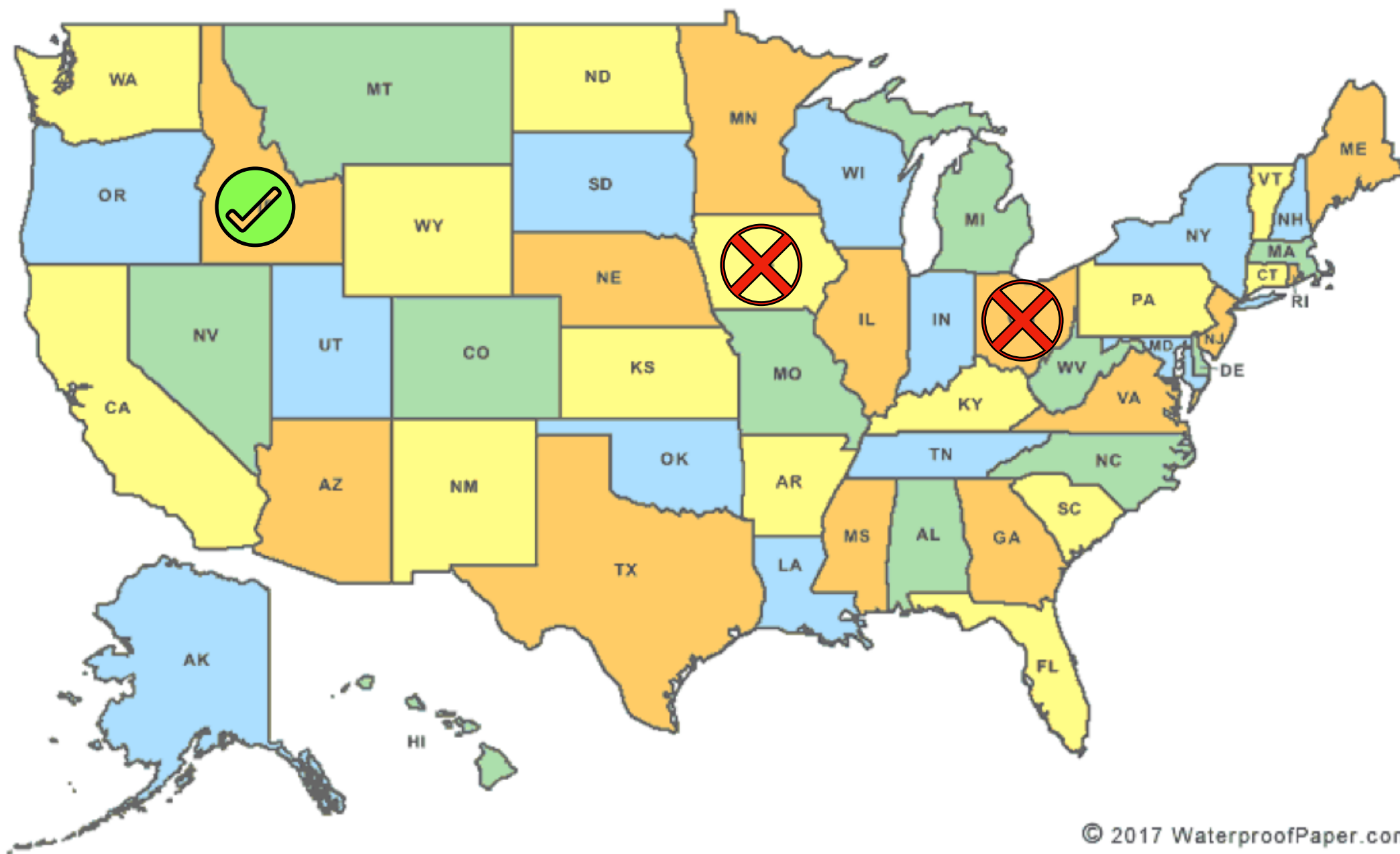


# You Can't Buy DevOps

**Julie Gunderson, PagerDuty**



© 2017 WaterproofPaper.com

# PagerDuty



# Complex Systems

The length of time a consumer will wait for a slow or unresponsive app:

Under 1 minute

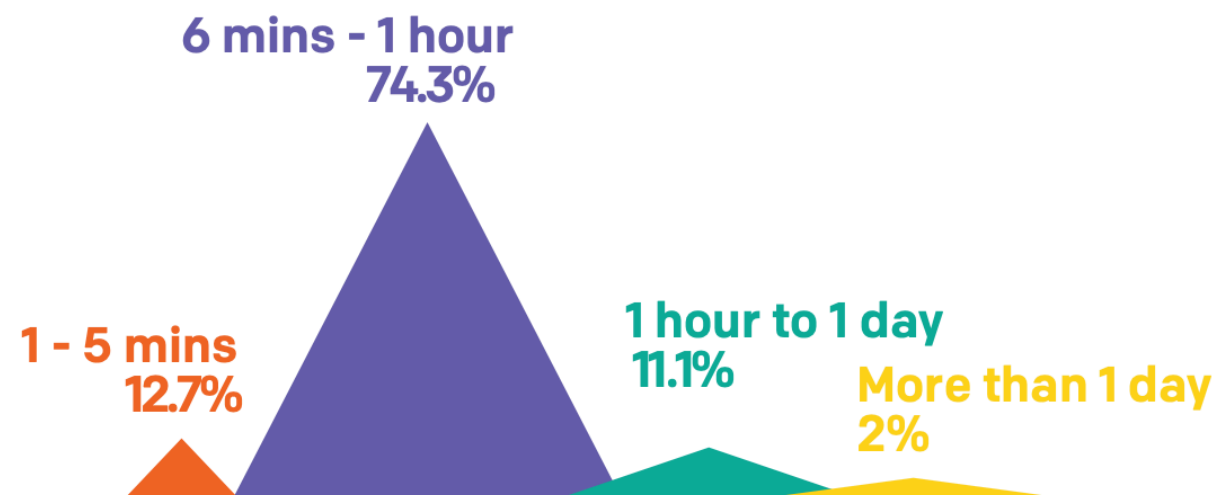
**81.2%**



Under 30 seconds

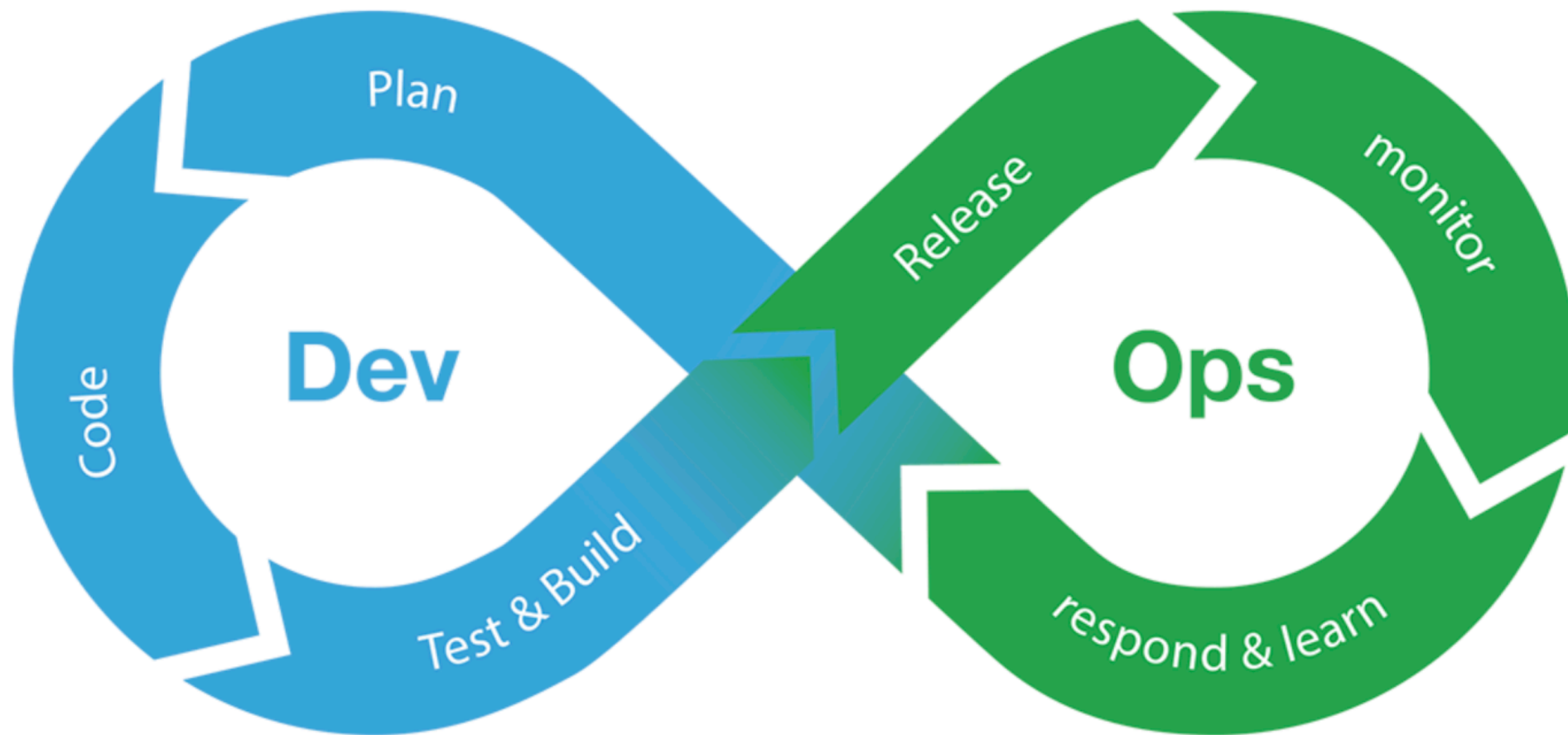
**53.8%**

The time it takes organisations to get consumer-facing digital services running after an incident:



Most IT organisations (67.1 percent) said they face consumer-impacting incidents at least one or more times a week, meaning they are at constant risk of losing customers and revenue due to the length of time it takes to resolve these issues. Another 15.3 percent of IT teams experience this type of incident several times a day.







devops definition



 All

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---

About 9,950,000 results (0.52 seconds)

DevOps is a set of practices that combines software development (*Dev*) and information-technology operations (*Ops*) which aims to shorten the systems development life cycle and provide continuous delivery with **high software quality.**

<https://en.wikipedia.org/wiki/DevOps>

DevOps is a word that is used to describe a set of modern IT practices which seek to more closely bring together software developers and operations staff to work on the same project in a more **collaborative** manner.

<https://opensource.com/resources/devops>

DevOps is the combination of **cultural** philosophies, practices, and tools that increases an organization's ability to deliver applications and services at high velocity: evolving and improving products at a faster pace than organizations using traditional software development and infrastructure management processes.

<https://aws.amazon.com/devops/what-is-devops/>



<https://devopsassessment.net/>



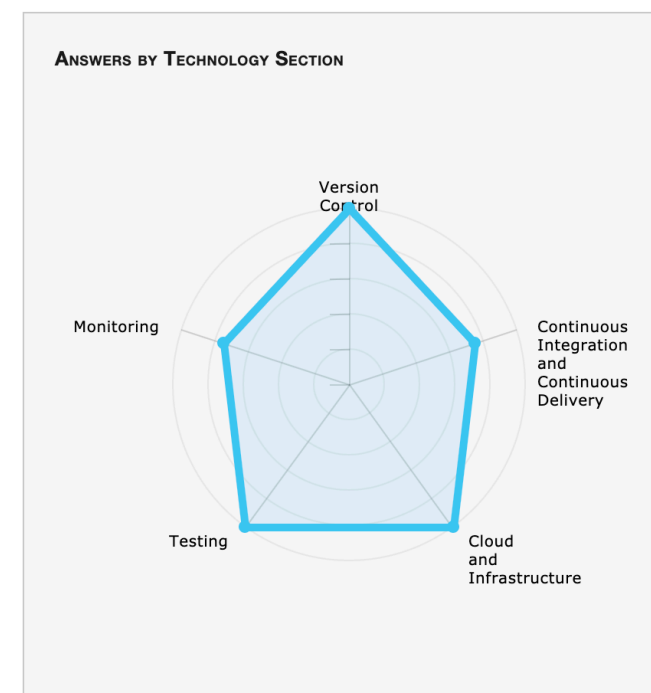
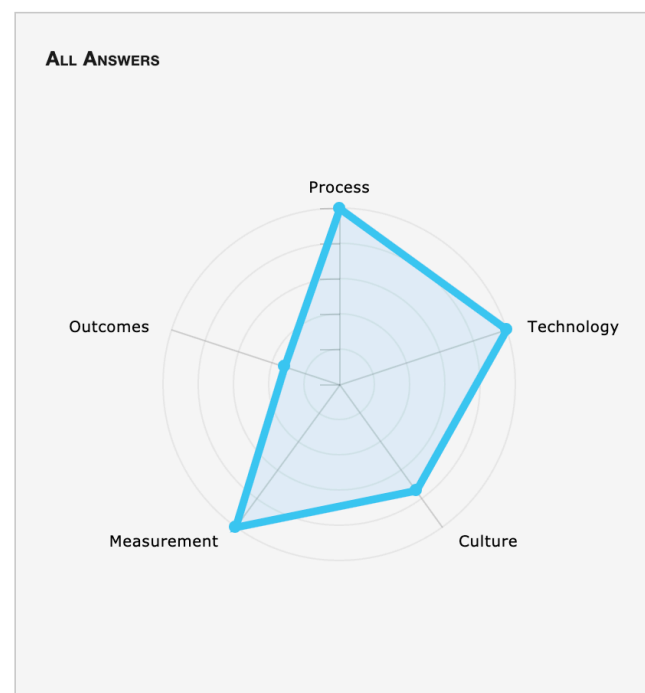
## DevOps Self-Assessment

Helping you become a high-performer

### Your Results Overview & Breakdown

#### An Explanation of the Results

The results of this Self-Assessment should be used to help you optimize your DevOps practices and tools. In deciding on the next steps of your DevOps journey, you should consider your competitive market, organizational culture, internal processes and current tooling for strengthening each of your DevOps practice areas.

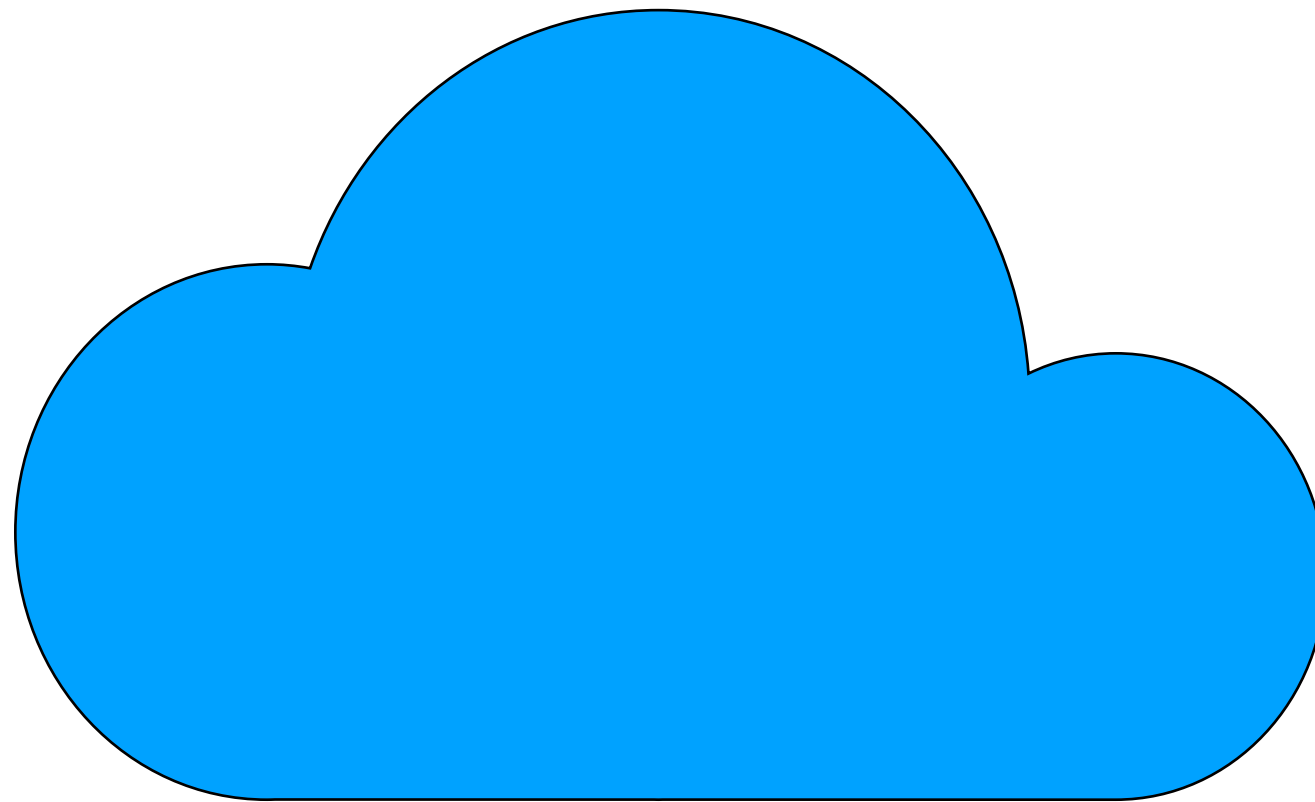






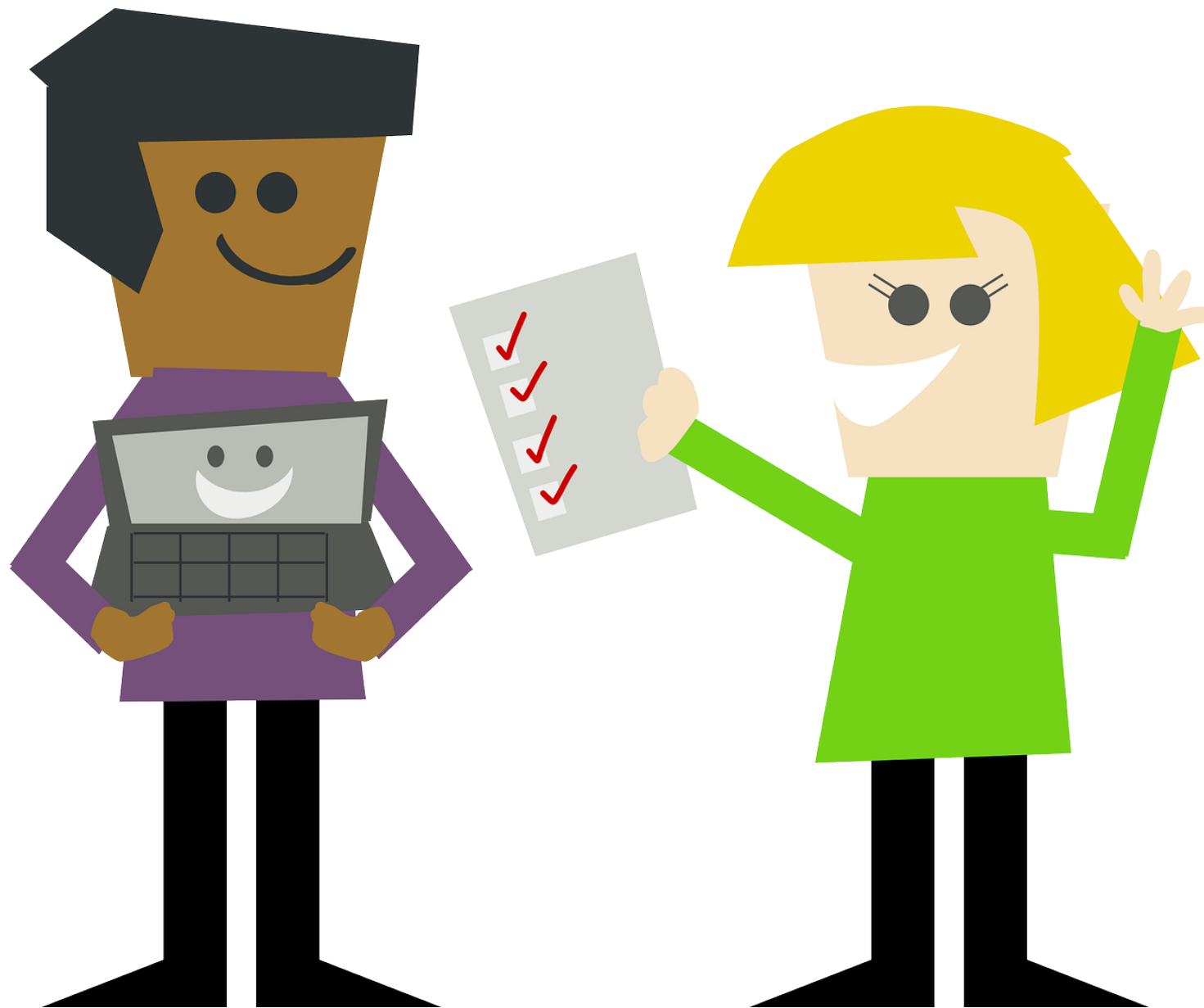














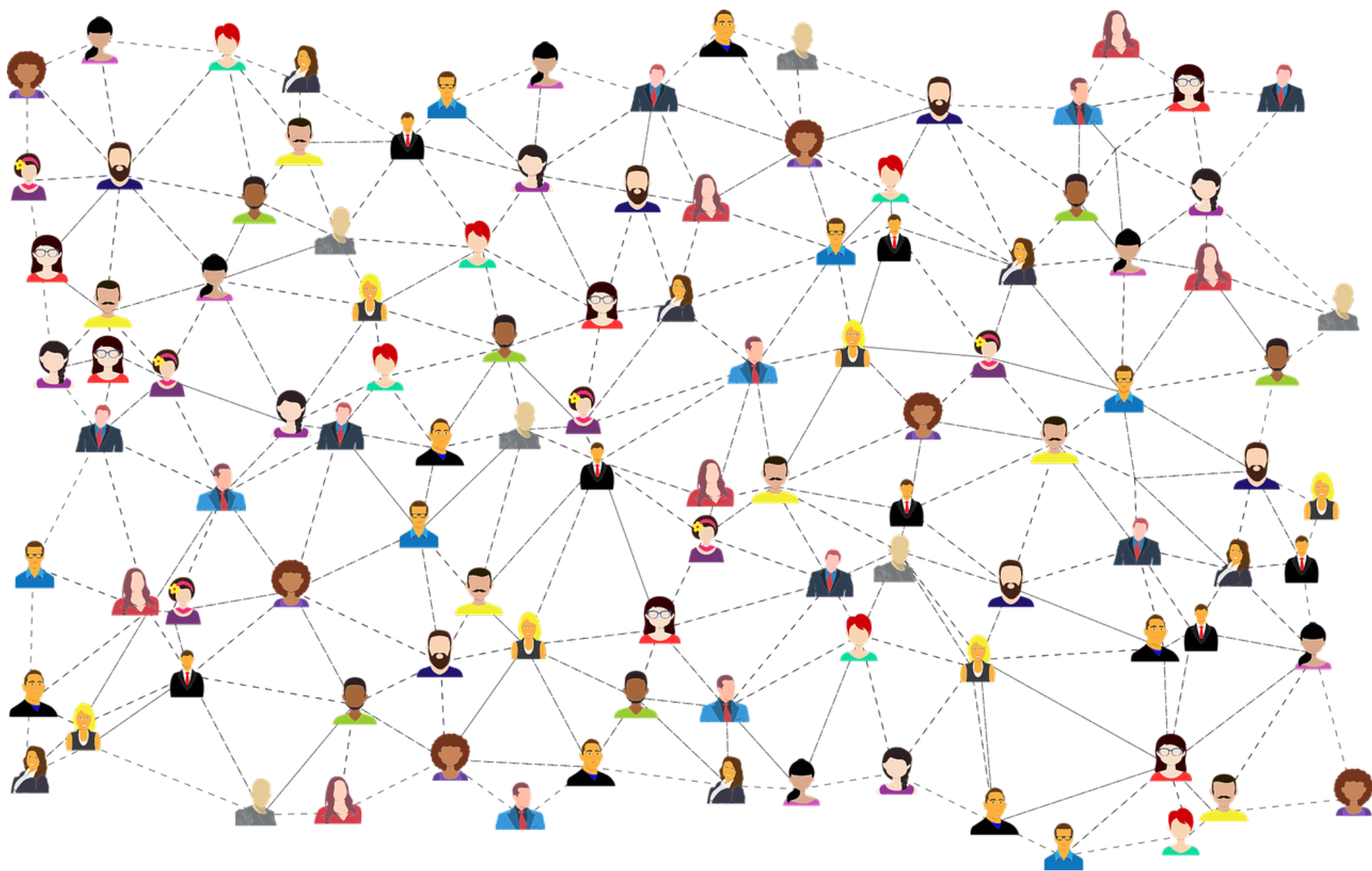
# Transformation



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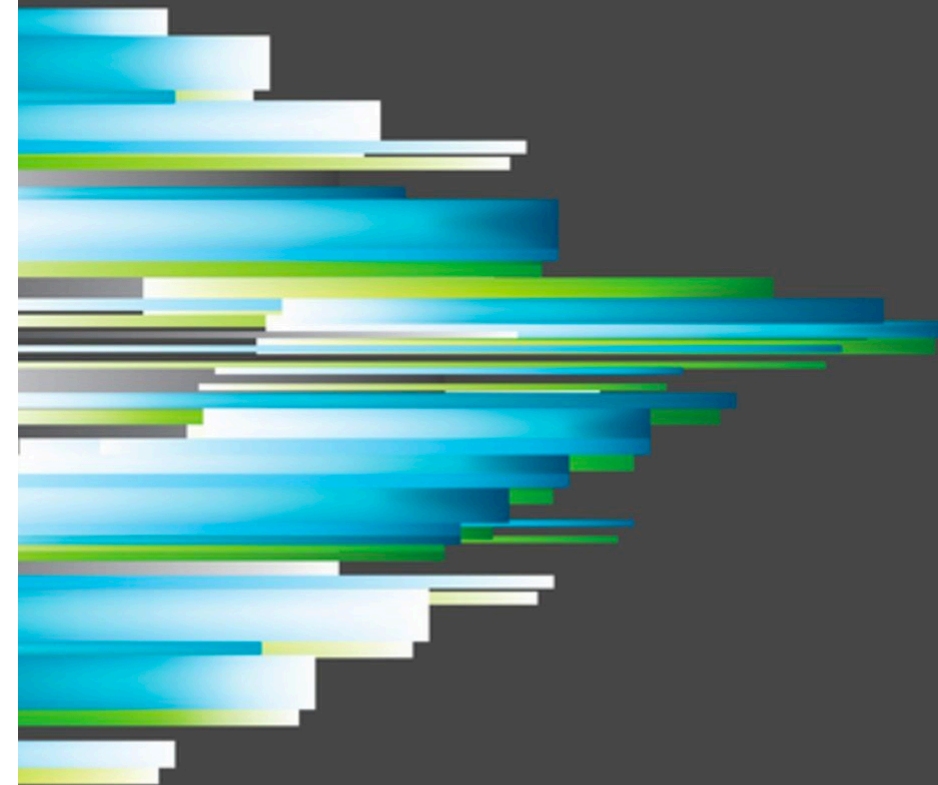






THE SCIENCE OF DEVOPS  
**ACCELERATE**

Building and Scaling High Performing  
Technology Organizations



Nicole Forsgren, PhD  
Jez Humble *and* Gene Kim

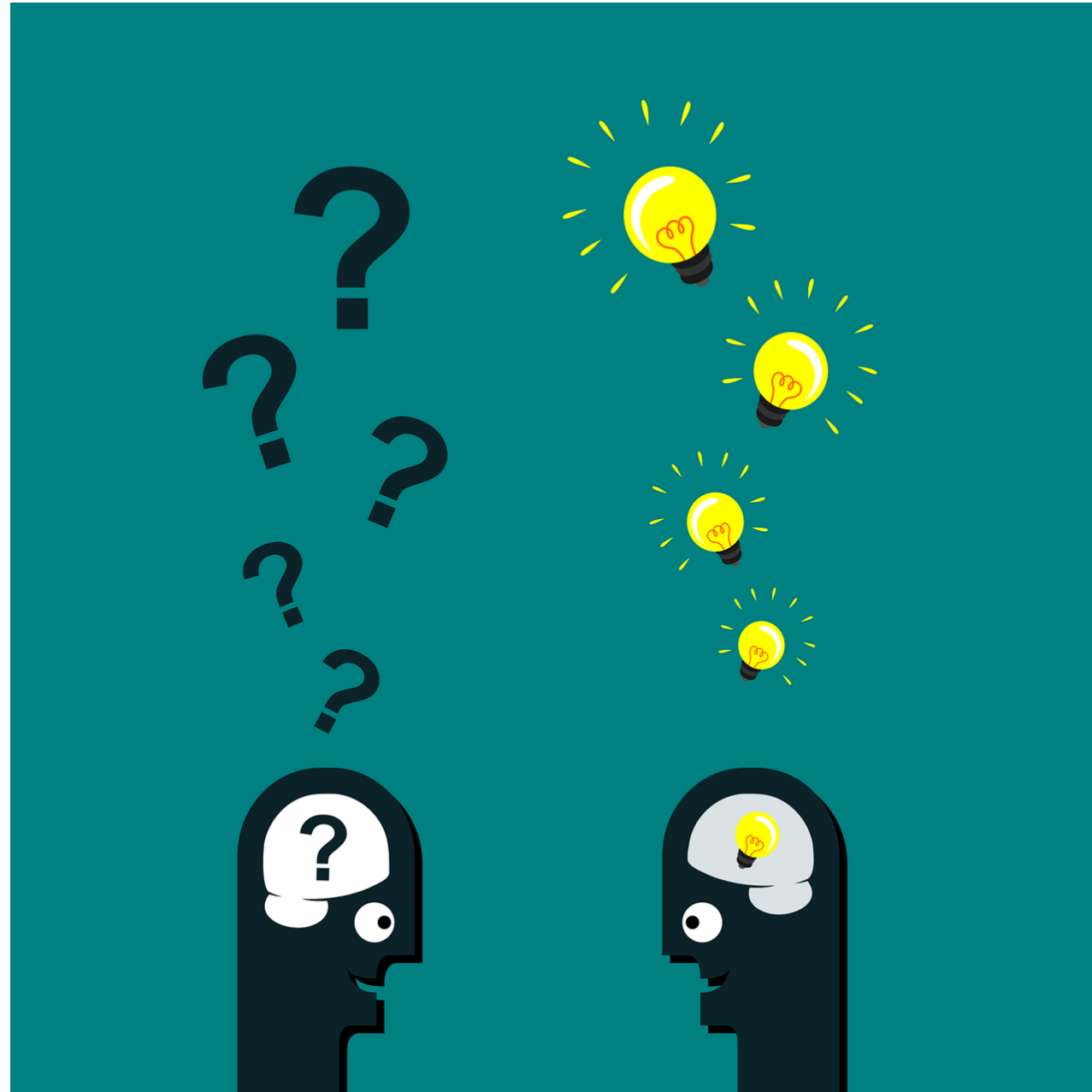
Westrum Three Cultures Model		
Pathological	Bureaucratic	Generative
Power-oriented	Rule-oriented	Performance-oriented
Low cooperation	Modest cooperation	High cooperation
Messengers shot	Messengers neglected	Messengers trained
Responsibilities shirked	Narrow responsibilities	Risks are shared
Bridging discouraged	Bridging tolerated	Bridging encouraged
Failure leads to scapegoats	Failure leads to justice	Failure leads to inquiry
Novelty crushed	Novelty seen as a problem	Novelty implemented

Westrum RA typology of organisational cultures *BMJ Quality & Safety* 2004;**13**:ii22-ii27.

# Google's findings on high performing teams



<https://rework.withgoogle.com/blog/five-keys-to-a-successful-google-team/>



## Westrum Three Cultures Model

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# Psychological Safety

“A shared belief held by members of a team that the team is safe for interpersonal risk taking.”

Amy C. Edmondson, *Psychological Safety and Learning Behavior in Work Teams*





# Col. Nicole Malachowski, USAF (Ret.)



“A culture that **values psychological safety**, trust, and respect contributes to productivity by letting employees focus on solving problems and getting their work done rather than politics and fighting.”

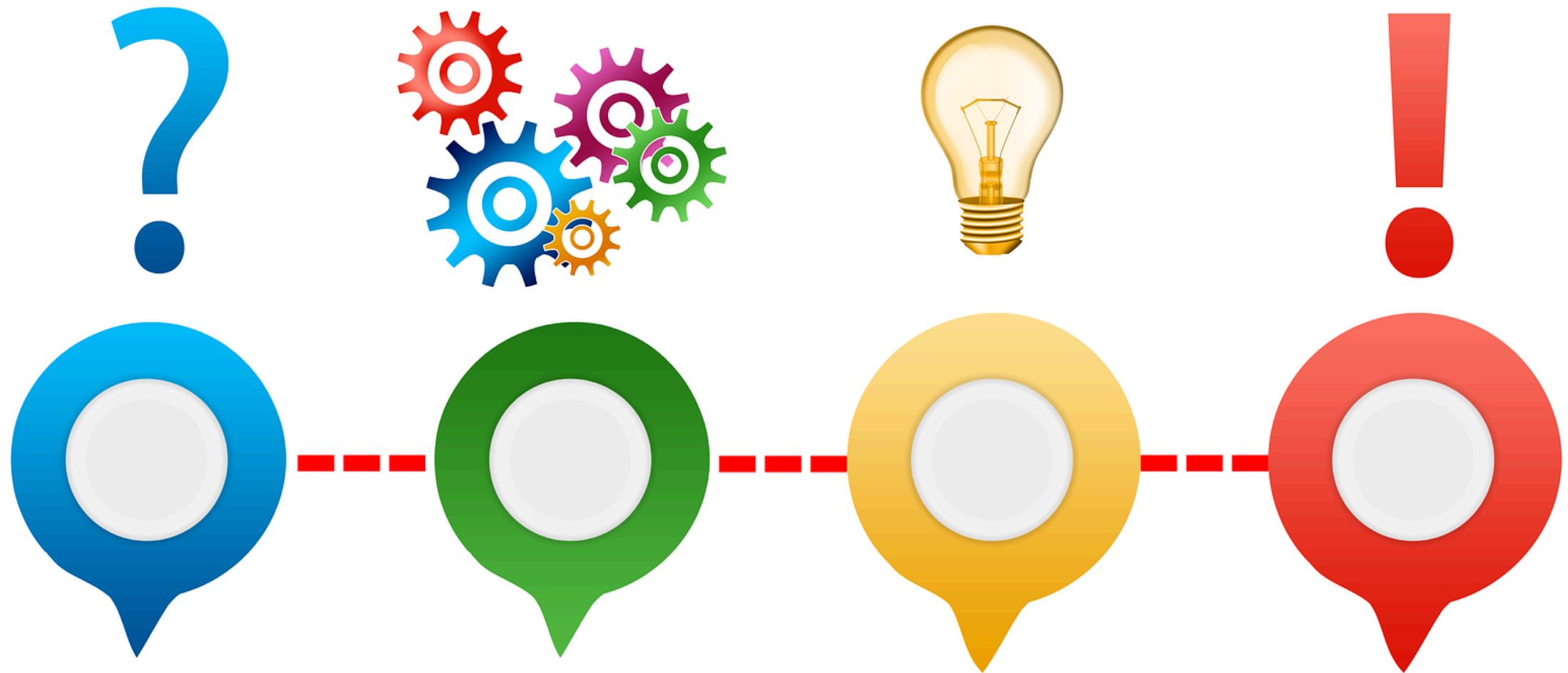
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Accelerate: State of DevOps 2019, DORA

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# Embrace Failure





# Words Matter

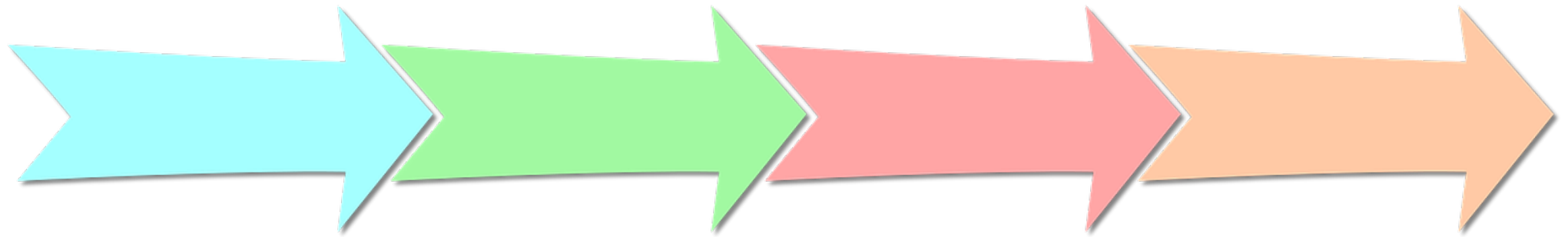




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# Clear, Simple, Defined Process





## Westrum Three Cultures Model

Pathological	Bureaucratic	Generative
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# DevOps Transformation



Release on demand



Delivery teams owning their services



Most people think about automation



Continuous Improvement - Job is never done



Few companies will ever get to 100% DevOps



Multi year journey

# DevOps Transformation

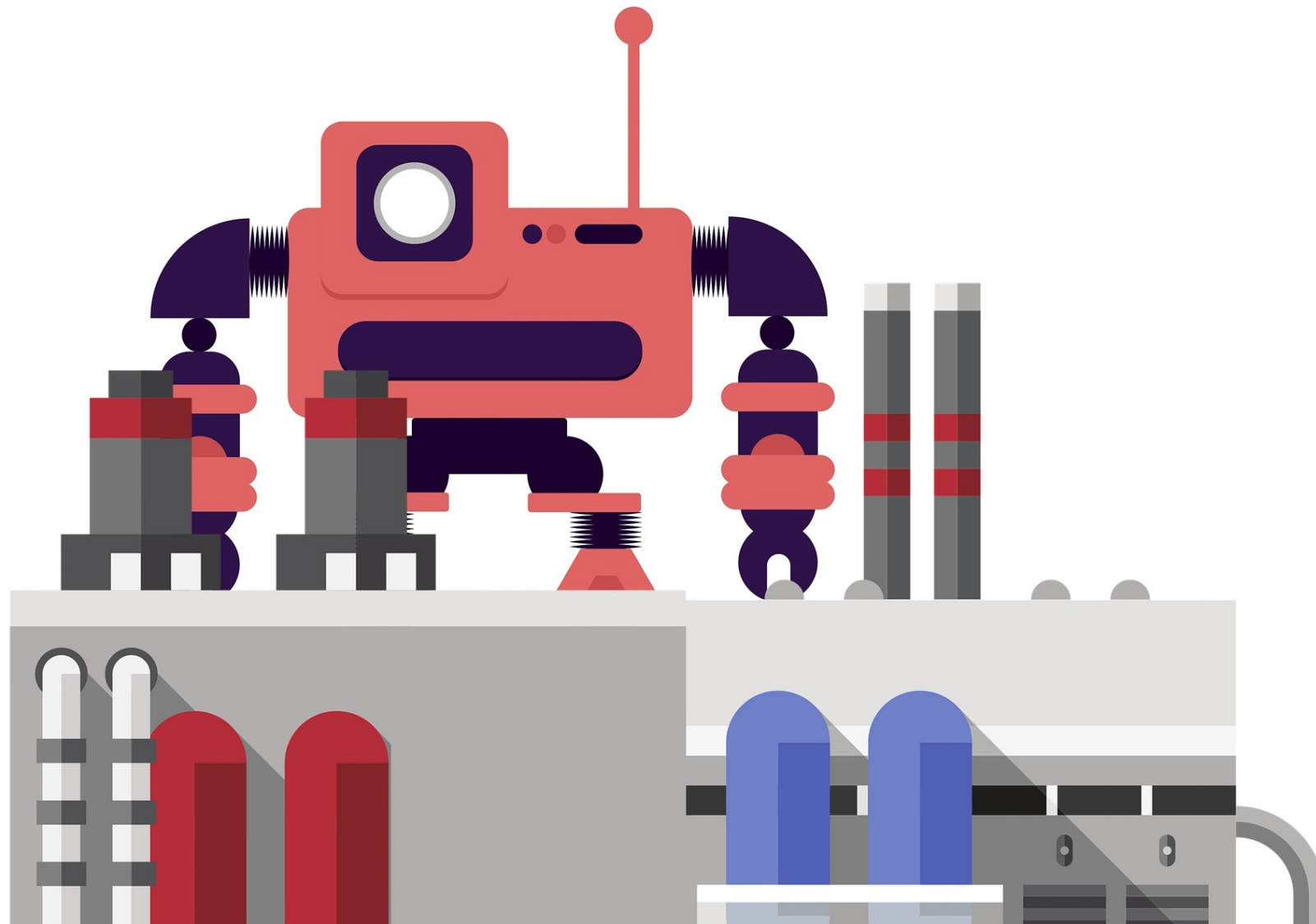
	Thinking about it	Hybrid	DevOps Elite
Release Cycle	Few times per year	Several times per year	Release on Demand
Response Process	ITIL heavy, NOC driven	Some combination of ITIL + DevOps	Primary SRE / DevOps model
Process	Mostly Manual	Mostly Automated	Fully automated
DevOps methodology	Some teams starting to adopt	New development is done with a DevOps model	Company DNA and primary operating model
Service Ownership	IT Ops / Production support “bugfix” teams	IT Ops (Delivery teams are brought in as escalation but not usually on-call)	Owned by those that built it
Continuous improvement	Failure leads to scapegoating	Failure leads to justice	Failure leads to inquiry

# Practices

# Configuration Management



# Automation



# Tooling



Os	Open Source	Source Control Mgmt.	Deployment	Analytics
Fr	Free	Database Automation	Containers	Monitoring
Fm	Freemium	Continuous Integration	Release Orchestration	Security
Pd	Paid	Testing	Cloud	Collaboration
En	Enterprise	Configuration	AIOps	

1 Os <b>GI</b> GitLab		PERIODIC TABLE OF DEVOPS TOOLS (V3)																		2 En <b>Sp</b> Splunk															
		Os Open Source		Source Control Mgmt.		Deployment		Analytics																											
3 Fm <b>Gh</b> GitHub		4 En <b>Dt</b> Datical		Fr Free		Database Automation		Containers		Monitoring																									
11 Os <b>Sv</b> Subversion		12 En <b>Db</b> DBMaestro		Fm Freemium		Continuous Integration		Release Orchestration		Security																									
				Pd Paid		Testing		Cloud		Collaboration																									
				En Enterprise		Configuration		AIOps																											
19 En <b>Cw</b> ISPW		20 En <b>Dp</b> Delphix		21 Os <b>Jn</b> Jenkins		22 Fm <b>Cs</b> Codeship		23 Os <b>Fn</b> FitNesse		24 Fr <b>Ju</b> JUnit		25 Fr <b>Ka</b> Karma		26 Fm <b>Su</b> SoapUI		27 En <b>Ch</b> Chef		28 Fr <b>Tf</b> Terraform		29 En <b>XLd</b> XebiaLabs XL Deploy		30 En <b>Ud</b> UrbanCode Deploy		31 Os <b>Ku</b> Kubernetes		32 Fm <b>Cc</b> CA CD Director		33 En <b>Pr</b> Plutora Release		34 Pd <b>Al</b> Alibaba Cloud		35 Os <b>Os</b> OpenStack		36 Os <b>Ps</b> Prometheus	
37 Pd <b>At</b> Artifactory		38 Fm <b>Rg</b> Redgate		39 Pd <b>Ba</b> Bamboo		40 Fm <b>Vs</b> VSTS		41 Fr <b>Se</b> Selenium		42 Fr <b>Jm</b> JMeter		43 Os <b>Ja</b> Jasmine		44 Pd <b>Sl</b> Sauce Labs		45 En <b>An</b> Ansible		46 Os <b>Ru</b> Rudder		47 En <b>Oc</b> Octopus Deploy		48 Os <b>Go</b> GoCD		49 Os <b>Ms</b> Mesos		50 Pd <b>Gke</b> GKE		51 Fm <b>Om</b> OpenMake		52 Pd <b>Cp</b> AWS CodePipeline		53 Pd <b>Cy</b> Cloud Foundry		54 En <b>It</b> ITRS	
55 Pd <b>Nx</b> Nexus		56 Os <b>Fw</b> Flyway		57 Os <b>Tr</b> Travis CI		58 Fm <b>Tc</b> TeamCity		59 Os <b>Ga</b> Gatling		60 Fr <b>Tn</b> TestNG		61 Fm <b>Tt</b> Tricentis Tosca		62 Pd <b>Pe</b> Perfecto		63 En <b>Pu</b> Puppet		64 Os <b>Pa</b> Packer		65 Fm <b>Cd</b> AWS CodeDeploy		66 En <b>Ec</b> ElectricCloud		67 Os <b>Ra</b> Rancher		68 Pd <b>Aks</b> AKS		69 Os <b>Rk</b> Rkt		70 Os <b>Sp</b> Spinnaker		71 Pd <b>Ir</b> Iron.io		72 Pd <b>Mg</b> Moogsoft	
73 Fm <b>Bb</b> BitBucket		74 En <b>Pf</b> Perforce		75 Fm <b>Cr</b> Circle CI		76 Pd <b>Cb</b> AWS CodeBuild		77 Fr <b>Cu</b> Cucumber		78 Os <b>Mc</b> Mocha		79 Os <b>Lo</b> Locust.io		80 En <b>Mf</b> Micro Focus UFT		81 Os <b>Sa</b> Salt		82 Os <b>Ce</b> CFEngine		83 En <b>Eb</b> ElasticBox		84 En <b>Ca</b> CA Automic		85 En <b>De</b> Docker Enterprise		86 Pd <b>Ae</b> AWS ECS		87 Fm <b>Cf</b> Codefresh		88 Os <b>Hm</b> Helm		89 Os <b>Aw</b> Apache OpenWhisk		90 Os <b>Ls</b> Logstash	



91EnXLiXebiaLabsXL Impact	92OsKiKibana	93FmNrNew Relic	94EnDtDynatrace	95EnDdDatadog	96FmAdAppDynamics	97OsElElasticSearch	98OsNiNagios	99OsZbZabbix	100EnZnZenoss	101EnCxCheckmarxSAST	102EnSgSignal Sciences	103EnBdBlackDuck	104OsSrSonarQube	105OsHvHashiCorp Vault
106EnSwServiceNow	107PdJrJira	108FmTlTrello	109FmSkSlack	110FmStStride	111EnCnCollabNet VersionOne	112EnRyRemedy	113EnAcAgile Central	114PdOgOpsGenie	115PdPdPagerduty	116OsSnSnort	117FmTwTripwire	118EnCkCyberArk	119EnVcVeracode	120EnFfFortify SCA



# Continuous Integration

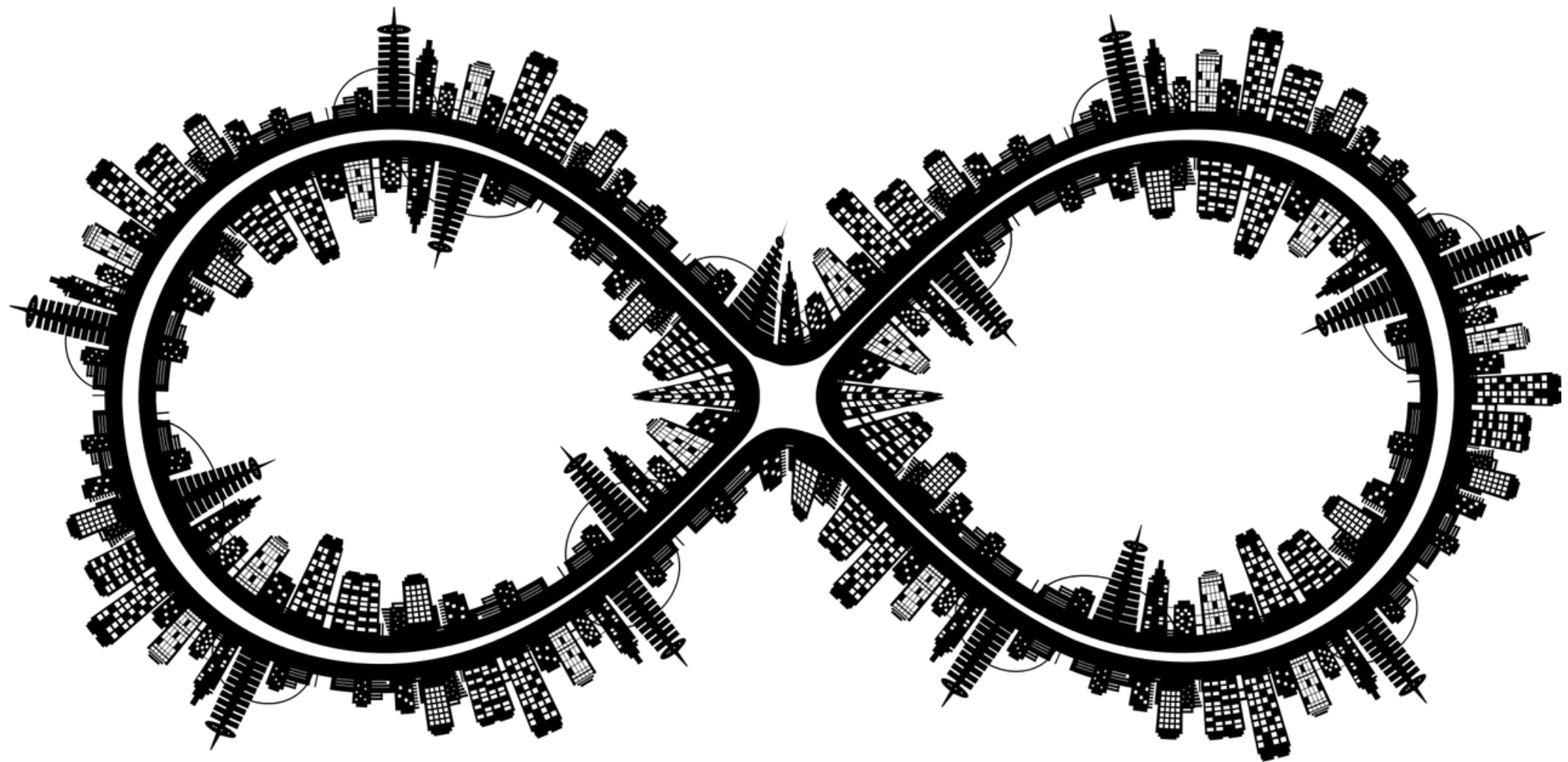


# Testing



# Start Small





“Many organizations wanting to adopt DevOps look for a set of prescriptive steps or best practices to guide their journey. However, every organization is different and which practices to adopt depends on the current state of the organization—including the state of its technology, culture, and processes—and its short- and long-term goals”

DORA Accelerate: State of DevOps 2019

[pduty.me/work-with-pagey](https://pduty.me/work-with-pagey)

