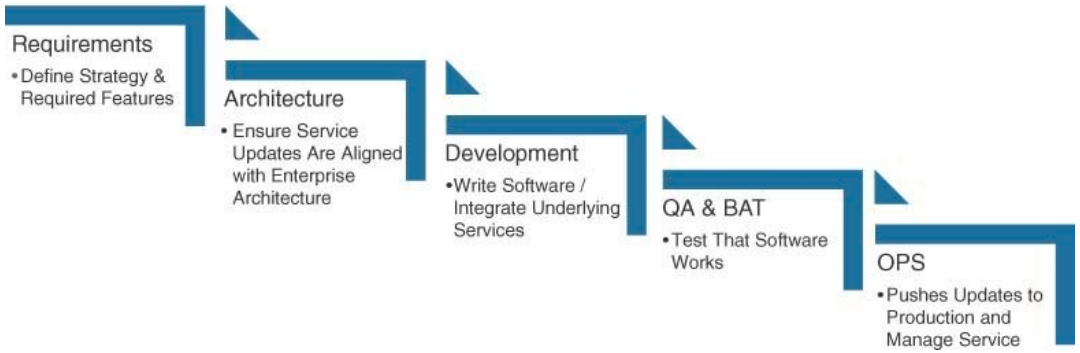
WHAT IS DEVOPS?

DEV AND OPS CALENDARS

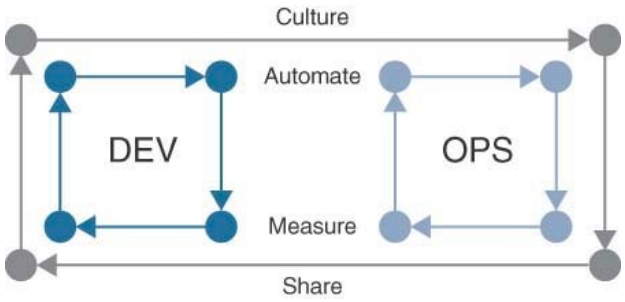
Traditional IT Service Delivery: Slow, Manual, and Error Prone



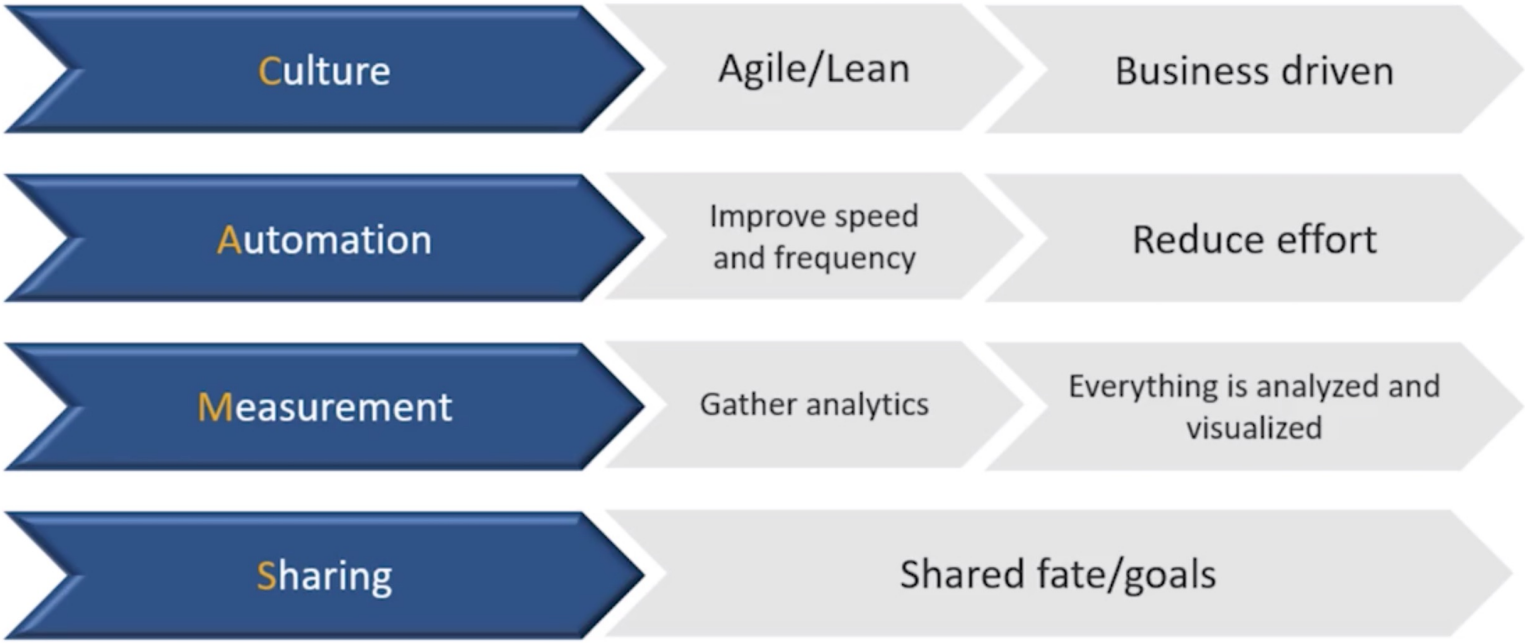
WHAT IS DEVOPS?

"[DevOps is] a set of cultural norms and technical practices that enable this fast flow of work from dev through test through operations while preserving world class reliability"

Gene Kim - author of "The Phoenix Project", "DevOps Handbook", and "The Unicorn Project"



What does It Take to Embrace DevOps?



DevOps case studies

Netflix	• 1000s of releases a day • Fully-automated build tools to test and make packages, machine image bakery, and image deployment • Developers deploy when they want; manage their own capacity and auto scaling; and fix anything that breaks
Scotiabank	• Transformed a 186-year old bank into a technology company • 3000 deployments a month through PLATO platform • React to customer feedback in REALTIME
Target	• 90+ APIs facilitating in-store experience, supply chain, and back office • Hundreds of deployments a day • Monthly API volume over 1.5 billion hits • Less than 10 incidents a month • Target DOJO

PUTTING DEVOPS INTO PRACTICE

THE THREE WAYS

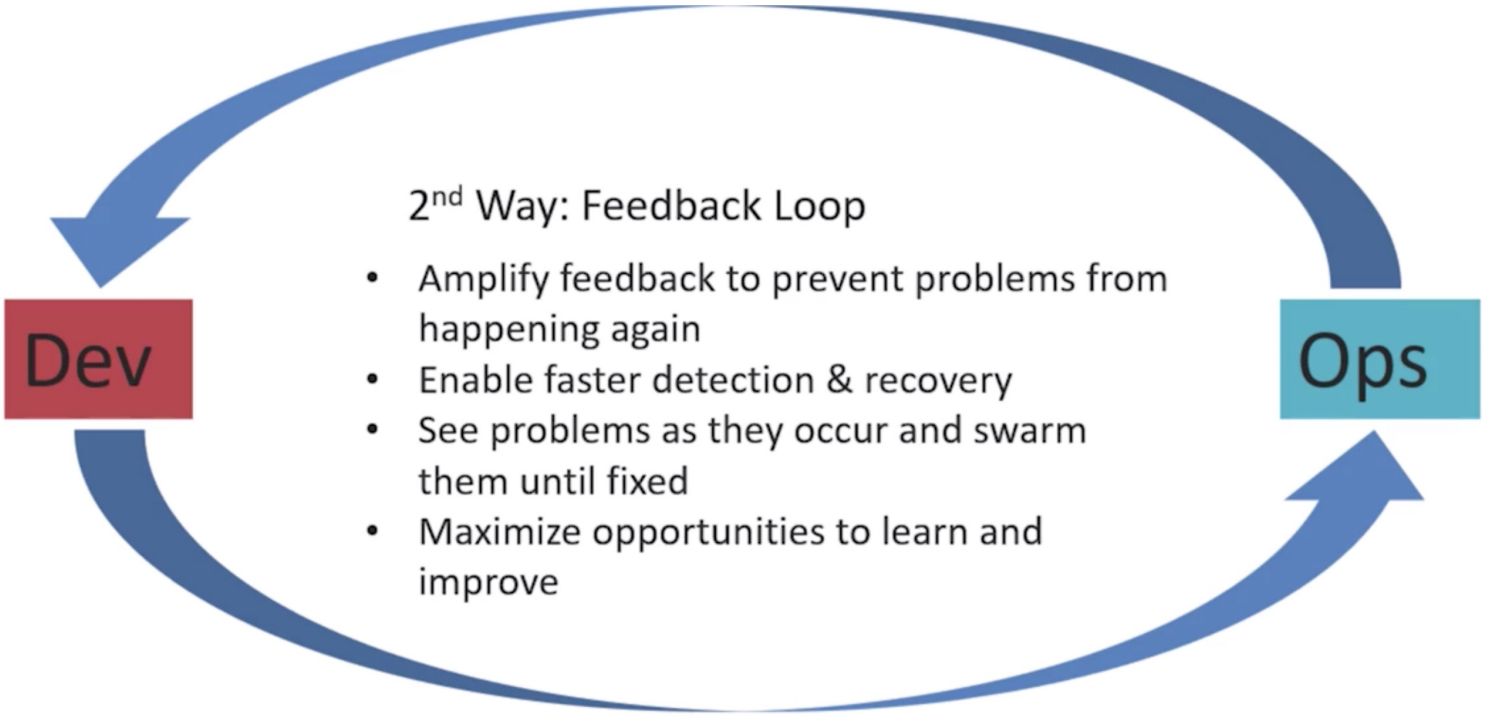
THE THREE WAYS

1st Way: Systems and Flow

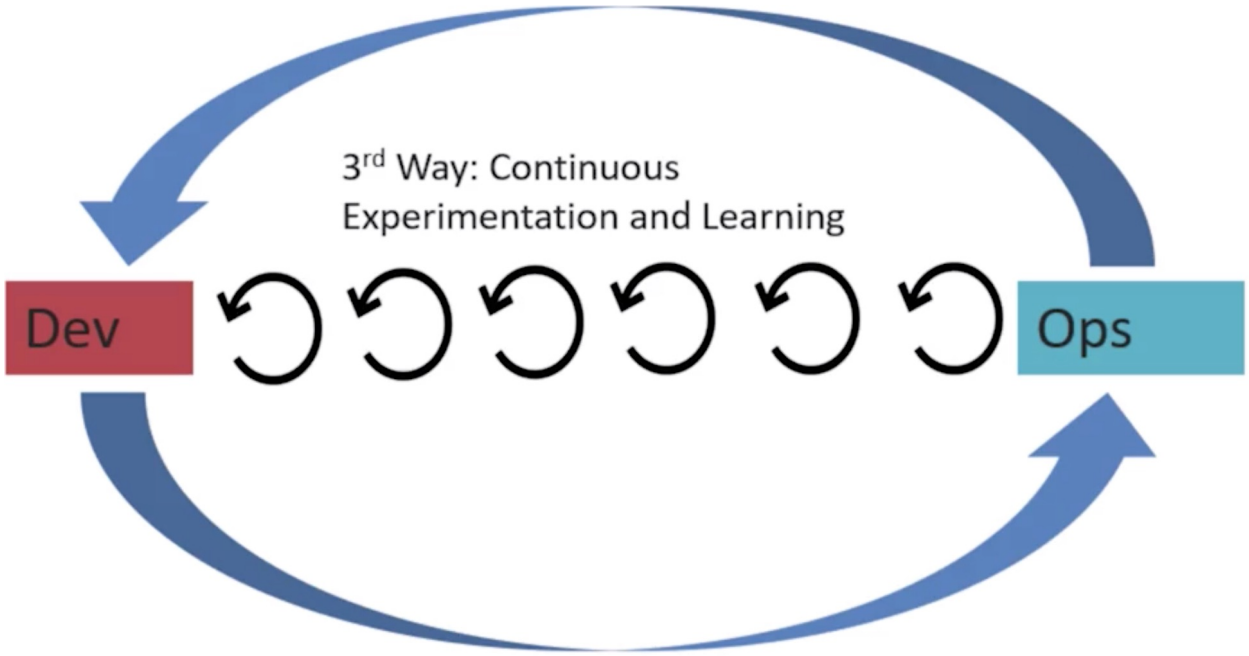
Make work visible

- Reduce batch sizes
- Reduce intervals of work
- Build in quality by preventing defects from being passed downstream
- Constantly optimize for business goals

THE THREE WAYS



THE THREE WAYS



DEVOPS IMPLEMENTATION

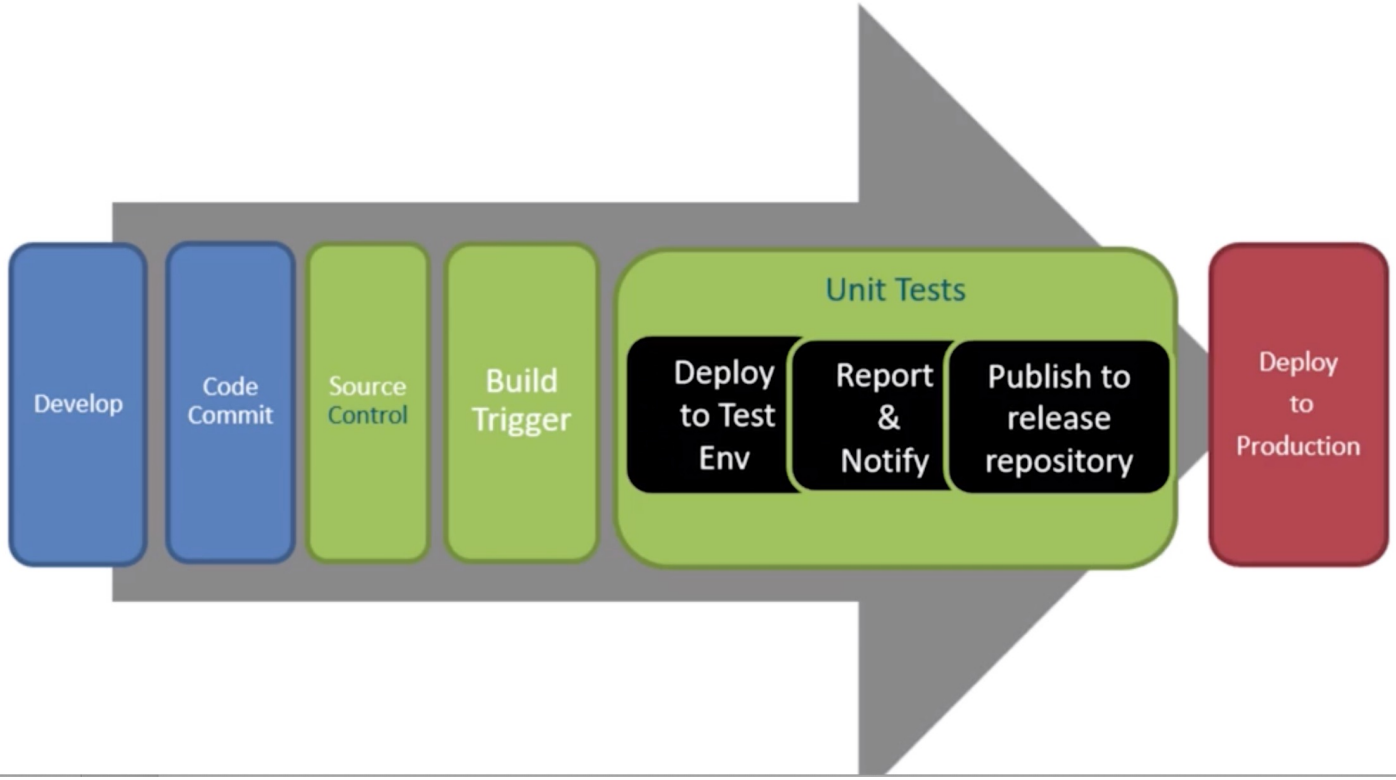
DevOps Tools

Continuous Integration	Jenkins, Travis, Team City, Drone
Configuration Management	Puppet, Chef, Ansible
Collaboration	Webex Teams, Slack, MS Teams
Working Environment	Docker, Vagrant, VMware
Source/Image Control	Git, Github, Subversion, Docker Hub, Artifactory
PaaS	Cloud Foundry, OpenShift, Aprenda, K8S
IaaS	Azure, AWS, GCP, Openstack

Continuous integration, Delivery, and Deployment

- Continuous Integration: Merging of development work with code base constantly so that automated testing can catch problems early.
- Continuous Delivery: Software package delivery mechanism for releasing code to staging for review and inspection.
- Continuous Deployment: Relies on CI and CD to automatically release code into production as soon as it is ready. Constant flow of new features into production

Continuous Deployment



DevOps Pipeline in Action