Microsoft

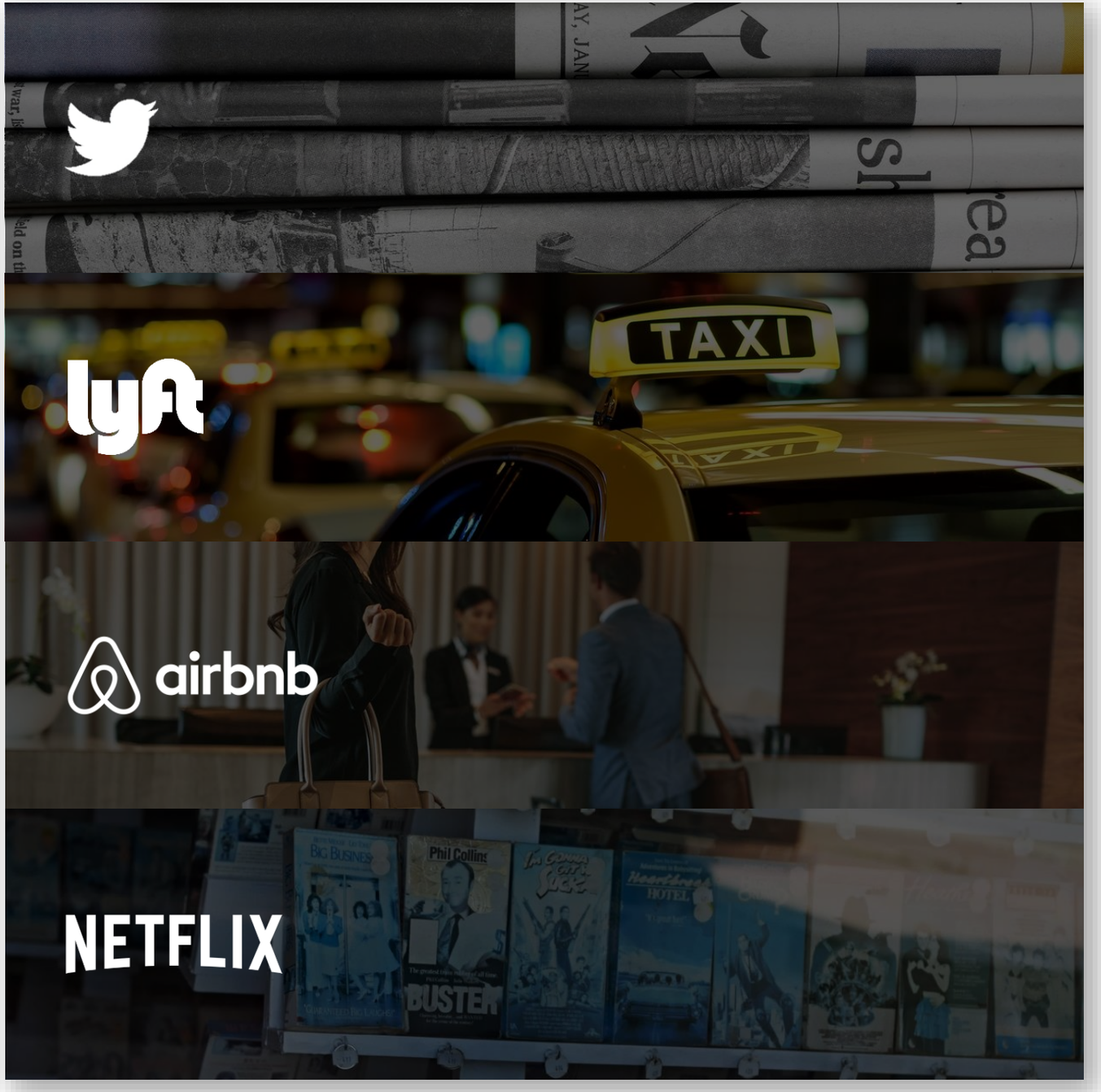
# Accelerate Delivery with DevOps

Toan Huynh

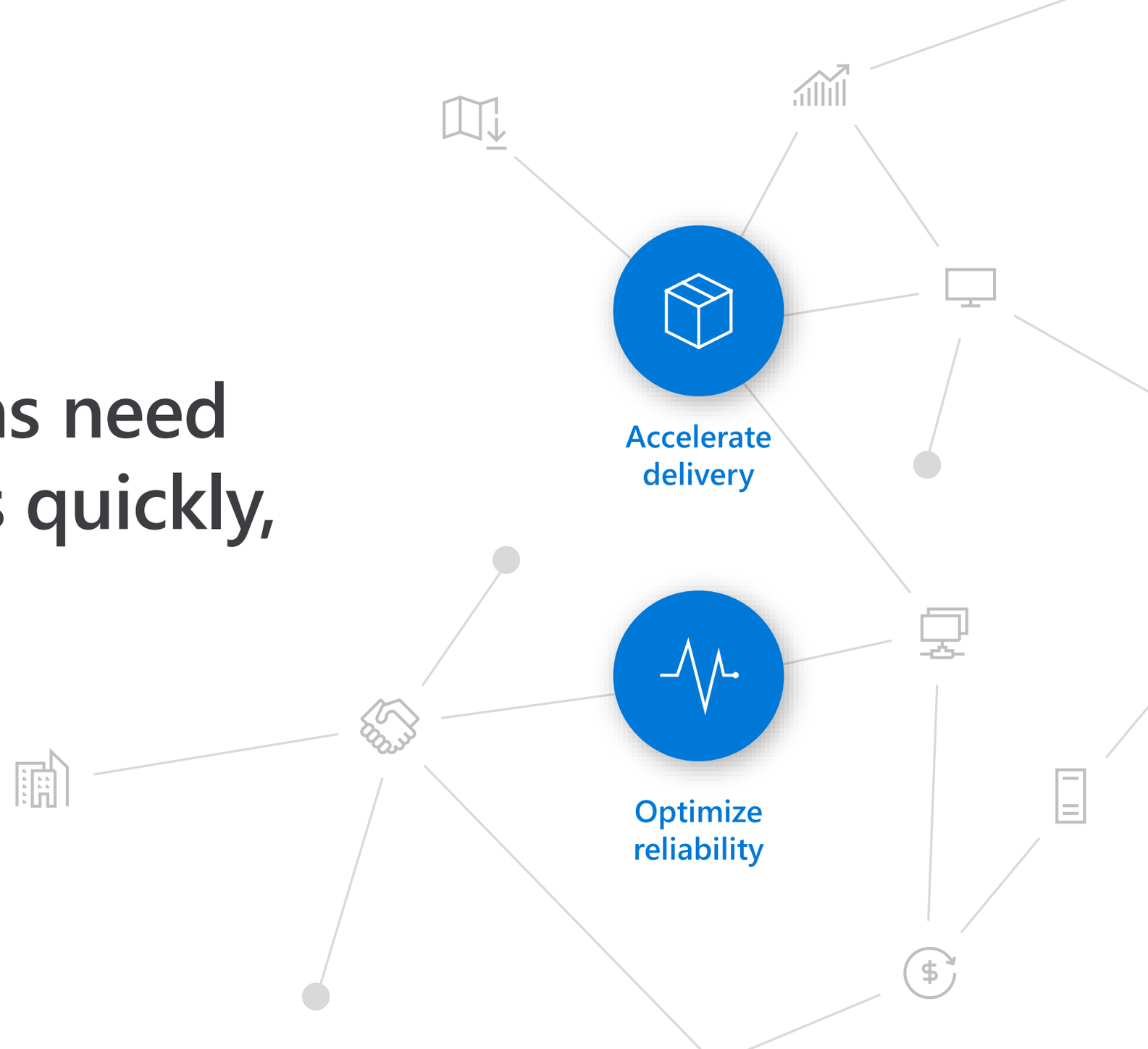
50% of Fortune 500 in 2000 now **replaced** by organizations that **use technology** to deliver customer value **faster, better, and cheaper**

The Fortune 500 of today face the same challenge tomorrow

**Innosight**
Corporate Longevity: Turbulence Ahead for Large Organizations



# Product innovations need to reach customers quickly, and stay available



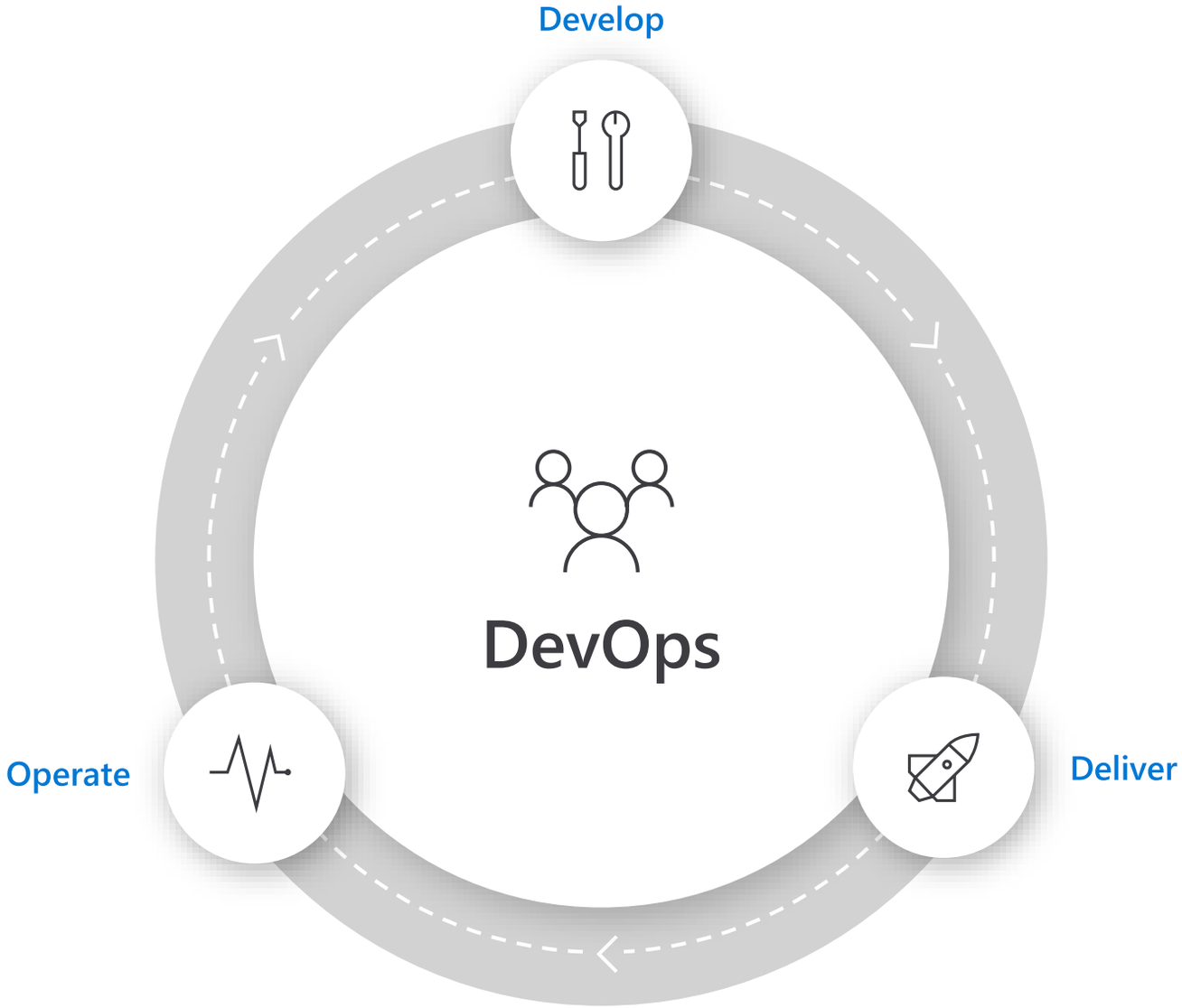
# Software delivery paradox

Speed vs. control impedes innovation

# Developers are at the heart of your company's innovation

# Accelerating Delivery with DevOps

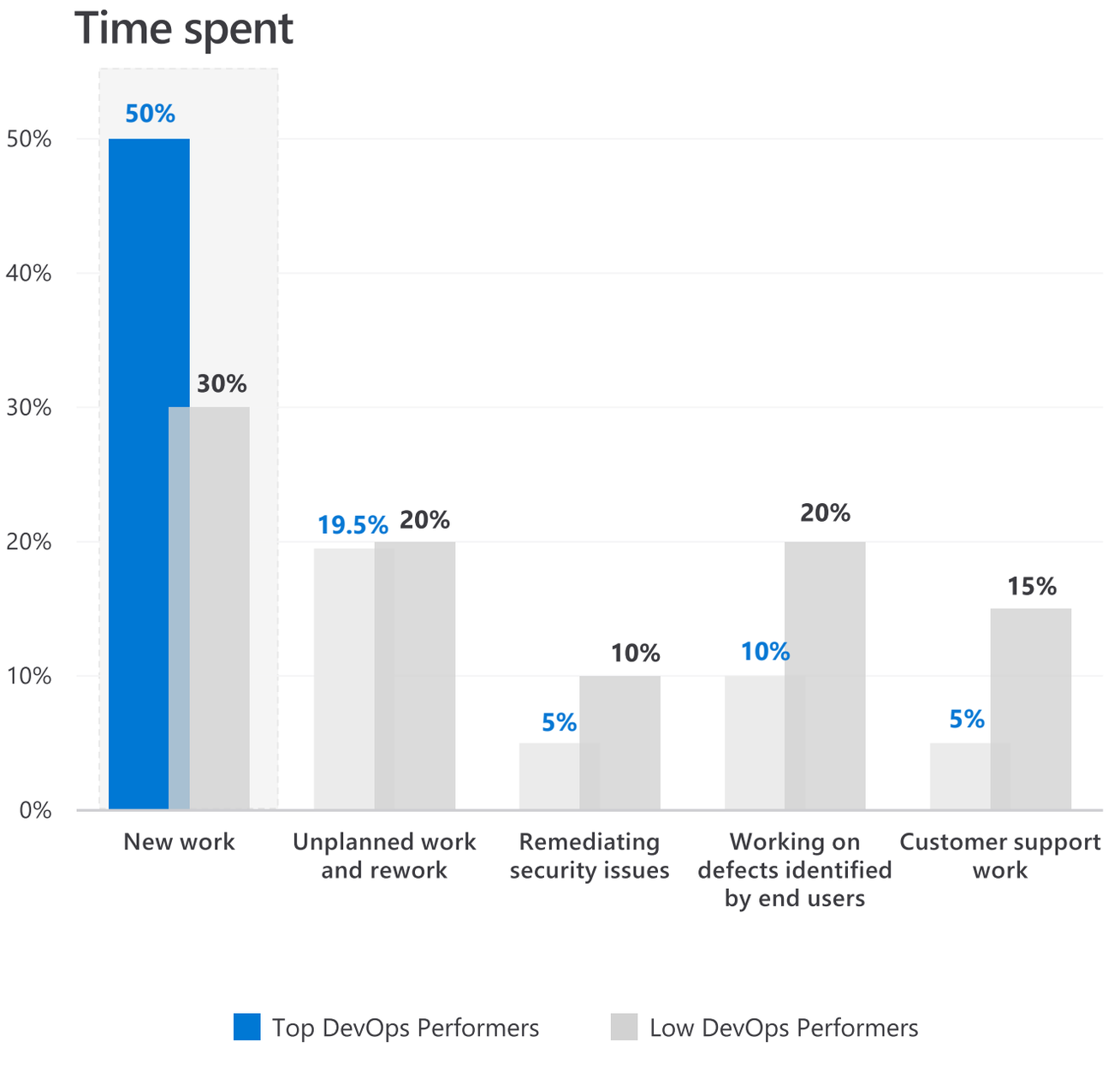
> DevOps is the union of people, process, and products to enable continuous delivery of value to your end users.



# Innovation with oversight

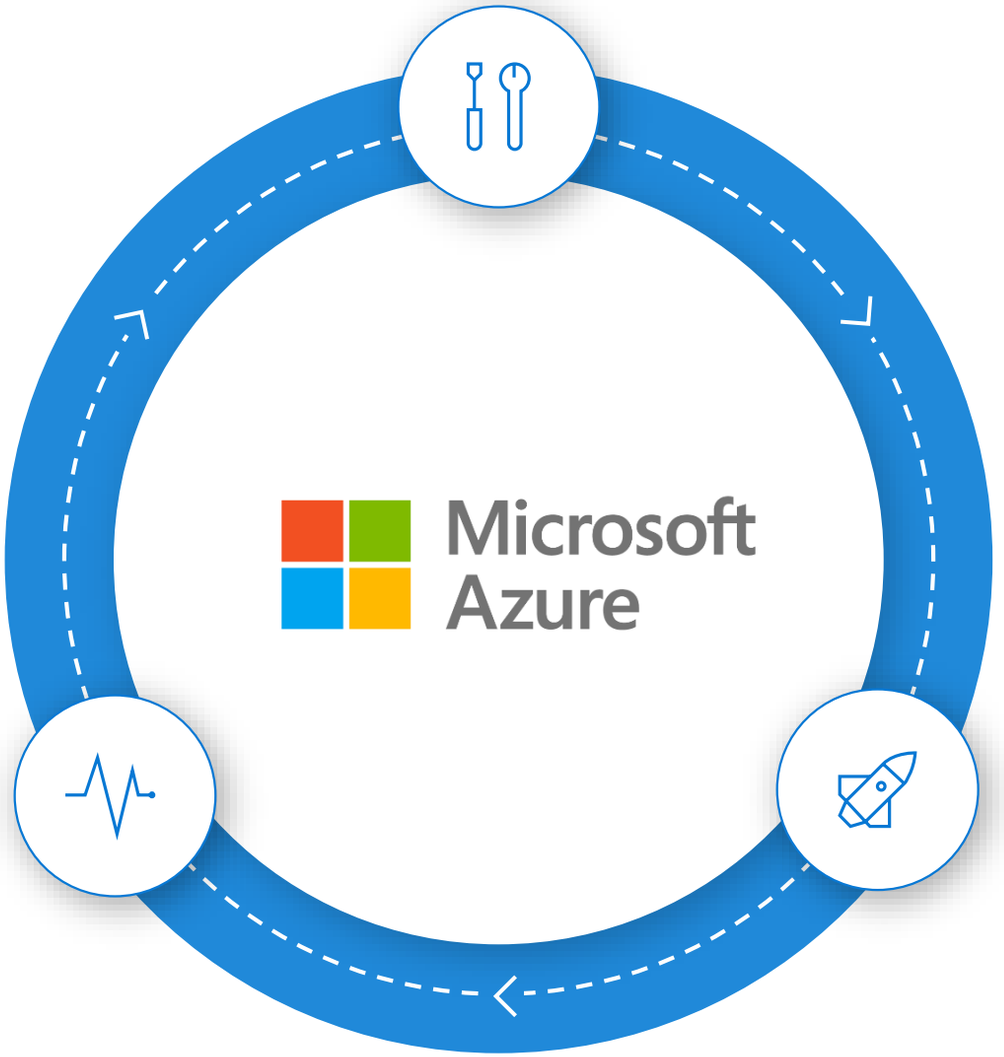
Top performing DevOps companies spend more time innovating and less time “keeping the lights on”.

The result: better products, delivered faster, to happier customers by more engaged teams



# Innovate at scale.
# Deliver with confidence.

Microsoft Azure is the cloud
with DevOps tooling built in



# Deliver with Azure DevOps

Azure Boards

Azure Repos

Azure Pipelines

Azure Artifacts

Azure Test Plans

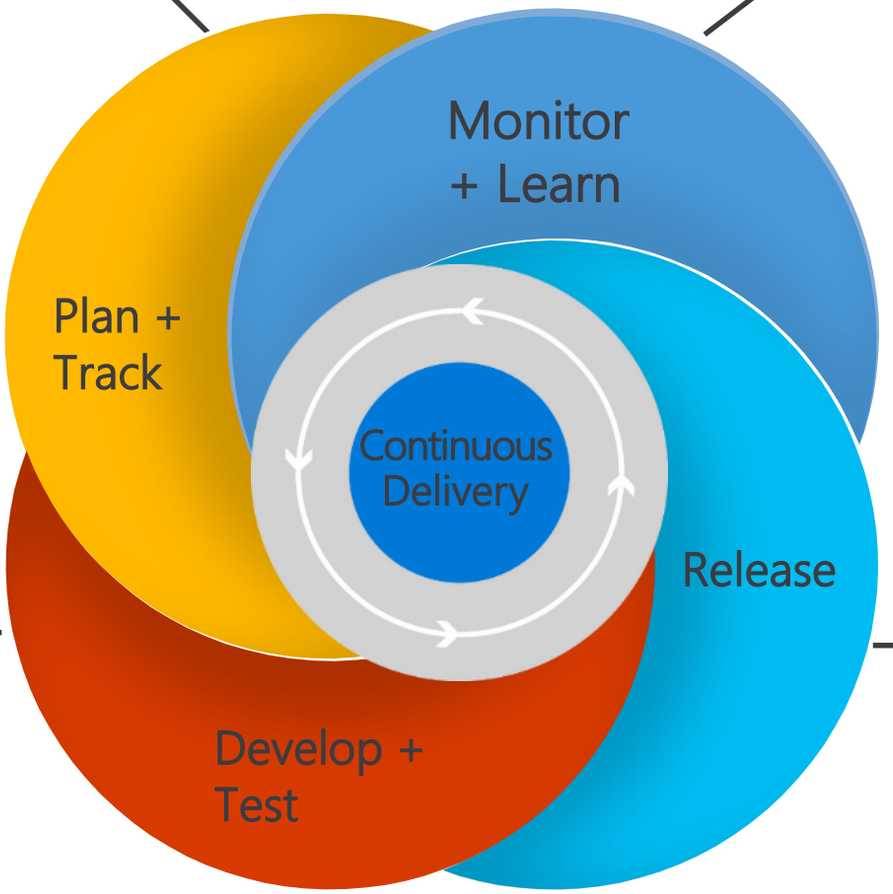
# Azure DevOps

## Agile Planning

Dashboards
Kanban Boards
Taskboards

## Monitoring

Telemetry
Diagnostics
Analysis




## Build and Test

Git Source Control
Modern Code Workflow
Continuous Integration
Continuous Testing
Package Management
Open Source Compliance

## Delivery

Deployment of app
and infrastructure

PaaS, IaaS and
Containers

# Deliver

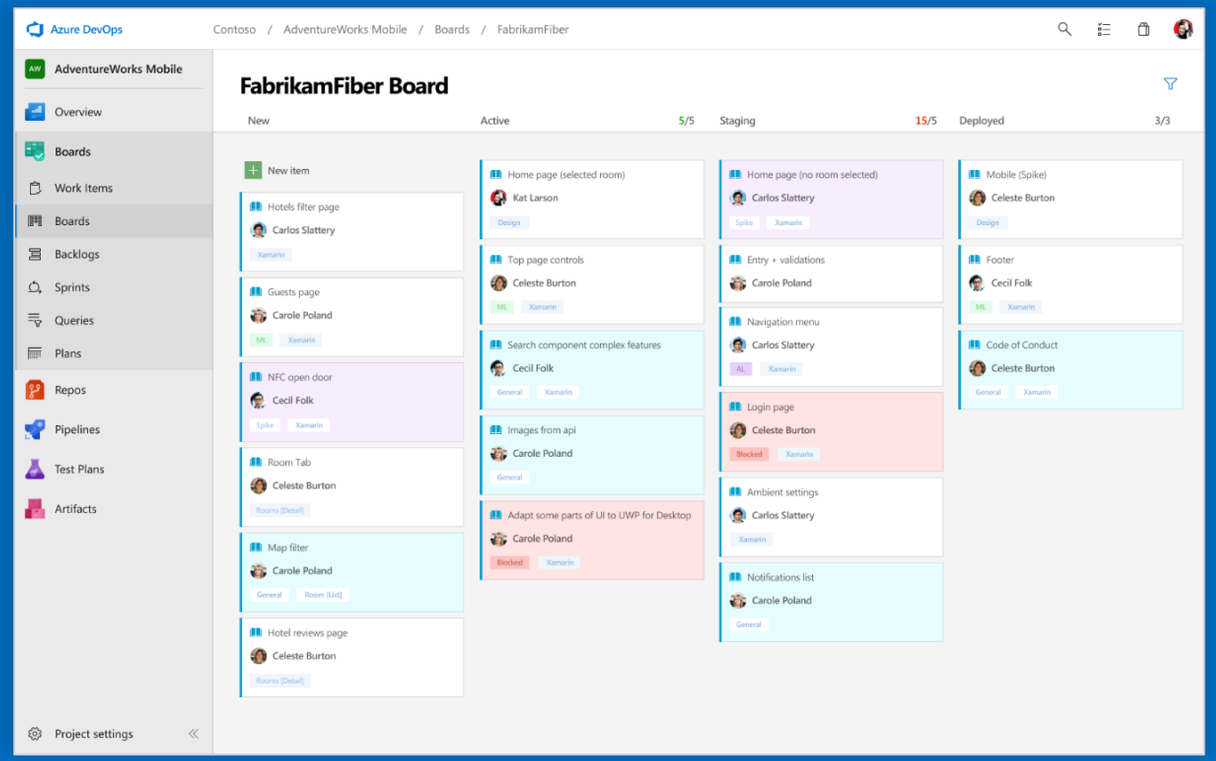
## Azure Boards

## Azure Repos

## Azure Pipelines

## Azure Artifacts

## Azure Test Plans




Connecting ideas to releases

Scrum ready to help your teams run sprints, stand-ups, and plan work

Integrated with GitHub commits and pull requests

Insights into project status and health

# Deliver

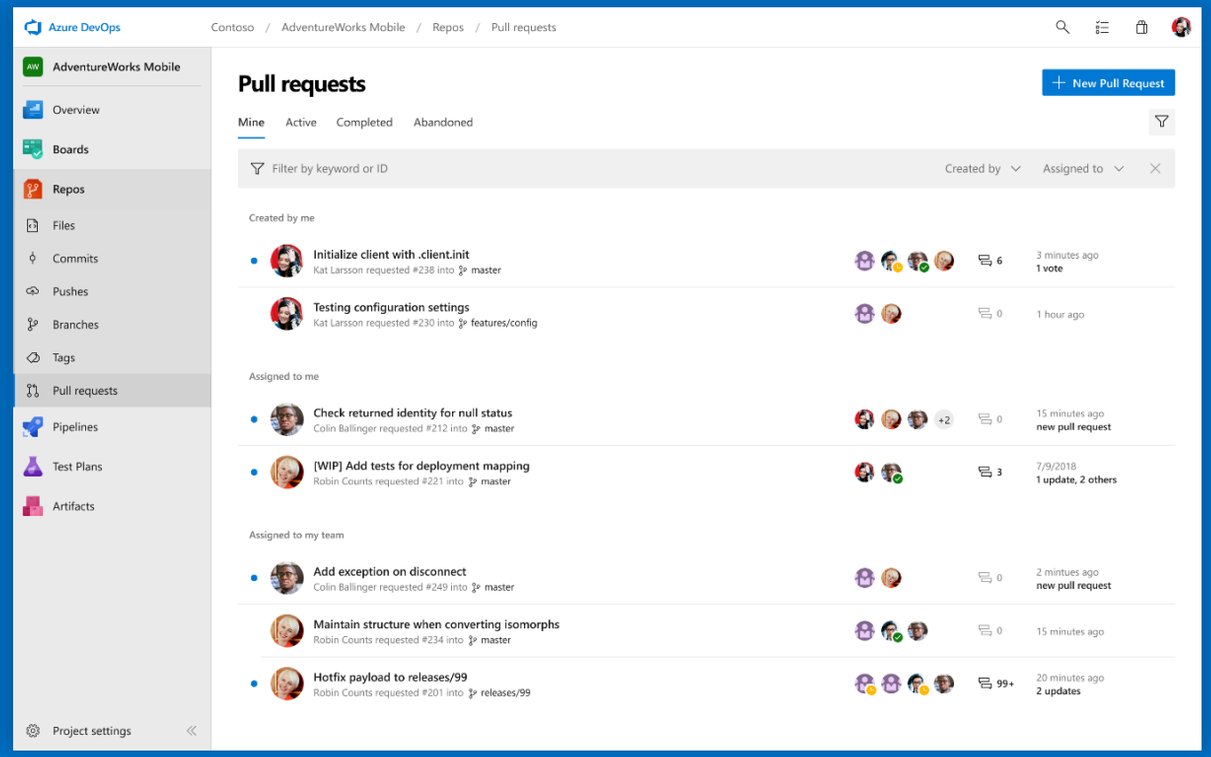
## Azure Boards

## Azure Repos

## Azure Pipelines

## Azure Artifacts

## Azure Test Plans




Private Git and TFVC repos for your teams

Code review via branch pull requests

Branch policies and build validation

Easy migration path to / from GitHub

# Deliver

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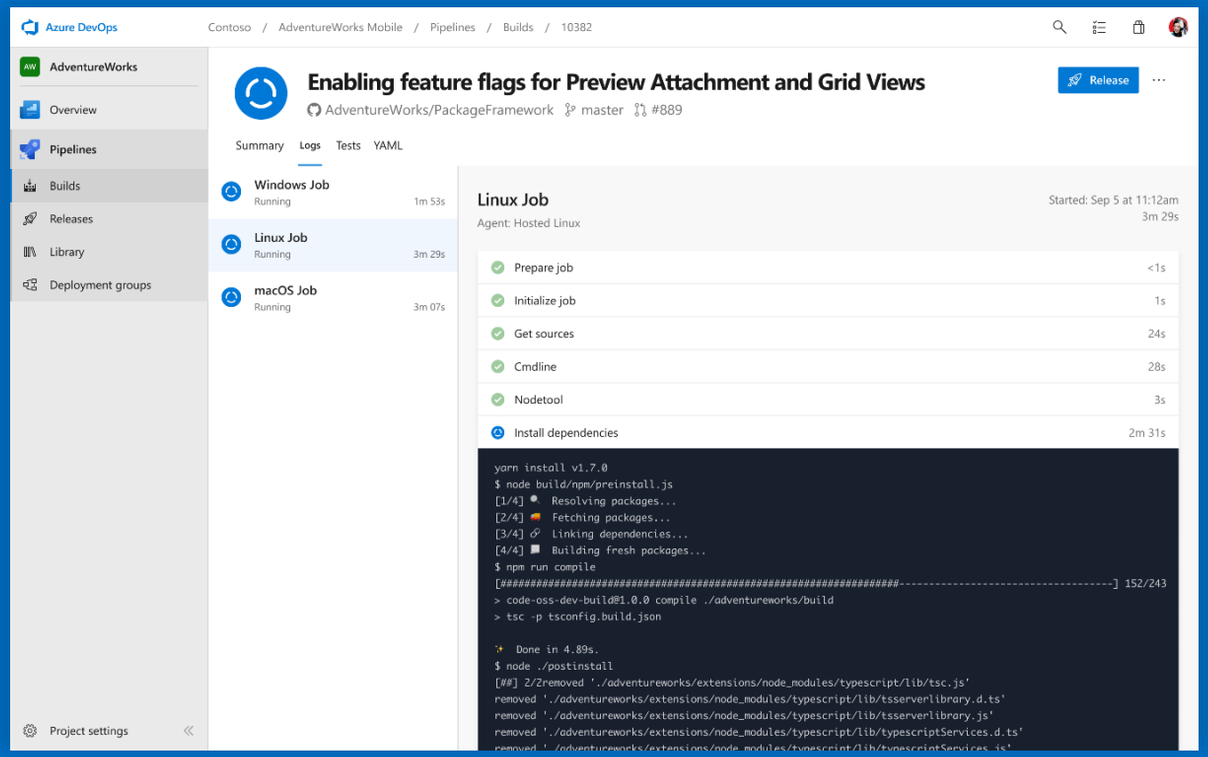
## Azure Artifacts

## Azure Test Plans




Cloud-hosted pipelines for Linux, macOS and Windows

Any language, any platform, any cloud

Native support for containers and Kubernetes

Best-in-class for open source

# Deliver

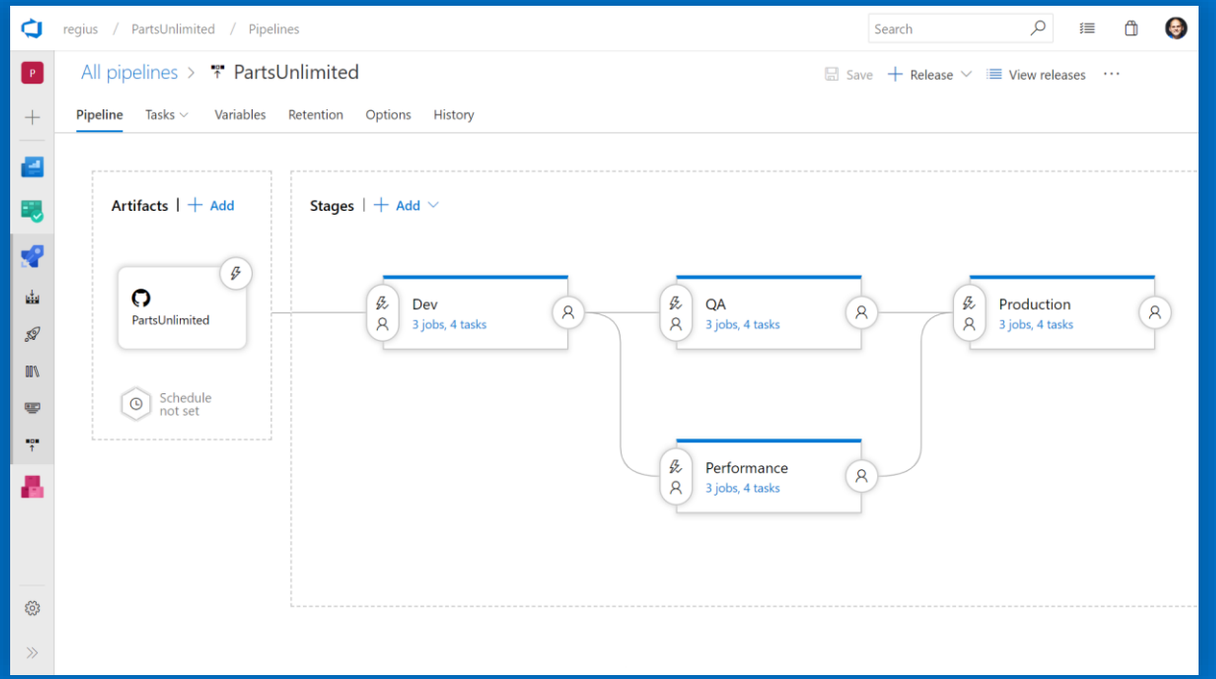
Azure Boards

Azure Repos

Azure Pipelines

Azure Artifacts

Azure Test Plans




Deploy to on-premises, ANY cloud or a hybrid of cloud and on-prem

Staged environment releases

Pre and post deployment approvals with gates to automate approval based on conditions

# Deliver

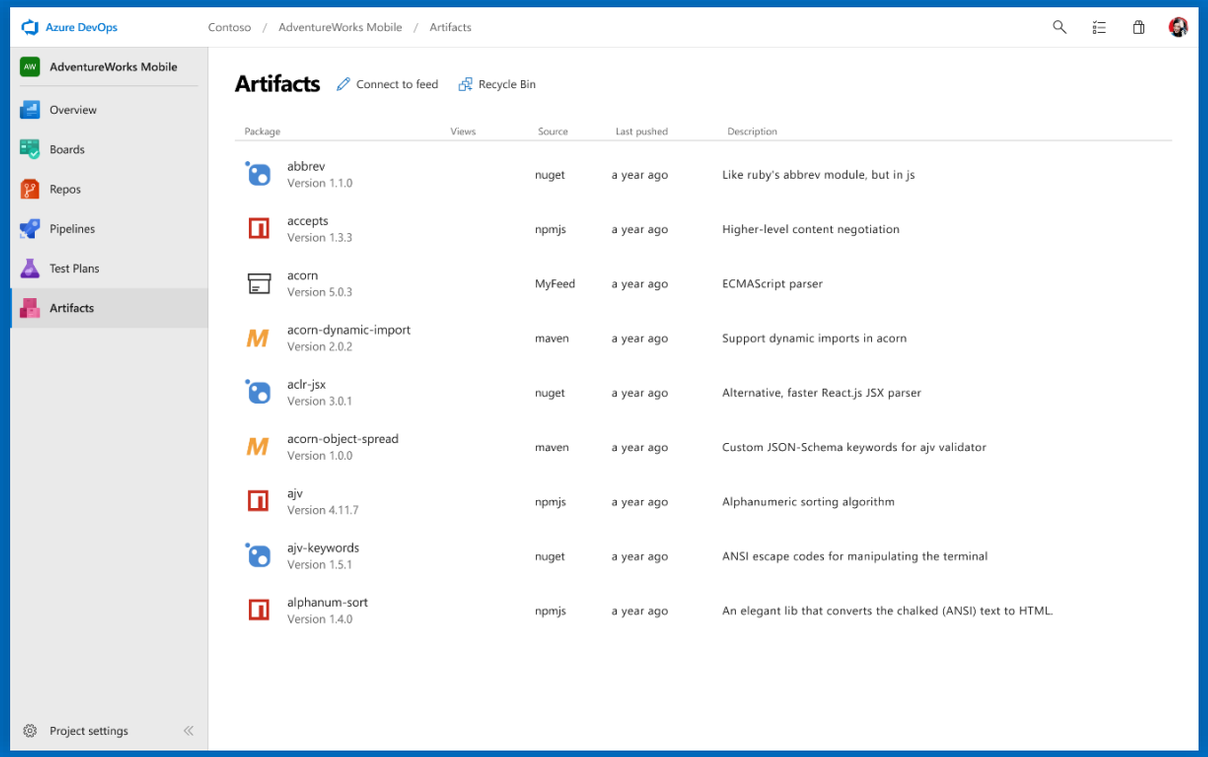
## Azure Boards

## Azure Repos

## Azure Pipelines

## Azure Artifacts

## Azure Test Plans




Manage all package types

Add packages to any pipeline

Share code efficiently

# Deliver

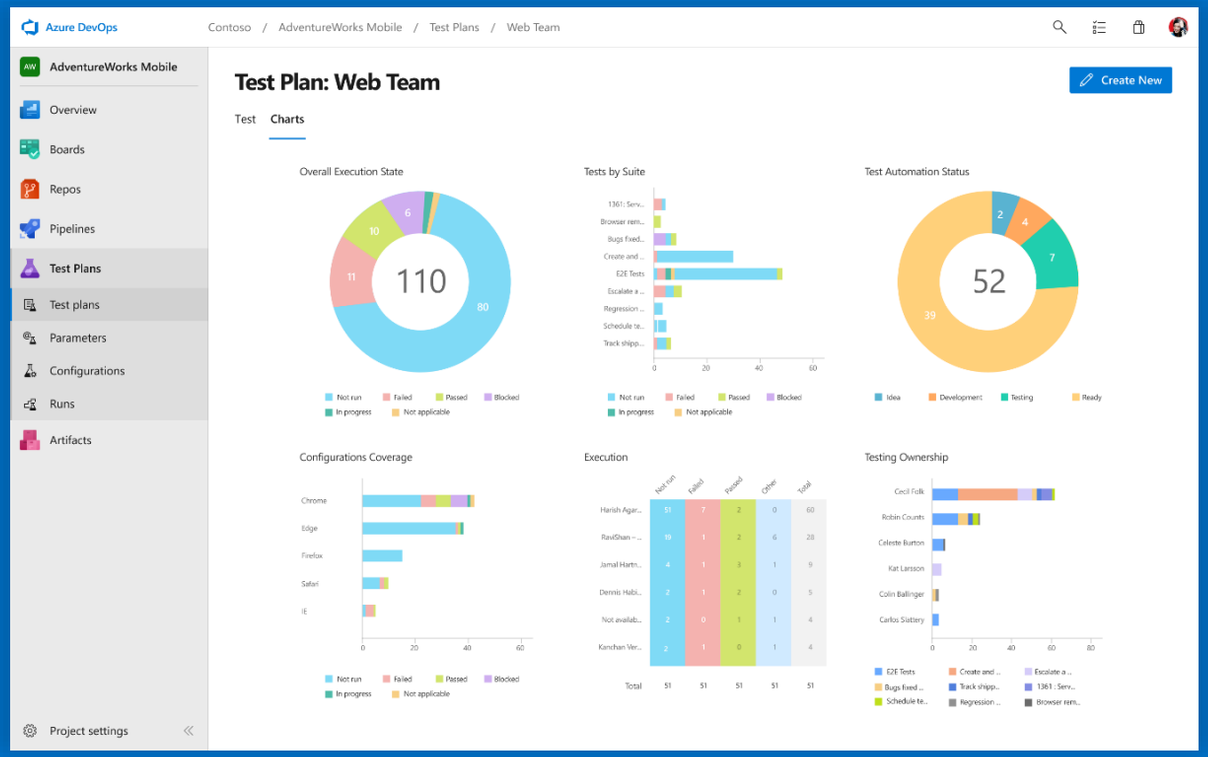
## Azure Boards

## Azure Repos

## Azure Pipelines

## Azure Artifacts

## Azure Test Plans




Run tests and log defects from your browser

Track and asses quality throughout your lifecycle

Capture rich data for reproducibility

Create tests directly from exploratory sessions

# Deliver with

Azure Boards

Azure Repos

Azure Pipelines

Azure Artifacts

Azure Test Plans

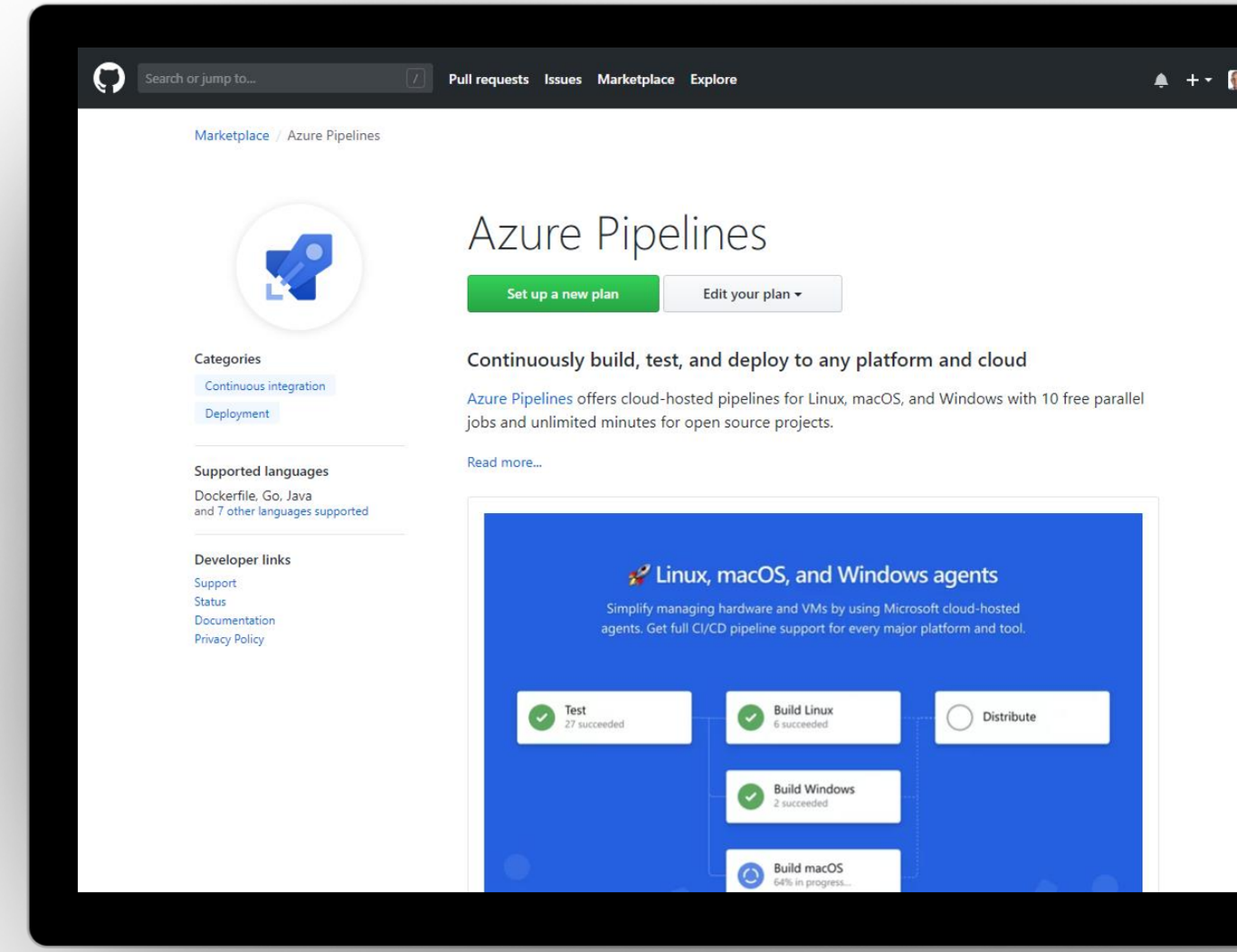
# GitHub

GitHub brings the **premier** social coding workflows to your team, breaking down silos and enabling Inner Source through:

- Expertise sharing
- Cross-team collaboration
- Improved code reuse
- Increased velocity

# Azure DevOps Integrated with GitHub

## Rich integration with Azure Pipelines and Azure Boards



# Azure Pipelines

Free **unlimited** build minutes for public projects

Up to 10 free parallel jobs across Windows, Linux and macOS

https://azure.com/pipelines

Microsoft ❤ Open Source

# Reactive operations

DEVELOP

DELIVER

OPERATE

- Governance
- Security
- Monitoring
- Automation
- Resiliency

# Moving to proactive operations with Azure

"Shifting left"

Resiliency

Monitoring

Security

Governance

Automation

# Deploy continuously and compliantly

Enterprise-grade security, monitoring, and management services built-in

## Governance

Proactively apply policies and enable compliant releases

Azure
Policy & Blueprints

## Security

Industry leading Security with Advanced Threat Protection

Azure
Security Center

## Resiliency

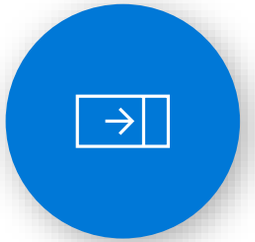
High availability and protection for VMs, apps and data

Azure
Backup & Site Recovery

## Monitoring

Deep operational insights with rich intelligence

Azure
Monitor



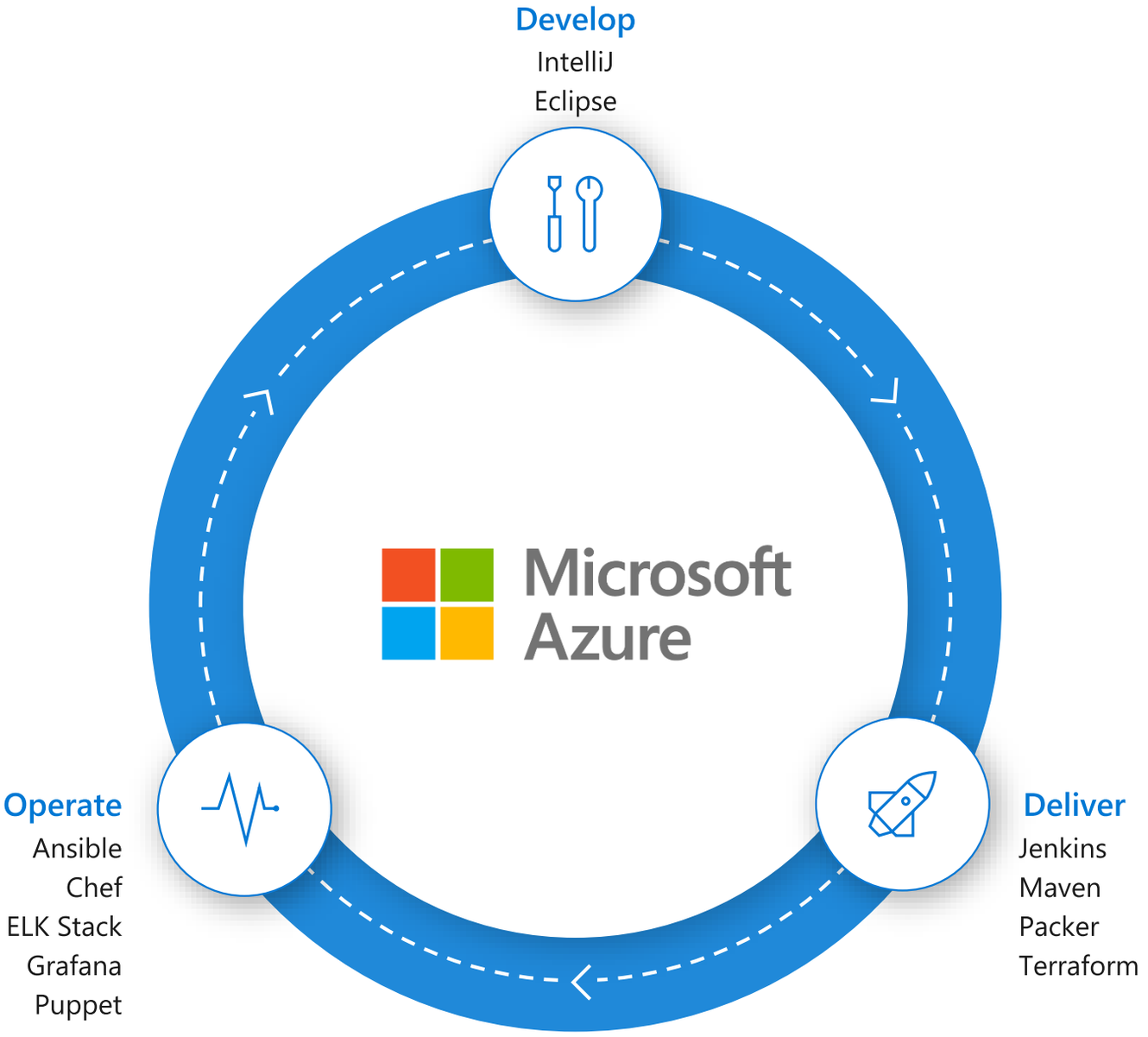
## Automate

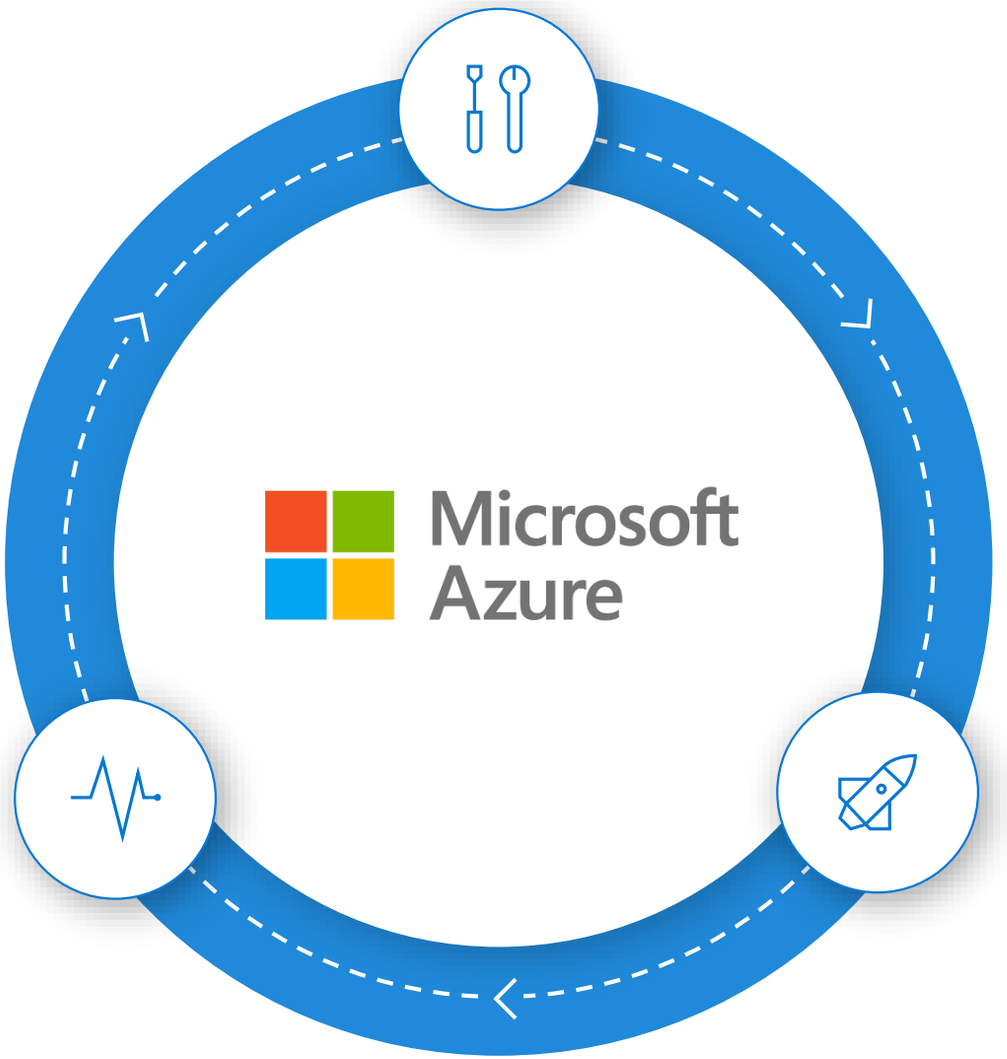
Powerful scripting, configuration and update management

Azure
Automation

# Use the tools you know and love

Azure and GitHub are fully integrated with your existing tools and workflow






## Core Infrastructure

Compute

Security

Storage

Management

Networking

## Advanced Workloads

Web + Mobile

Internet of Things

Microservices

Containers

Serverless

Identity

Data + Analytics

Artificial Intelligence

Cognitive Services

High Performance Computing

## Azure Stack + Hybrid

# The cloud with DevOps tools built in

# Azure DevOps

- Continued heavy investment in Azure DevOps
- Best in class CI/CD solution across the industry
- Best & most loved solution for managing development teams
- Tight integrations with GitHub
- Provide enterprise scalable package management

https://azure.com/devops

# Azure DevOps supports small teams and the largest enterprises

> “Instead of telling people to wait for 6 months for a new feature, we can give it to them in a few weeks…Our 2800 worldwide developers can use the same backlog, user stories and tests whether they’re on Windows or Linux… building for iOS or Android.”

accenture

> “Speed is gained in moving to the PaaS offering of Azure DevOps. PaaS provides regularly released features and a future-proof capability, eliminating the need for Accenture to maintain infrastructure and go through upgrade cycles.”

Columbia

> “Microsoft made it really easy to break outside the silos… and tie the DevOps process into the fulfilment of business process. Without the tools that we have today, we would not be successful.”

> “Branches sync 500 percent faster. Builds are 400 percent faster, with the typically six-hour process reduced to 90 minutes. We (now have) a highly streamlined process that operates with a few button clicks—and one-button deployment.”

# DevOps at Microsoft

Azure DevOps is the toolchain of choice for Microsoft engineering with over 90,000 internal users

https://aka.ms/DevOpsAtMicrosoft

**372k**
Pull Requests per month

**4.4m**
Builds per month

**5m**
Work items viewed per day

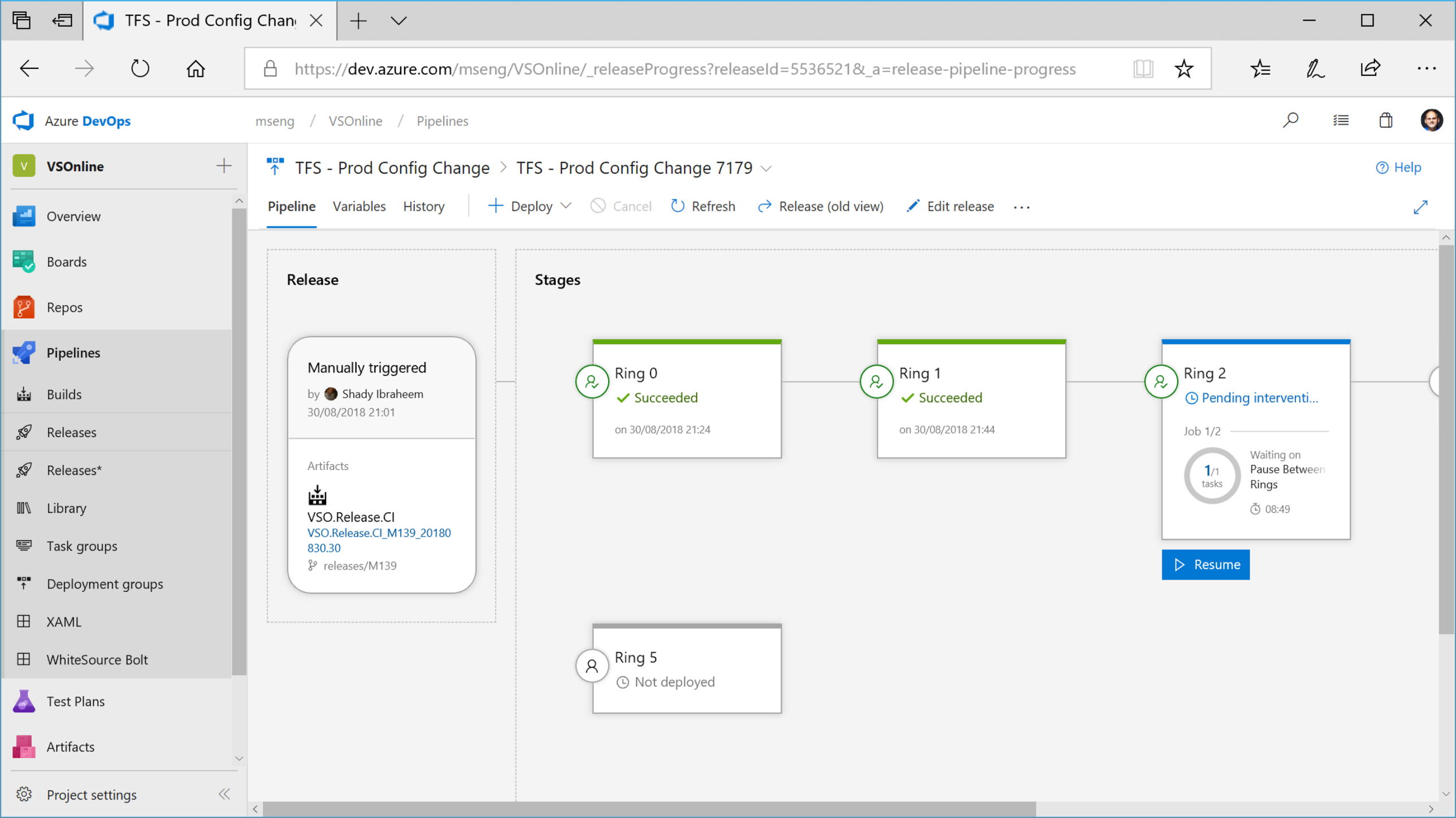
**2m**
Private Git commits per month

**500m**
Test executions per day

**7,700**
Employees contributing to open source

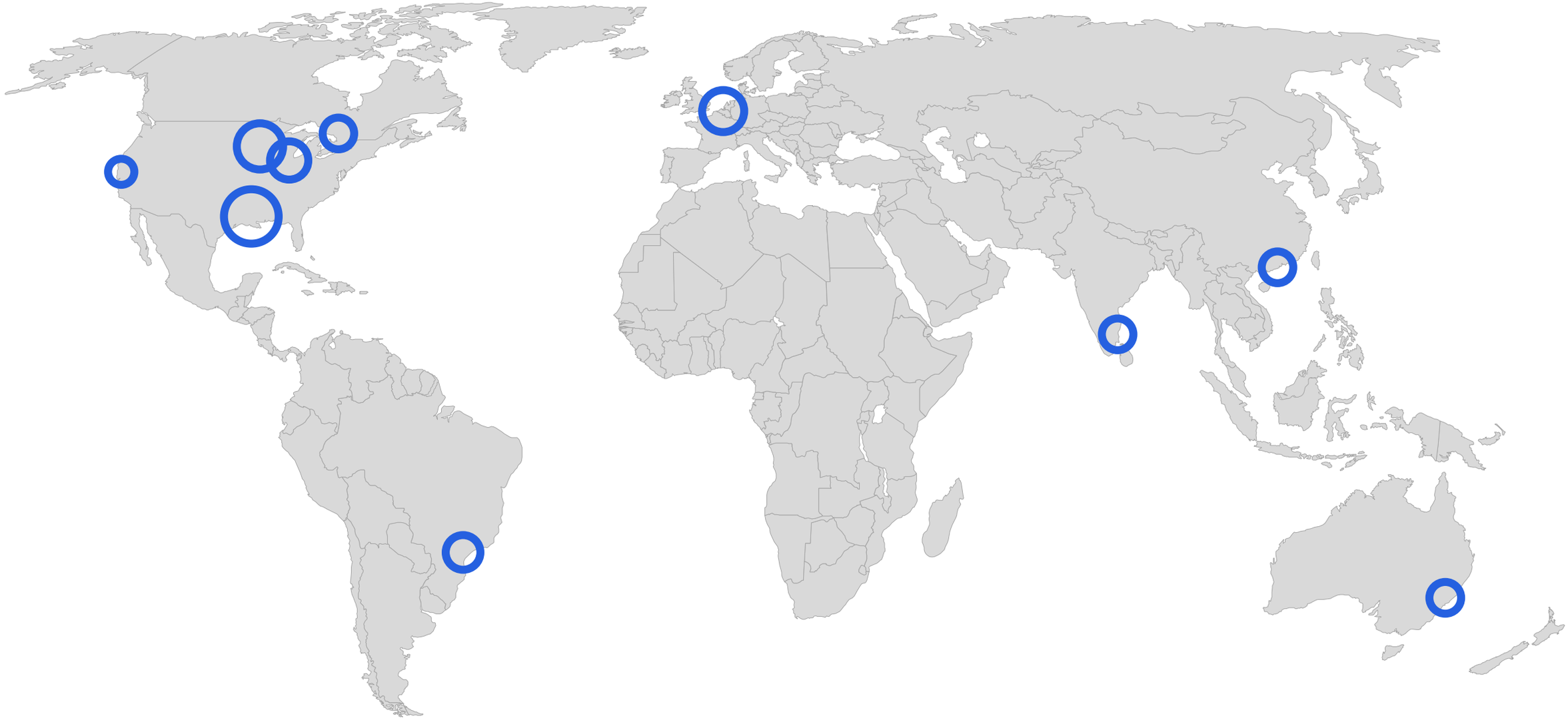
**86,000**
Deployments per day

Data: Internal Microsoft engineering system activity, February 2019


TFS - Prod Config Chan
https://dev.azure.com/mseng/VSOnline/_releaseProgress?releaseId=5536521&_a=release-pipeline-progress
Azure DevOps
mseng / VSOnline / Pipelines
VSOnline
Overview
Boards
Repos
Pipelines
Builds
Releases
Releases*
Library
Task groups
Deployment groups
XAML
WhiteSource Bolt
Test Plans
Artifacts
Project settings
TFS - Prod Config Change
TFS - Prod Config Change 7179
Help
Pipeline
Variables
History
Deploy
Cancel
Refresh
Release (old view)
Edit release
Release
Manually triggered
by Shady Ibraheem
30/08/2018 21:01
Artifacts
VSO.Release.CI
VSO.Release.CI_M139_20180830.30
releases/M139
Stages
Ring 0
Succeeded
on 30/08/2018 21:24
Ring 1
Succeeded
on 30/08/2018 21:44
Ring 2
Pending interventi...
Job 1/2
1/1 tasks
Waiting on Pause Between Rings
08:49
Resume
Ring 5
Not deployed

# Global Reach

## Azure DevOps has more global regions than any other cloud provider



# Migrating from TFS to Azure DevOps

## Move from Team Foundation Server to Azure DevOps and bring your data along

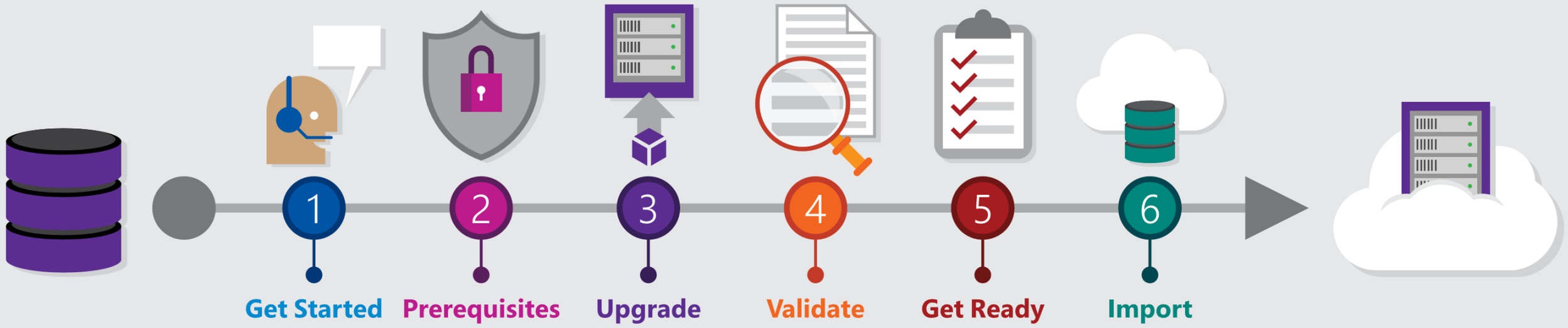
### Benefits of Cloud Hosted Azure DevOps Services

- Global availability
- Hosted and maintained by Microsoft with 99.9% uptime guarantee and 24x7 support
- Immediate access to latest features
- Simplified deployment to Azure

### TFS Import Service

- Fully supported high fidelity migration path
- Trusted by many large enterprises
- Now faster and easier to use

https://aka.ms/tfsimport



Microsoft Azure

# Thank You!

ευχαριστώ Salamat Po متشكرم شكراً Grazie

благодаря ありがとうございます Kiitos Teşekkürler 谢谢

ขอบคุณครับ Obrigado شكريه Terima Kasih Dziękuję

Hvala Köszönöm Tak Dank u Wel дякую Tack

Mulţumesc спасибо Danke Cám ơn Gracias

多謝晒 Ďakujem תודה நன்றி Děkuji 감사합니다

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