CONTINUOUS DELIVERY FRAMEWORK

Coforge

ACD - Appian Continuous Delivery Framework

Coforge's ACD solution provides a Continuous Delivery Framework enabling organizations to respond to increasing business demands by delivering regular releases with a faster time to market. The framework uses Appian's Process Management capabilities to orchestrate and automate the application release process. It brings together a number of the key DevOps processes, specifically: Continuous Integration, Scripted Deployment and the Deployment Pipeline. These DevOps processes enable Continuous Deployment, which ultimately allows an organization to achieve the Continuous Delivery of new releases of an application.
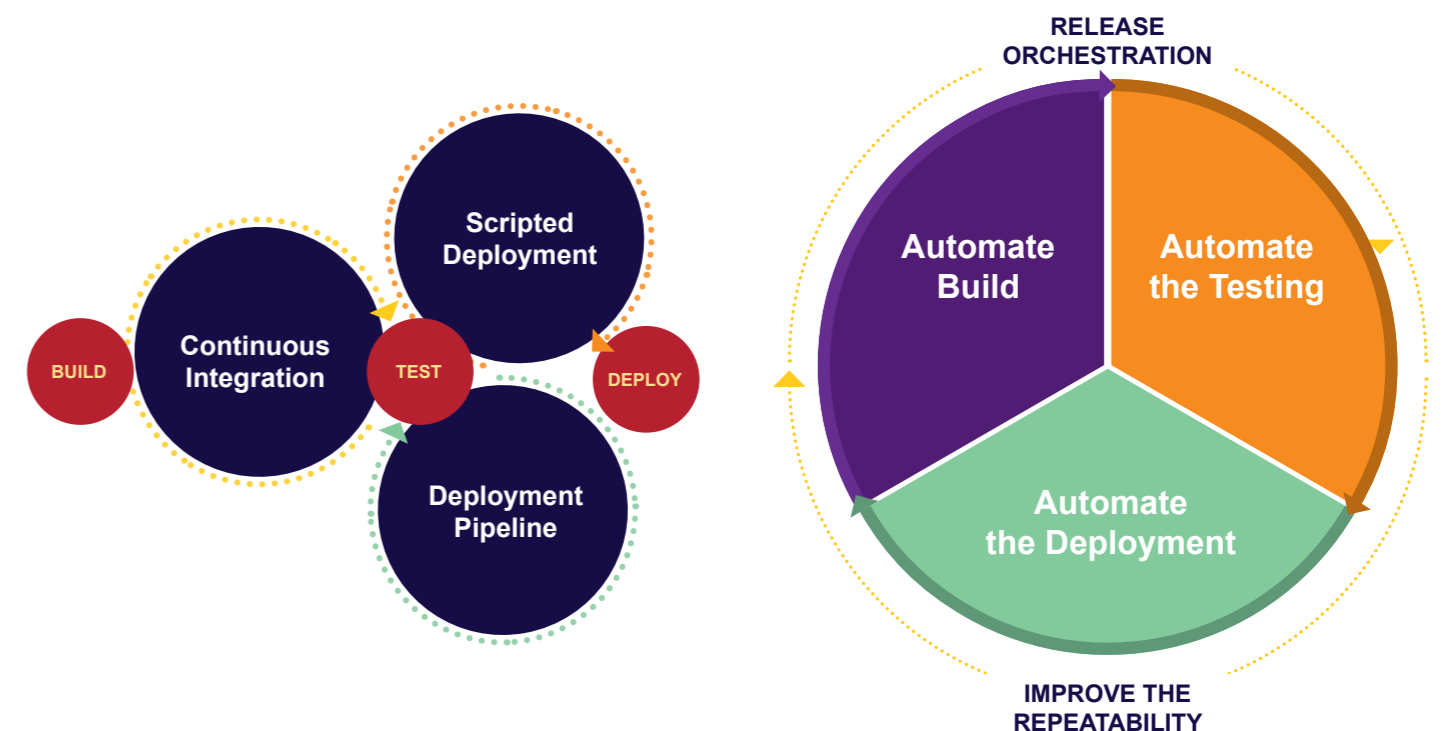
BUSINESS CHALLENGES

- Inability to respond to the increasing business demands for new features and functionality
- Long delays in making minor development changes or additions to existing production applications
- Regimented quarterly release cycles due to lengthy test and regression cycles
- Inability to innovate at pace

TECHNICAL CHALLENGES

- Lack of cross-functional teams across the Development, Test and Operations organizations
- Insufficient test coverage and test automation to regression test functionality in a timely manner
- Lack of environments and a single route to go-live, causing a bottleneck in the delivery cycle
- Failed builds into upstream environments due to human intensive and error-prone release processes

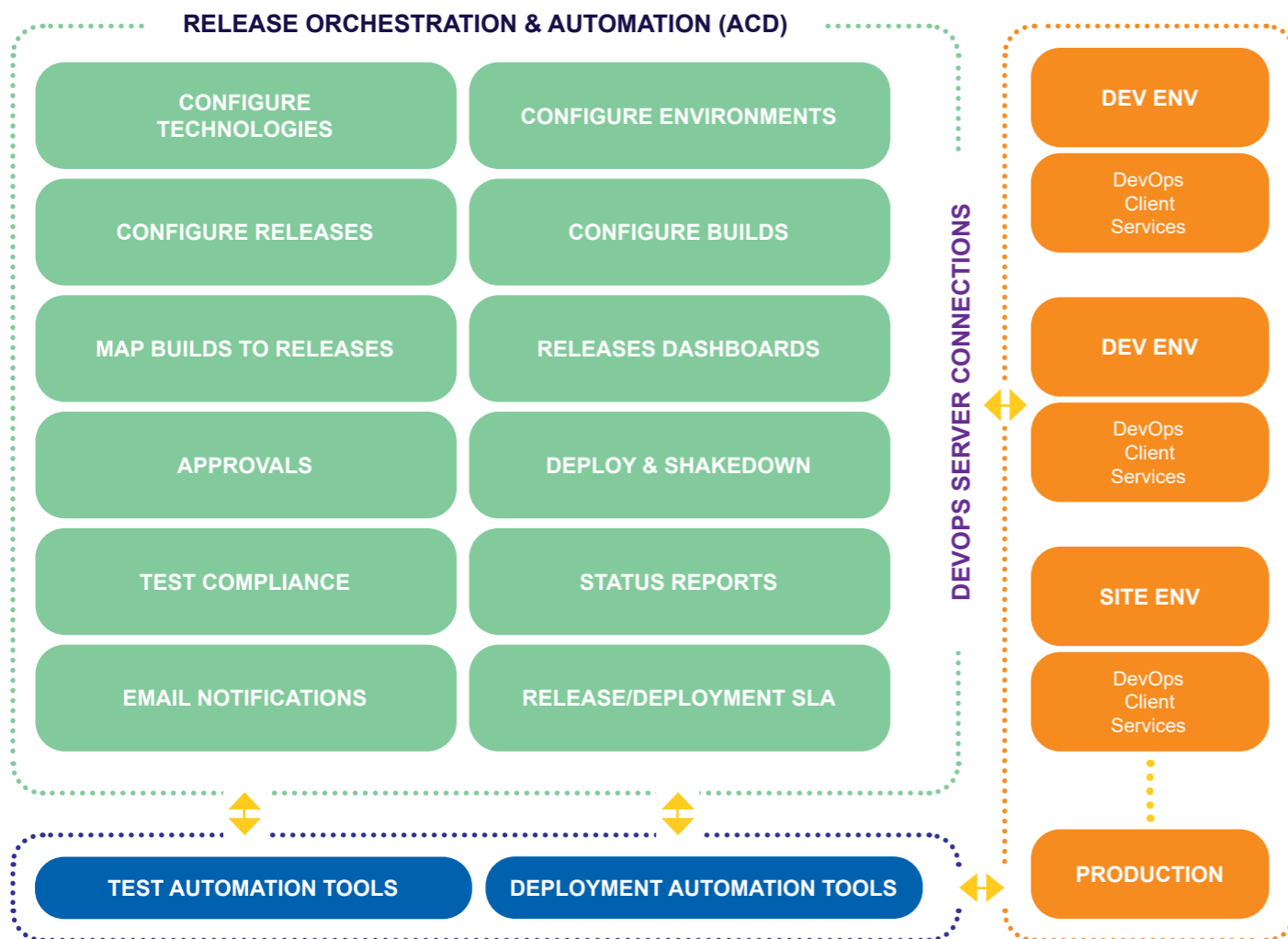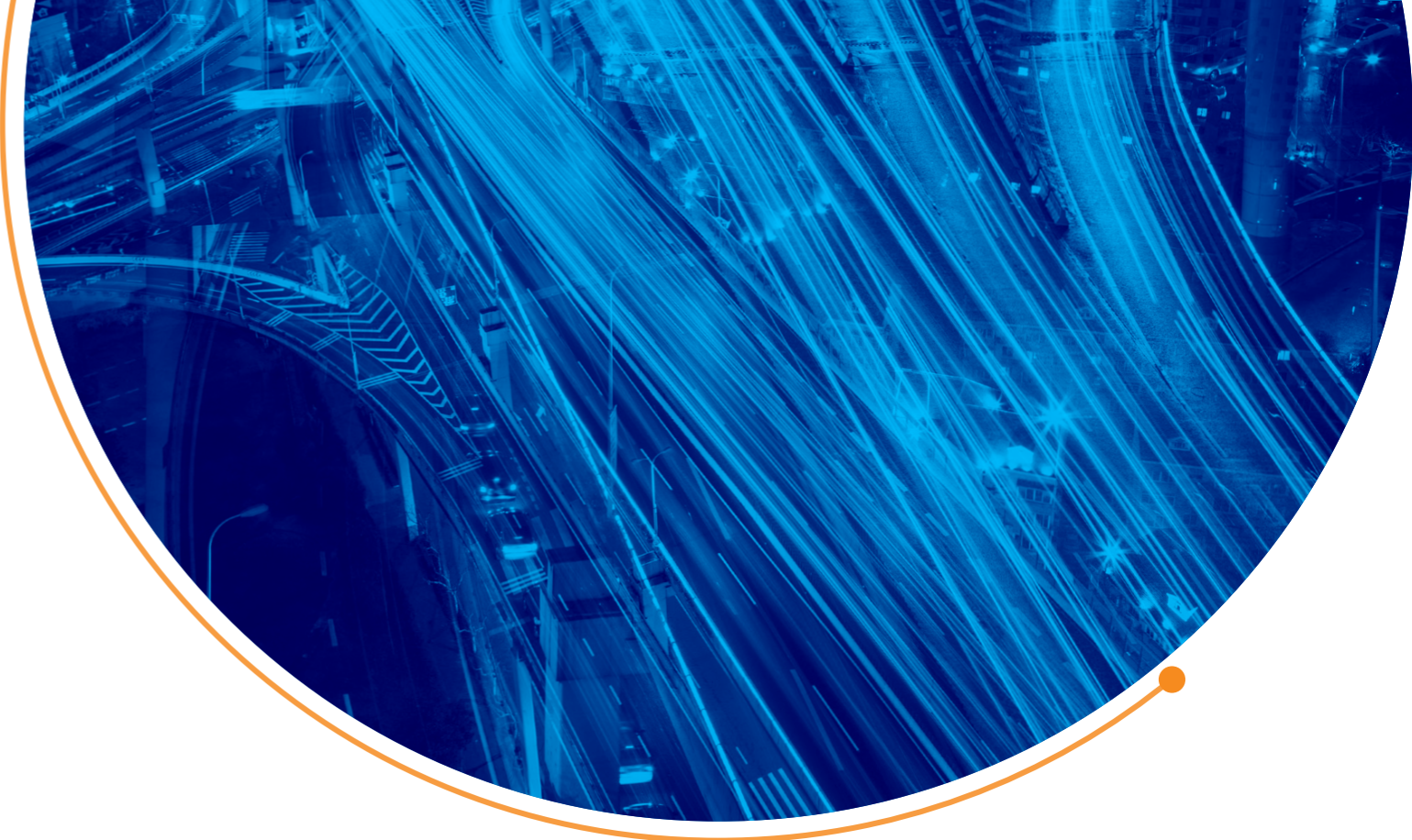## BUILDING BLOCKS OF CONTINUOUS DELIVERY

SOLUTION OVERVIEW

ACD utilizes Appian's BPM platform to achieve the Automated Build, Automated Test and Automated Deployment of an application. It provides a single view of the Release Orchestration process across various environments i.e. Development, System Integration Test, System Acceptance Test, User Acceptance Test and Production. ACD considers a Release as a 'Process' within Appian and tracks it end-to-end, enforcing best practices on the following lines:

- Pre-Deployment Code quality checks in Development including ability to upload validation scripts

- Leverage Appian's Batch Testing modules to validate the build in Development, prior to deployment

- Automatic creation of the build within Development for deployment

- Automated Deployment of the build to upstream environments using tools like IBM uDeploy, Jenkins and CA's Release Automation

- Cross-check deployment by comparing validation rules and automated testing results across environments

- Automated Smoke and Functional Testing of the build in higher environments using tools like Selenium and FitNesse

- Generation of release notes and other build artefacts, related to the release

Coforge's ACD framework maintains the Release & Build hierarchy. A release can contain multiple builds, each of which can be tracked separately till completion. ACD encapsulates and orchestrates this release process, irrespective of the technology components and allows releases to be triggered either manually or scheduled for a future date and time. The ACD architecture uses DevOps agents (Client Services) that are deployed throughout various environments. These agents are exposed as REST services that execute operations that include performing builds, running test scripts for integration, regression testing and orchestrate release automation.

RELEASE ORCHESTRATION & AUTOMATION (ACD)

CONFIGURE TECHNOLOGIES	CONFIGURE ENVIRONMENTS
CONFIGURE RELEASES	CONFIGURE BUILDS
MAP BUILDS TO RELEASES	RELEASES DASHBOARDS
APPROVALS	DEPLOY & SHAKEDOWN
TEST COMPLIANCE	STATUS REPORTS
EMAIL NOTIFICATIONS	RELEASE/DEPLOYMENT SLA

DEVOPS SERVER CONNECTIONS

DEV ENV
DevOps Client Services

DEV ENV
DevOps Client Services

SITE ENV
DevOps Client Services

PRODUCTION

TEST AUTOMATION TOOLS   DEPLOYMENT AUTOMATION TOOLS

ACD FRAMEWORK FEATURES & BUSINESS BENEFITS

- Deploys applications with lower risks and fewer failures

- Provides a 360° view of all release processes, deployments and build levels across multiple environments

- Performs automated smoke testing before and after deployments

- Automates quality checks before and after deployment for each build

- Performs full regression tests as required in each environment

- Sends real time notifications and alerts of the deployment statuses

- Uses out of the box connectors to integrate with commonly used test automation tools like Selenium and FitNesse

For more information, contact information@coforge.com

Coforge is a leading global IT solutions organization, enabling its clients to transform at the intersect of unparalleled domain expertise and emerging technologies to achieve real-world business impact. We leverage AI, Cloud and Insight driven technologies, allied with our industry expertise, to transform client businesses into intelligent, high growth enterprises. Today our proprietary platforms power critical business industries. Our 21,000 technology and process consultants engineer, design, consult, operate and modernize systems across the world.

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