WHAT IS KUBERNETES?

Kubernetes is an open-source container orchestration system for automating software deployment, scaling, and management. Google originally designed Kubernetes, made it open-source, and currently Cloud Native Computing Foundation maintains the project.

- WIKIPEDIA

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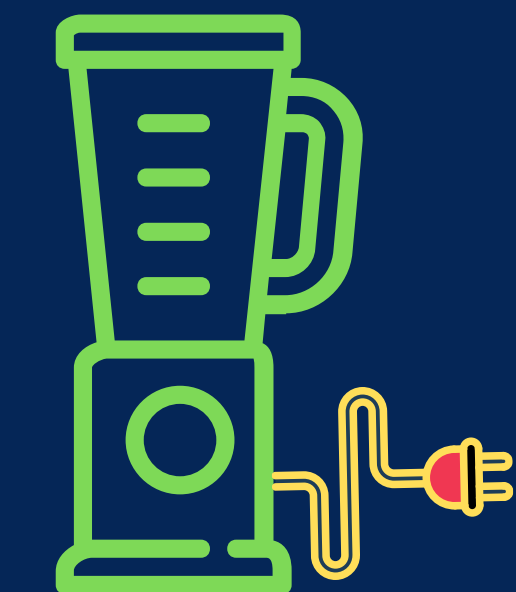
WHY KUBERNETES?

VIRTUAL MACHINES

CONTAINERS + KUBERNETES

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MULTI-CLOUD READY

YOUR
APPLICATION

AWS   AZURE   GCP

NUTANIX   VMWARE   OPENSHIFT

IMPLEMENT AN
APPLICATION-CENTRIC
AUTOMATION PIPELINE
WITH
OBSERVABILTY

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BENEFITS OF KUBERNETES
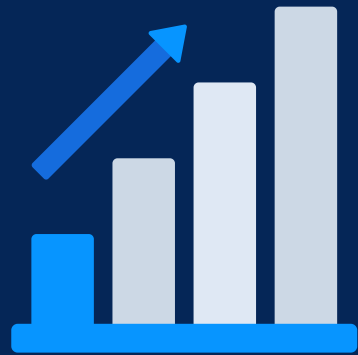
Increase Agility

- FASTER DEPLOYMENTS, UPDATES & PATCHES
- DEPLOY IN SECONDS/MINUTES
- LEVERAGE GITOPS
- ABSTRACTS INFRASTRUCTURE
- DECLARATIVE

Reduce Risk

- REDUCE SECURITY, RESILIENCY & OPERATIONAL RISKS
- RISK MITIGATED CONFIGURATIONS
- HARDENED IMAGES
- ZERO PRIVILEGED ACCESS
- ENTERPRISE-GRADE CONTROLS

Reduce Cost

- REDUCE STAFF, CLOUD, NETWORK, SOFWARE & OPERATIONAL COSTS
- REDUCE WHITESPACE BY 80-90%
- SELF HEALING + AUTOSCALING
- AUTO PATCHING/UPGRADING
- STANDARDIZE OBSERVALIBILITY & AUDITABLITY

5x
CLOUD ADOPTION SPEED
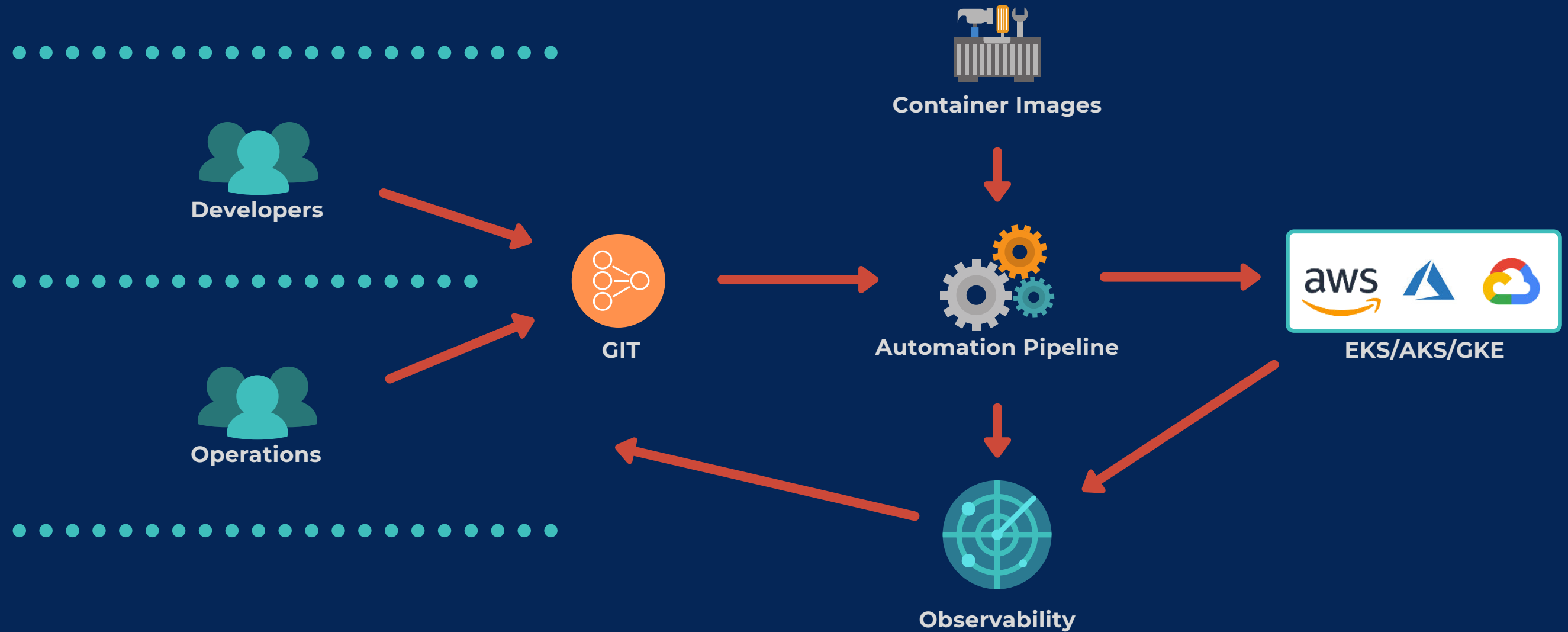
30%
LOWER CLOUD TCO

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HOW TO LEVERAGE KUBERNETES?

Container Images

Developers

Operations

GIT

Automation Pipeline
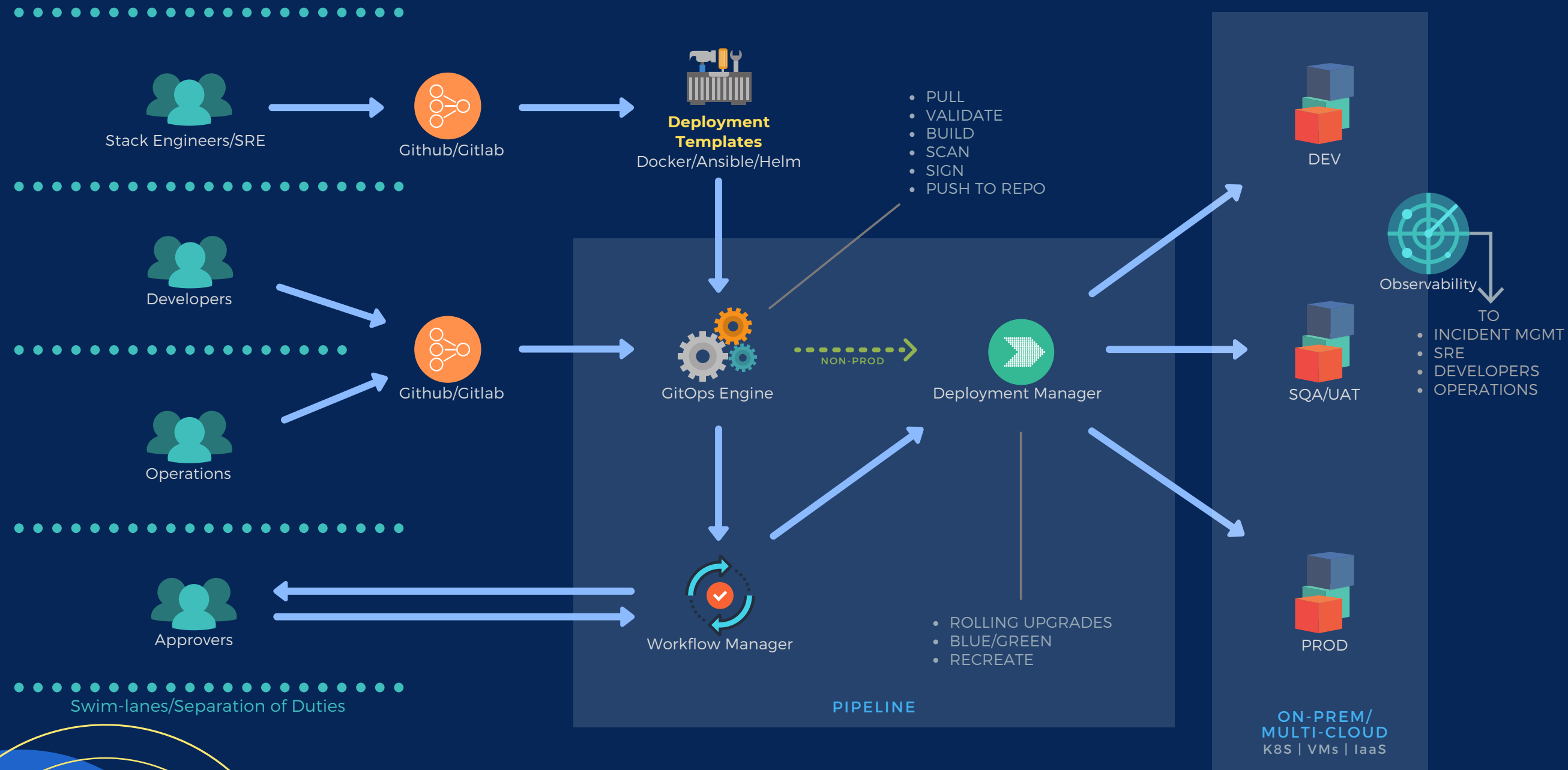
aws   EKS/AKS/GKE

Observability

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KEY CHALLENGES

- Finding & Managing Container Images
- Hardening the container images & configuration
- Building an automation pipeline to containerize your applications
- Migrating legacy applications
- Finding the right talent to align with your goals and timeline
- Having the right security posture
- Managing the network complexity
- Organizing data
- Achieving high availability & disaster recovery
- Identifying the right tools
- Implementing adequate controls

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REFERENCE IMPLEMENTATION

Stack Engineers/SRE

Github/Gitlab

Deployment Templates
Docker/Ansible/Helm

- PULL
- VALIDATE
- BUILD
- SCAN
- SIGN
- PUSH TO REPO

Developers

Operations

Github/Gitlab

GitOps Engine

NON-PROD

Deployment Manager

Workflow Manager

Approvers

Swim-lanes/Separation of Duties

- ROLLING UPGRADES
- BLUE/GREEN
- RECREATE

PIPELINE

DEV

Observability

TO
- INCIDENT MGMT
- SRE
- DEVELOPERS
- OPERATIONS

SQA/UAT

PROD

ON-PREM/ MULTI-CLOUD
K8S | VMs | IaaS

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THANK YOU

Learn more about **our Managed Services on Kubernetes**

http://lowtouch.cloud

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