



**QUASYS**  
Quality as a Service



# UNLOCKING QUICK ROI: BEST PRACTICES FOR DEVSECOPS ON OPENSHIFT



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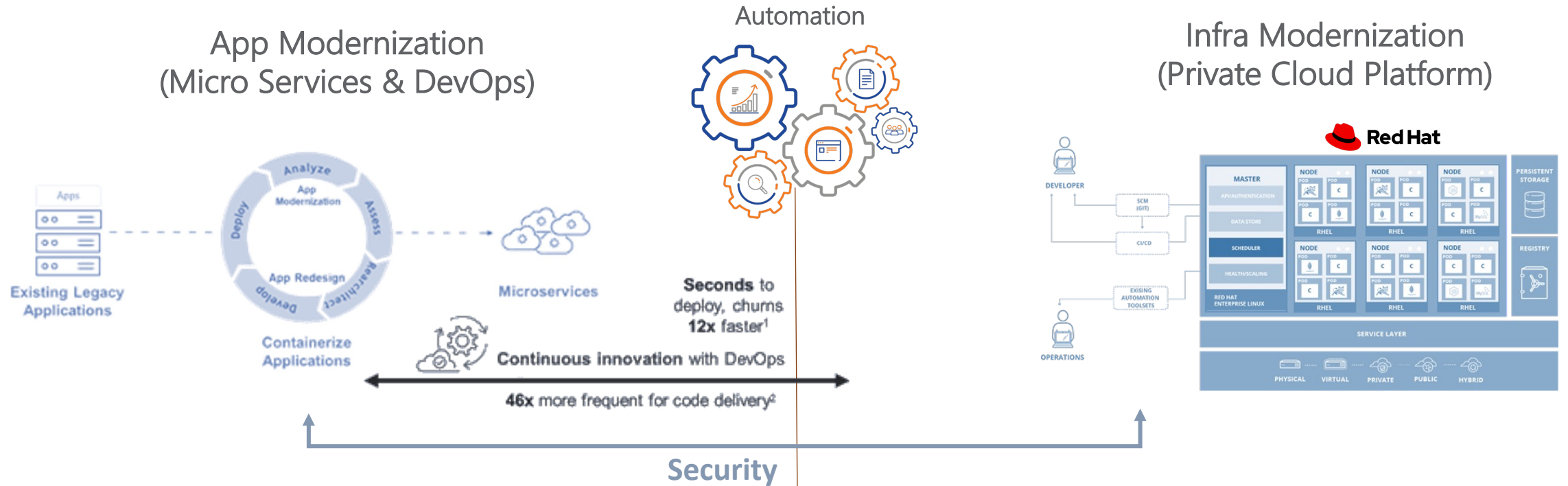
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# End to End Transformation



## Quasys Professional Services

- Re-design Legacy applications in cloud native form
- Application Security
- Build DevOps pipeline
- Open Source DevOps toolset
- Modern Data Solution

## Quasys Container Platform Services

- Red Hat OpenShift Cloud Platform
- API Management & Security
- Container Runtime & Network Security
- Container Storage & Backup
- Kafka, Redis, SSO

# The Beginning of the Journey: Challenges

Every Customer is Unique: Tailored

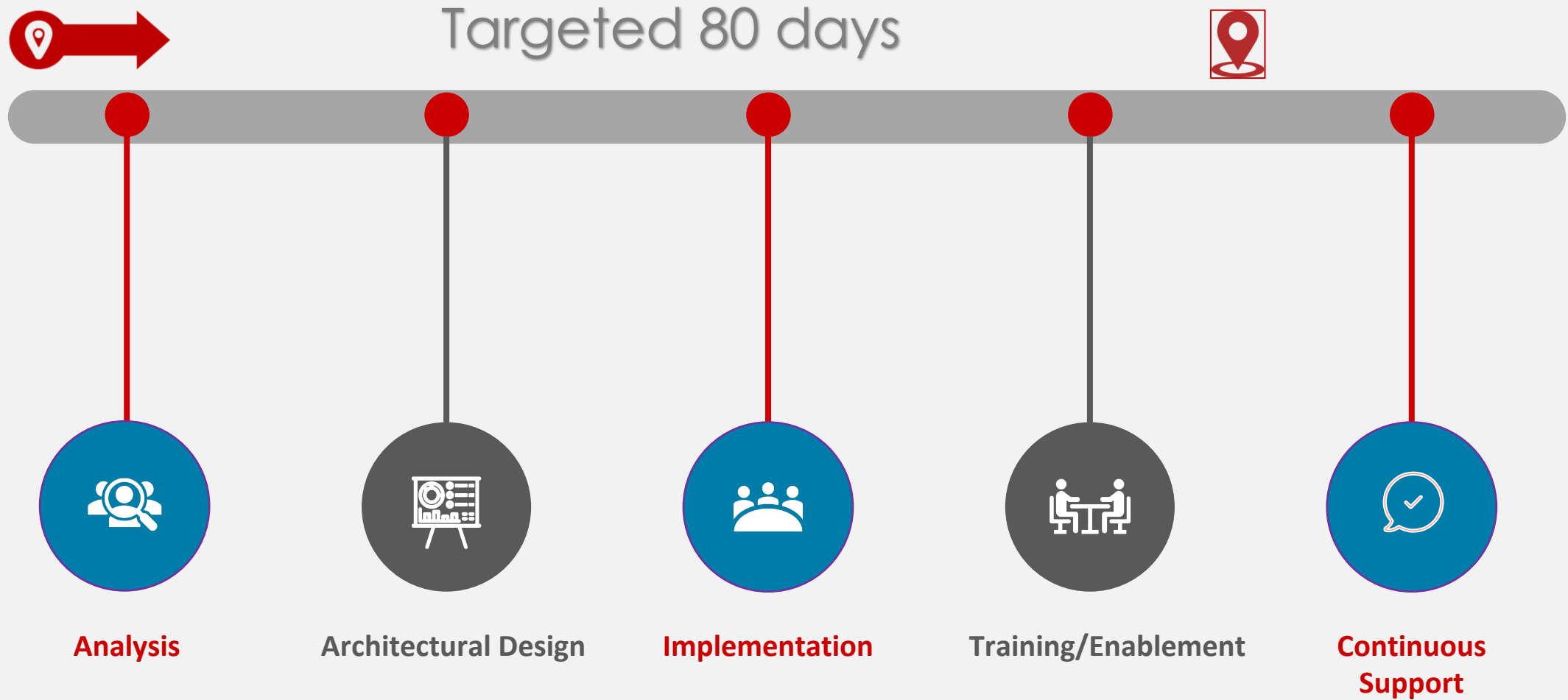
Every Customer has Standards and Expectations: Cloud is not Cloud

Time Pressure: Go to Production Strategy & Planning/Dedication

DevSecOps Culture: Trusted Advisor & Quick Wins

Know-how and Enablement: Implementations & Documentations

# Quasys Methodology





# Security is BIG Concern

## SECURITY on NEW WORLD

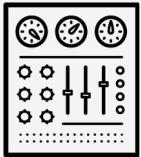
Speed



Agility



Control



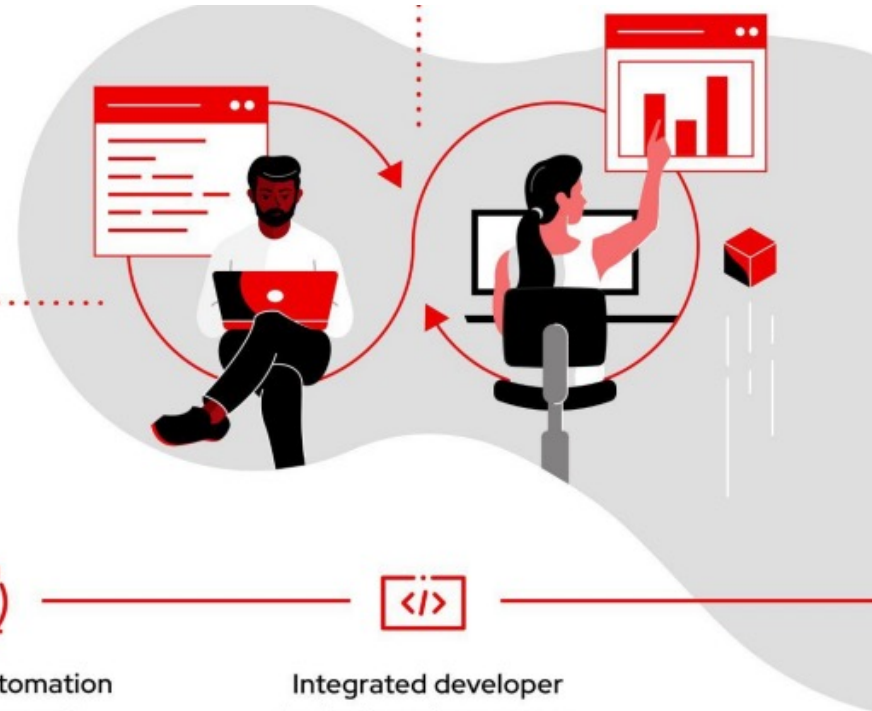
## SECURITY on NEW OUTCOMES



Full life cycle  
application security

End to end automation  
and management

Integrated developer  
toolsets and processes



# Follow the Red Hat



## DEVELOPMENT

## DevSecOps Security Controls

## OPERATIONS

SPRINT

SPRINT

### 1 Secure code training

Engineers gain knowledge and awareness of AppSec principles and responsibilities.

### 2 Secure by Design

Gather threat and abuse case models and security requirements. Adopt reusable Secure-by-default design patterns.

### 3 Pre-commit configuration for secret scanning

### 4 Secure access to app. code & image repository

Implement least privilege RBAC and n/w isolation to code and private container repository. Infrastructure as code version controlled.

### 5 Secure access to CI service

Prevent unauthorised manipulation of the pipeline itself with RBAC and separation of duties.

### 6 CI Server deploys to test

Automated deployment via Infrastructure as Code

### 7 Composition Analysis

Analyse Third Party/Open Source libraries. Reuse secure code only and comply with OSS licensing.

### 8 Code Analysis

SAST: Analyse code for vulnerabilities. IDE and build server integrated with remediation advice.

### 9 Security Tests

DAST: Perform App specific automated security testing and dynamic container analysis. Validate controls are mitigating the abuse case threat vectors.

### 10 Security review human logic test

Conduct Penetration testing where it makes sense. (Might not be needed for every sprint).

### 11 Image Assurance

Validate image integrity signatures, and that assurance policies are met to proceed to prod.

### 12 Application Protection

Protect and monitor the app and cluster

### 13 Privileged access, secrets management & network isolation

Implement tight network & access policy, by locking down clusters/pods/VMs. Use secrets management and automated certificate handling.

### 14 Deploy to Production

Automated deployment by Infrastructure as Code. IaC compliance and security testing.

### 15 Infrastructure & Data Protection

Apply infrastructure hardening, data encryption endpoint protection, DLP and IPS.

### 16 Vulnerability scanning

Ensure continuous assessment & automated CIS benchmarking of build and deployed images and environments.

### 17 Continuous monitoring & Incident Response

Analyse intrusion / breach alerts and threat intelligence. Log attacks, behaviours and threats, to respond, learn from, and apply to next sprint.

### 18 Rinse & Repeat

Improve and enforce governance.

SPRINT

SECURITY

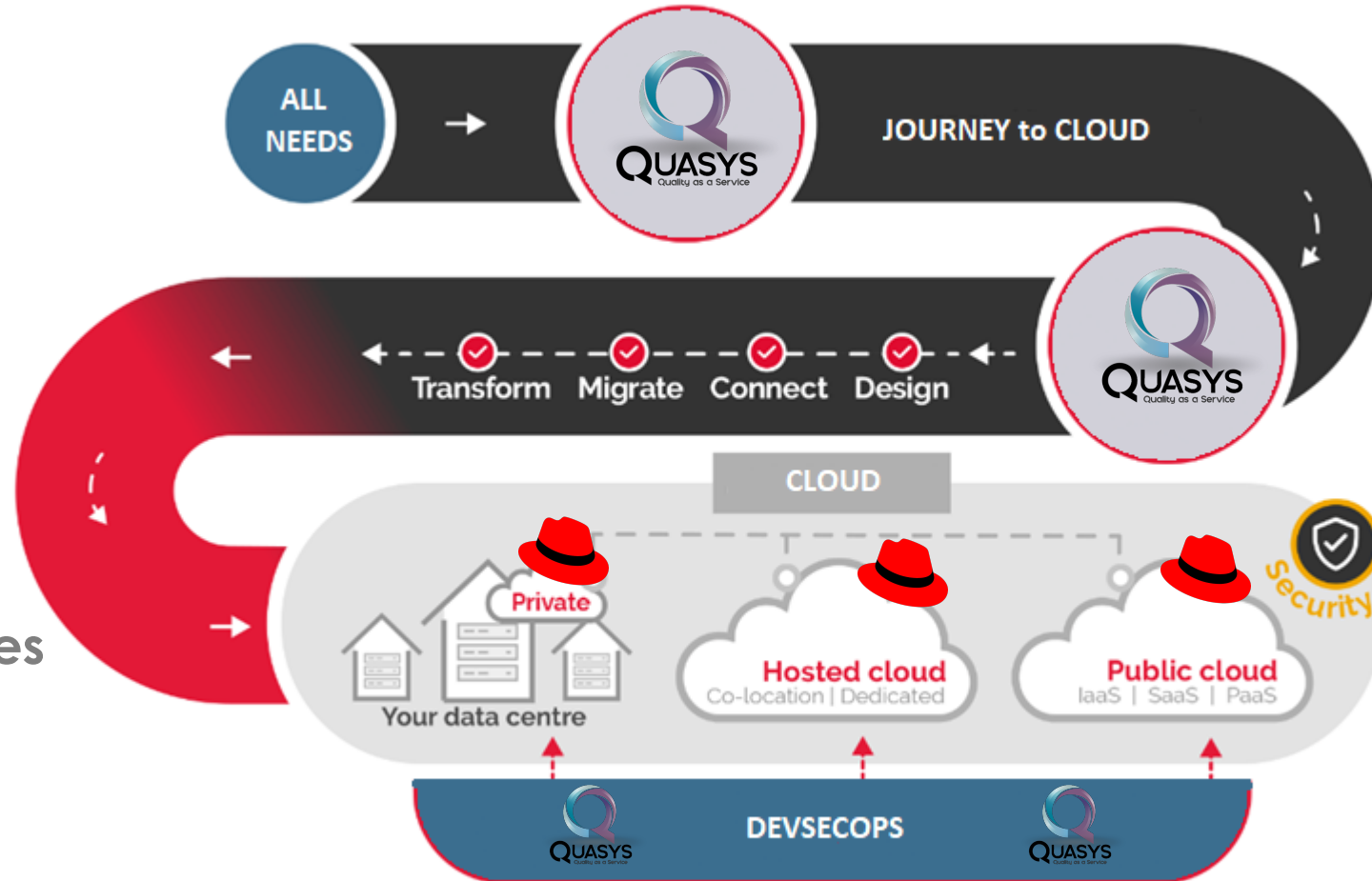




# Secure DevOps & OpenShift : 80 Days Around The CLOUD



- License
- Design / Consultancy
- Implementation Services
- Training
- Local Support





# THANK YOU



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