunk for DevOps



# Improved DevOps Agility

“It’s like we were working without peripheral vision before and now we have it.”

-**Robert Gonsalves,**  
**Web Operations**

## Key Customer Benefits

- Increased success rate of deployments
- Ability to detect issues before they affect broad production
- Monitoring deployment process several times per day

**NBCUniversal**

# Deliver Better Code Quality

“Developers are now able to look for errors and troubleshoot issues five to 10 times faster by having all their event data centralized in Splunk.”

**-Principal Engineer,  
Apollo Group**

## Key Customer Benefits

- Provide full visibility into QA sanity and load testing before production
- Exceed SLA thresholds with full visibility and benchmark key infrastructure metrics and errors
- Easily troubleshoot if tests do not contain the expected results





# How Vertu adopted DevOps for Digital Transformation with Splunk Software



Data-driven DevOps to ensure mobile handset software quality



Machine data from AWS, Ansible, Jenkins, logs files



Digital transformation underpinned by DevOps



# Enable Data-Driven Continuous Delivery

“Dump all the logs into Splunk, and it starts looking like one big system, instead of a bazillion teeny ones that hate each other.”

**-Alison Perkins,  
Senior Systems Engineer**

## Key Customer Benefits

- Quickly validate and troubleshoot code pushes to production
- Ensure that new code does not negatively impact performance or user experience
- Reduced one application’s error rate by 2 orders of magnitude in a matter of weeks



# Why Tesco uses Splunk Platform to Accelerate Development and Understand Customers

Cut Investigation & Resolution time 95%  
Reduce Escalations 50%, Accelerate Dev Cycles 30%



Operational Analytics with Live Transaction Tracing  
and End-to-end Infrastructure Insight



Activity Tracking Dashboards with Improved  
Customer Experience and Reduced Lost Revenue





# How Amaya Gaming Improve DevOps with Splunk Siftware



Allows DevOps to ensure quality of releases & avoid negative impact on service performance.



Analyze which new website features are being adopted, and how, by end users.



Insight fed back into the development cycle to improve customer engagement.



# Sources of Additional Reading

- [www.splunk.com/DevOps](http://www.splunk.com/DevOps)
- [\*DevOps Review 2016: Accelerating Innovation\*](#), Computing Research UK, July 2016
- [\*2016 State of DevOps Report\*](#), DevOps Research and Assessment
- [\*The DevOps Cookbook\*](#), John Allspaw, Patrick Debois, Damon Edwards, Jez Humble, Gene Kim, Mike Orzen, and John Willis
- [\*The Phoenix Project\*](#), Gene Kim, Kevin Behr, George Spafford
- [\*Data-Driven DevOps: Use Metrics to Help Guide Your Journey\*](#), Gartner Inc., 29 May 2014 G00264319, Analyst(s): Cameron Haight | Tapati Bandopadhyay
- *DevOps Best Practice Metrics: Fortune 1000 Survey*, IDC, 2014

# THANK YOU

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