



THE No.1 COFFEE!
TRUNG NGUYÊN LEGEND
The Energy Coffee That Changes Life

Project Presentation & Demonstration

Secure CI/CD pipeline to support the e-commerce development

CLIENT: TRUNG NGUYEN COFFEE CORP.

GROUP 01

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Acknowledgement of Country

We respectfully acknowledge the Wurundjeri People of the Kulin Nation, who are the Traditional Owners of the land on which Swinburne's Australian campuses are located in Melbourne's east and outer-east, and pay our respect to their Elders past, present and emerging.

We are honoured to recognise our connection to Wurundjeri Country, history, culture, and spirituality through these locations, and strive to ensure that we operate in a manner that respects and honours the Elders and Ancestors of these lands.

We also respectfully acknowledge Swinburne's Aboriginal and Torres Strait Islander staff, students, alumni, partners and visitors.

We also acknowledge and respect the Traditional Owners of lands across Australia, their Elders, Ancestors, cultures, and heritage, and recognise the continuing sovereignties of all Aboriginal and Torres Strait Islander Nations.



Overview

Trung Nguyen is ...

- A renowned brand in global coffee industry

Current situation

- They want to earn more revenue via E-commerce
- Their current platform is outdated
- Their IT Team is using the Waterfall methodology for software development

Proposed solution

- Develop a secure CI/CD pipeline
- Improve their current E-commerce platform
(project team supports the UI only)



Project Background

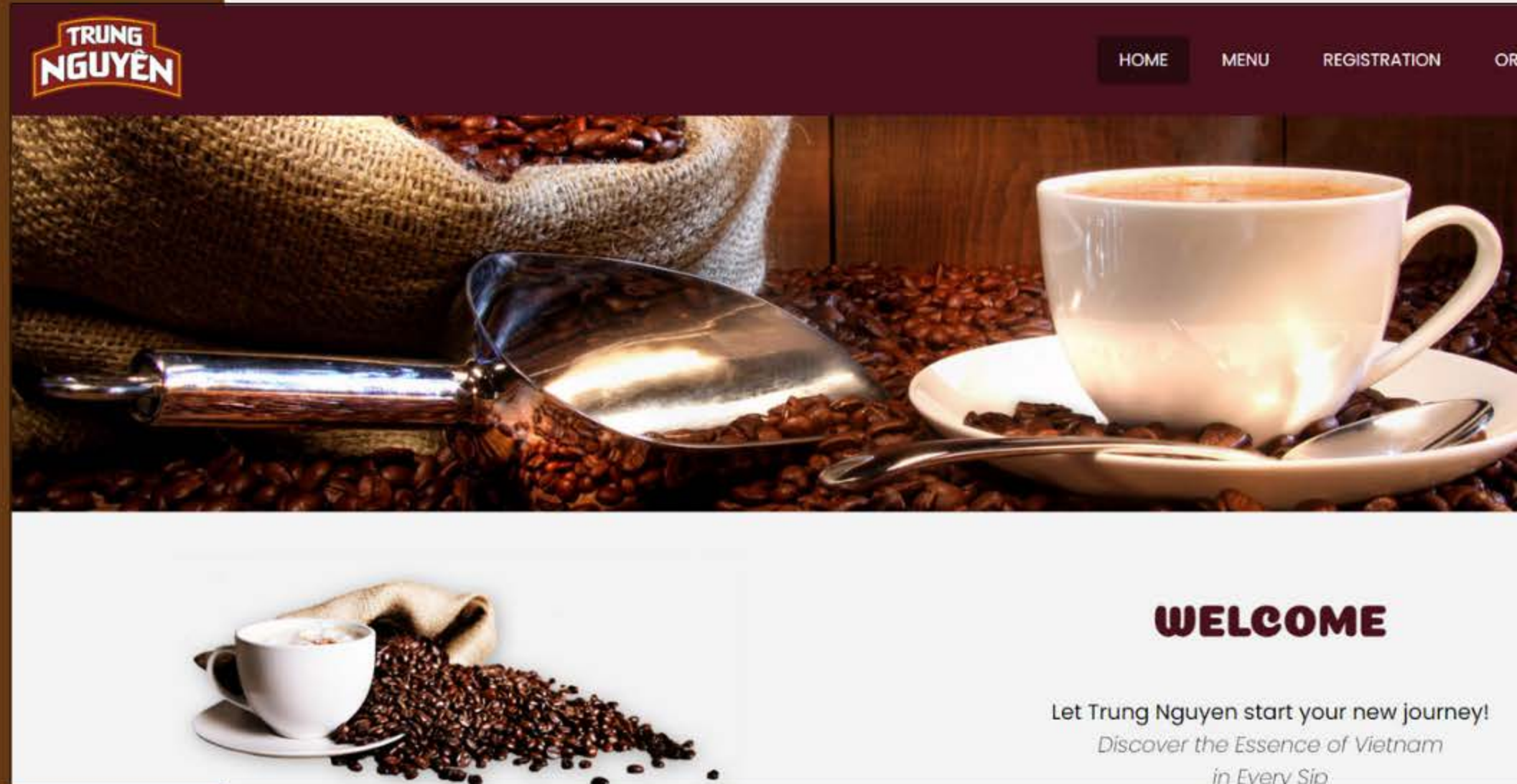
Trung Nguyen Coffee is a leading Vietnamese coffee brand known for its significant contribution to the country's coffee sales.

Strong focus on:

- Brand Loyalty
- Sale Contributor
- Customer Engagement

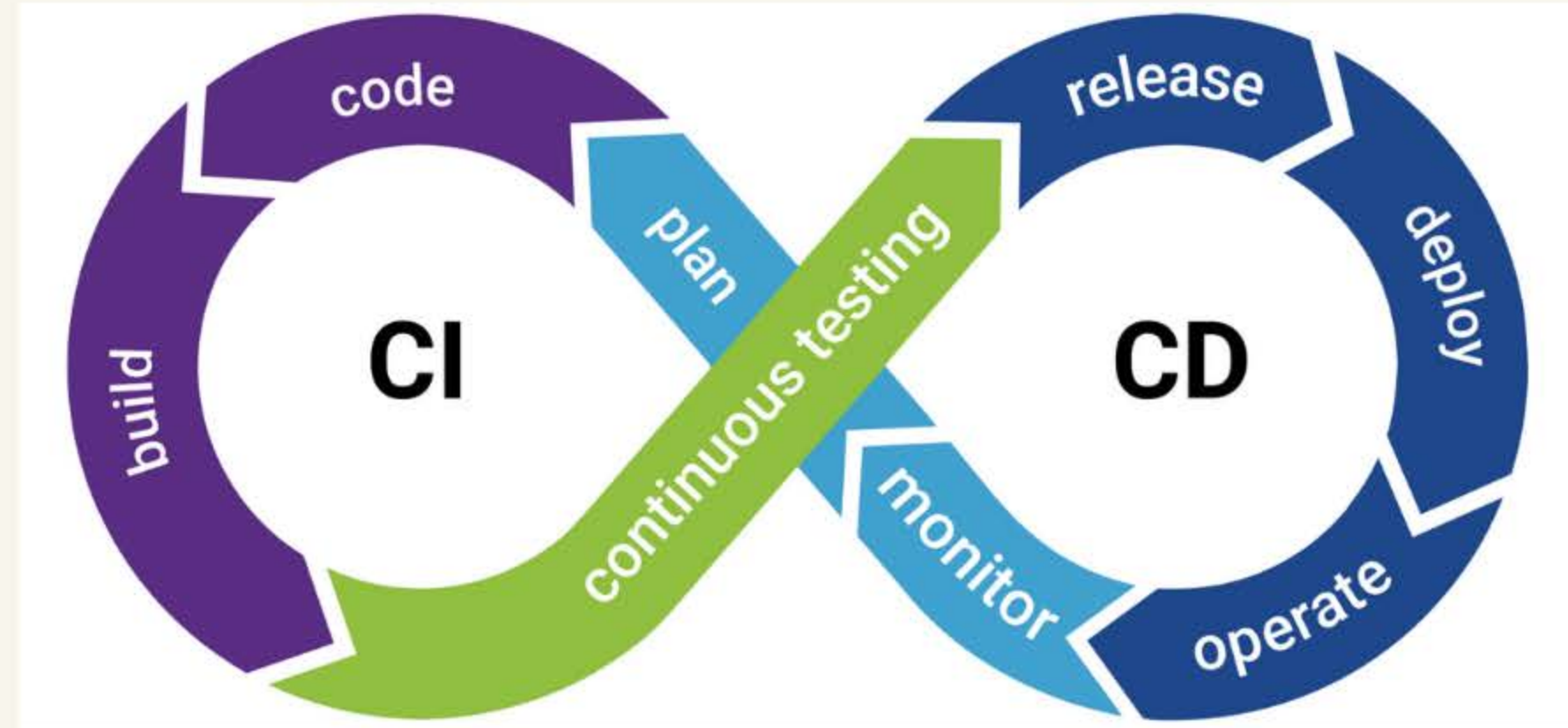
Expected E-commerce platform:

Need to be **ADAPTIVE** and **FLEXIBLE** with new changes.



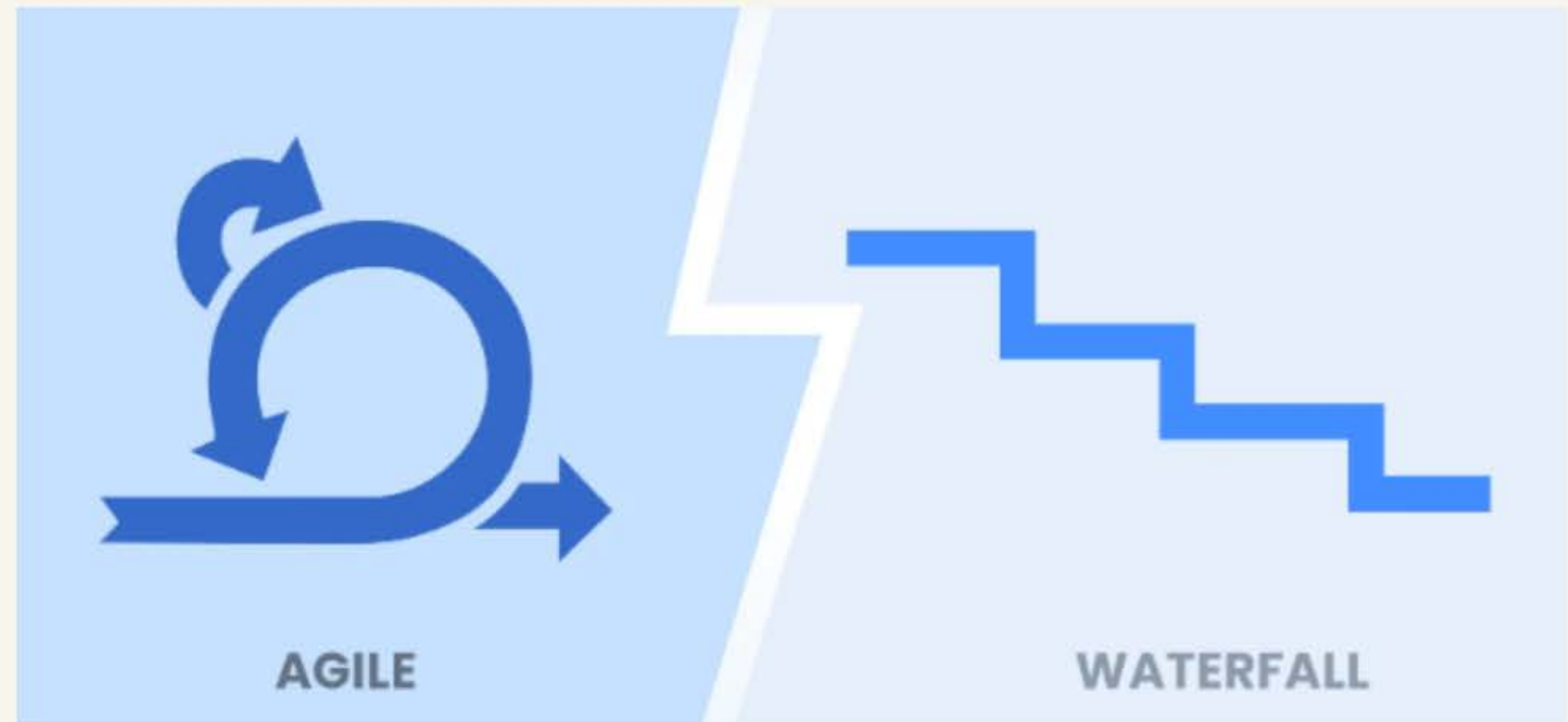
Project Scope & Objectives

1. Design the complete CI/CD Pipeline
2. Prepare infrastructure for the CI/CD pipeline
3. Implement the CI/CD pipeline
4. Perform testing after implementation
5. Prepare User Guide and Training Document
6. Gather feedback from the client



Problem Statement

1. Inadaptability with changes
2. Delayed Feedback
3. Extended Development Duration
4. Increased Downtime
5. Security Risks



Project Outcome

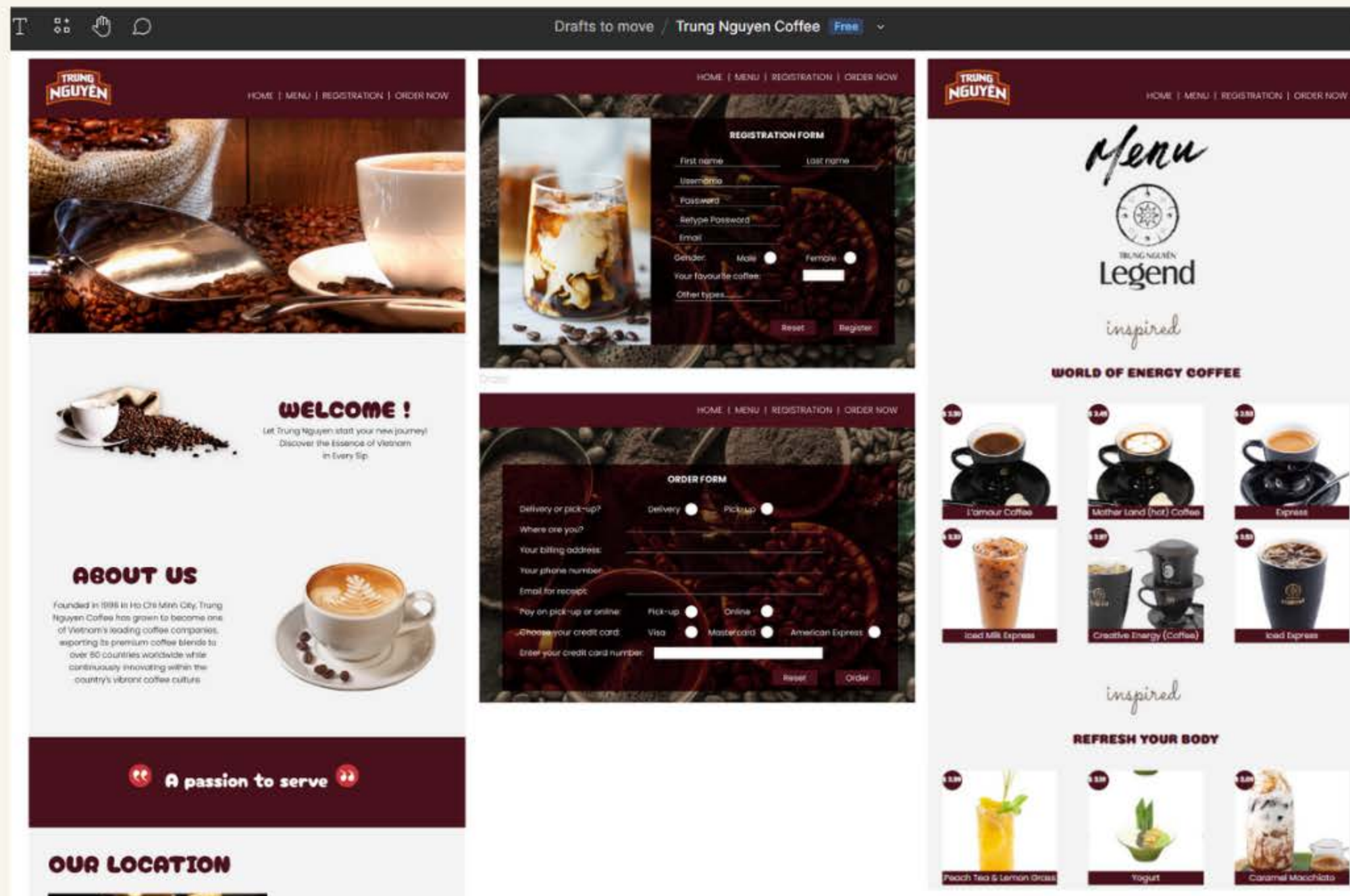
1. A complete CI/CD Pipeline
2. An improved platform's user interface
3. The integration of CI/CD pipeline into the platform



Preliminary Design Concept

DESIGN & DEVELOPMENT PHASES

User Interface



The platform's user interface will include::

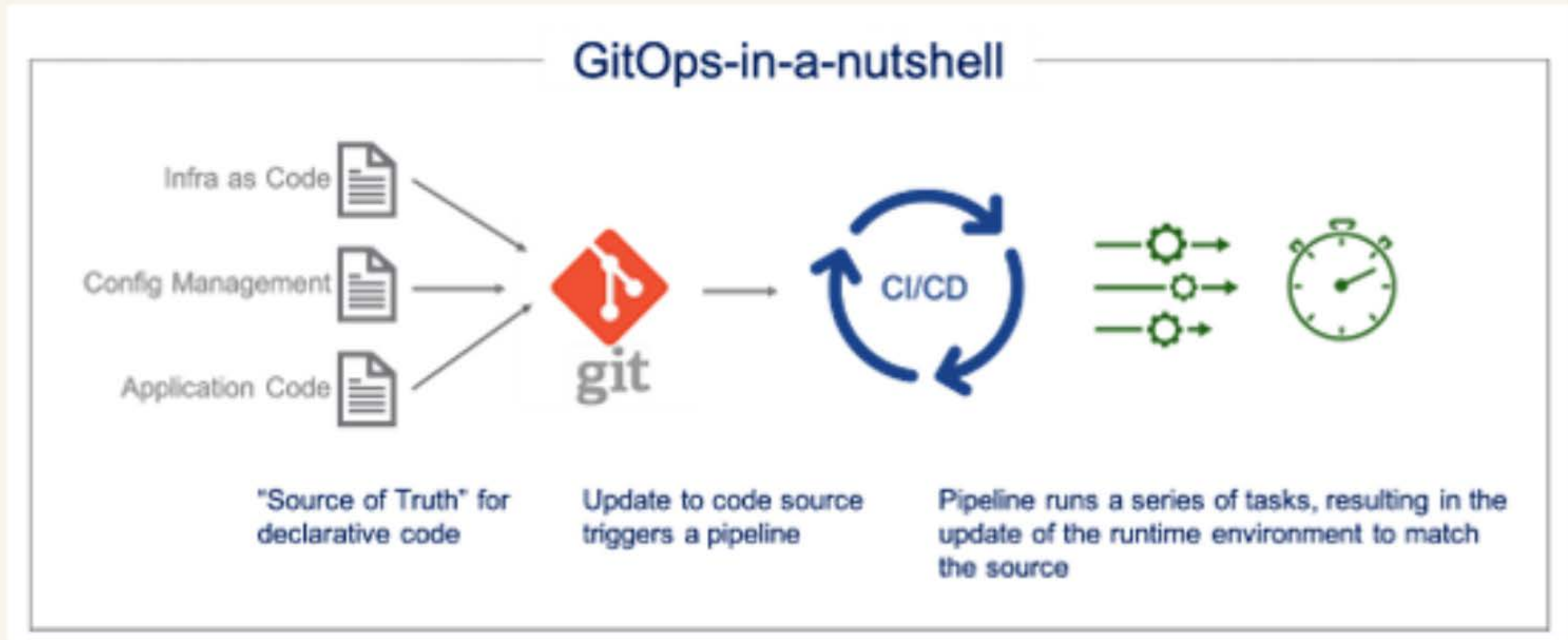
- Homepage
- Menu page
- Order page
- Registration page

Preliminary Design Concept

DESIGN & DEVELOPMENT PHASES

CI/CD Pipeline

DevOps methodology of execution - GitOps

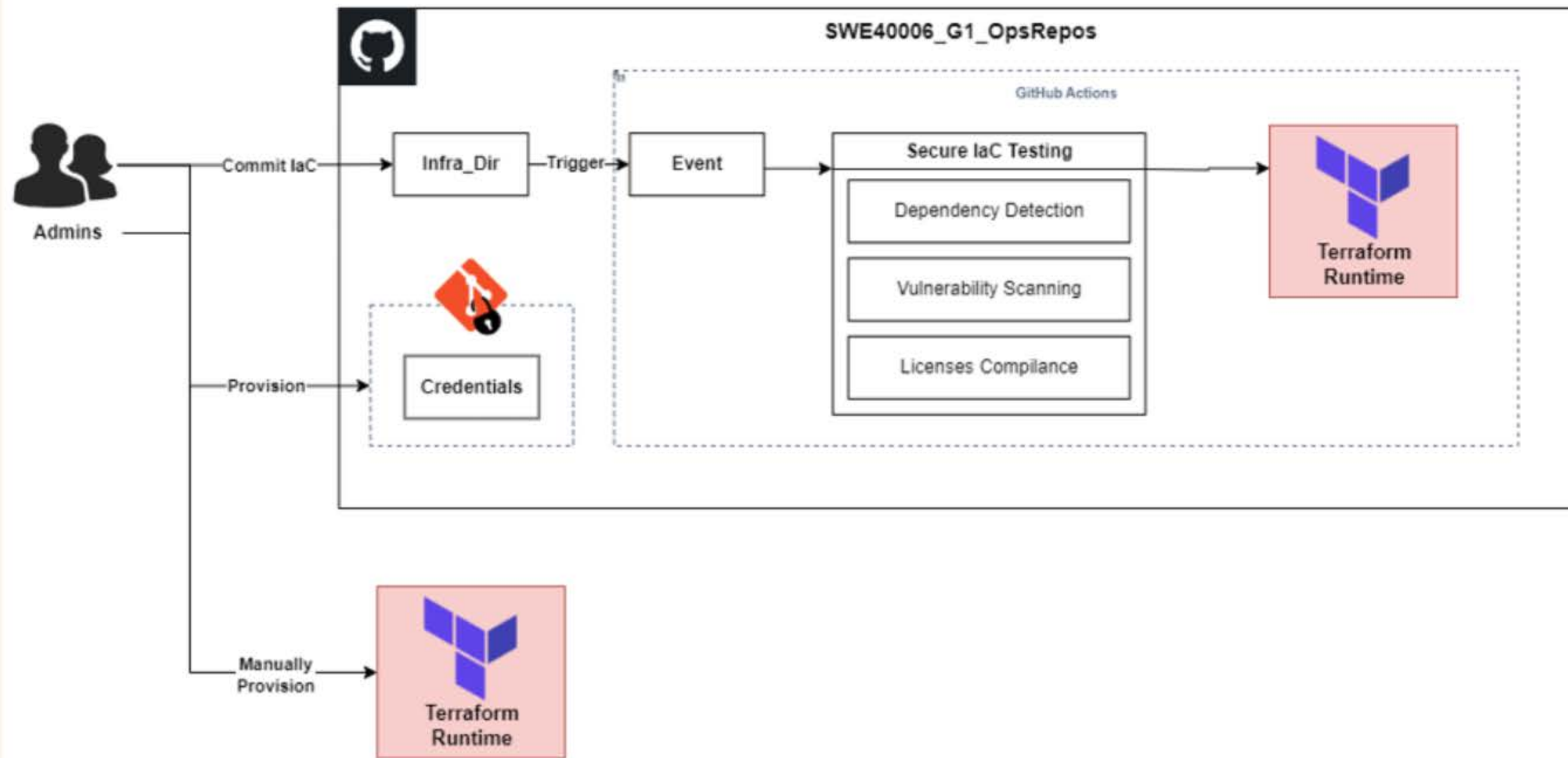


Preliminary Design Concept

DESIGN & DEVELOPMENT PHASES

CI/CD Pipeline

Infrastructure Provisioning

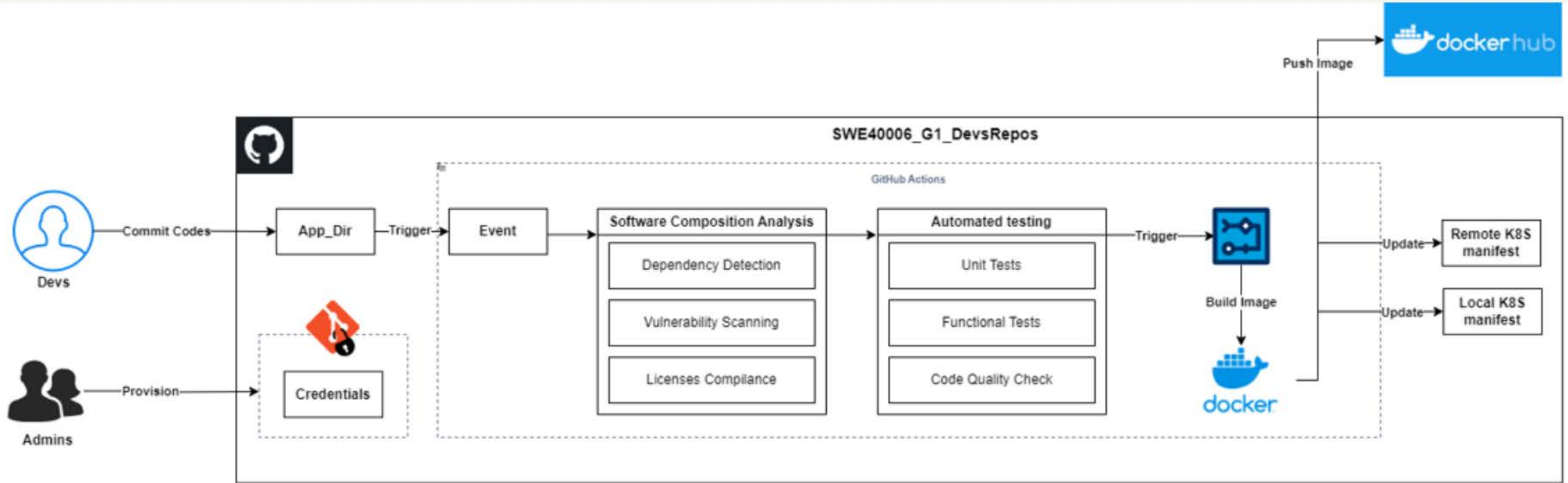


Preliminary Design Concept

DESIGN & DEVELOPMENT PHASES

CI/CD Pipeline

CI Workflow

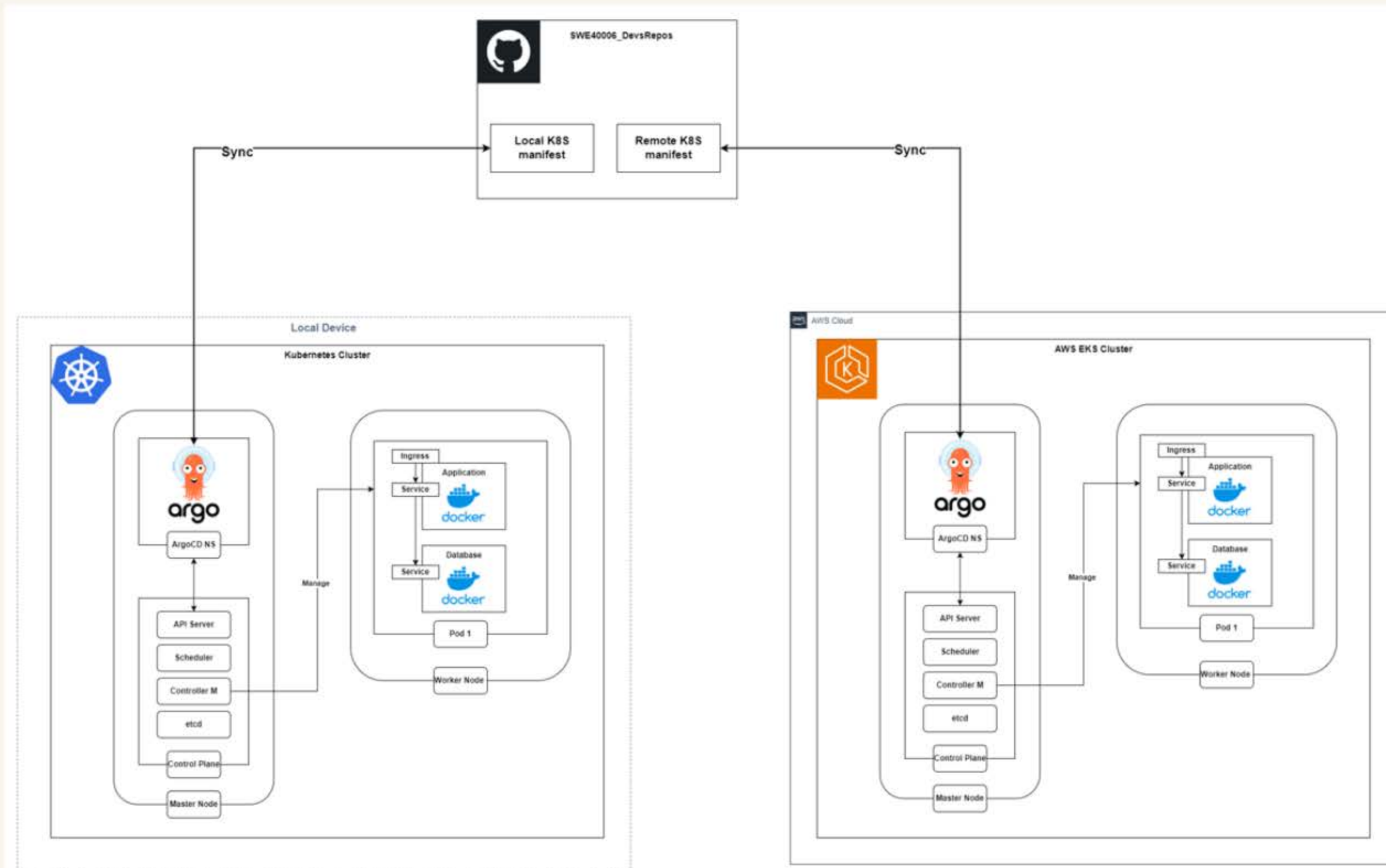


Preliminary Design Concept

DESIGN & DEVELOPMENT PHASES

CI/CD Pipeline

CD Workflow

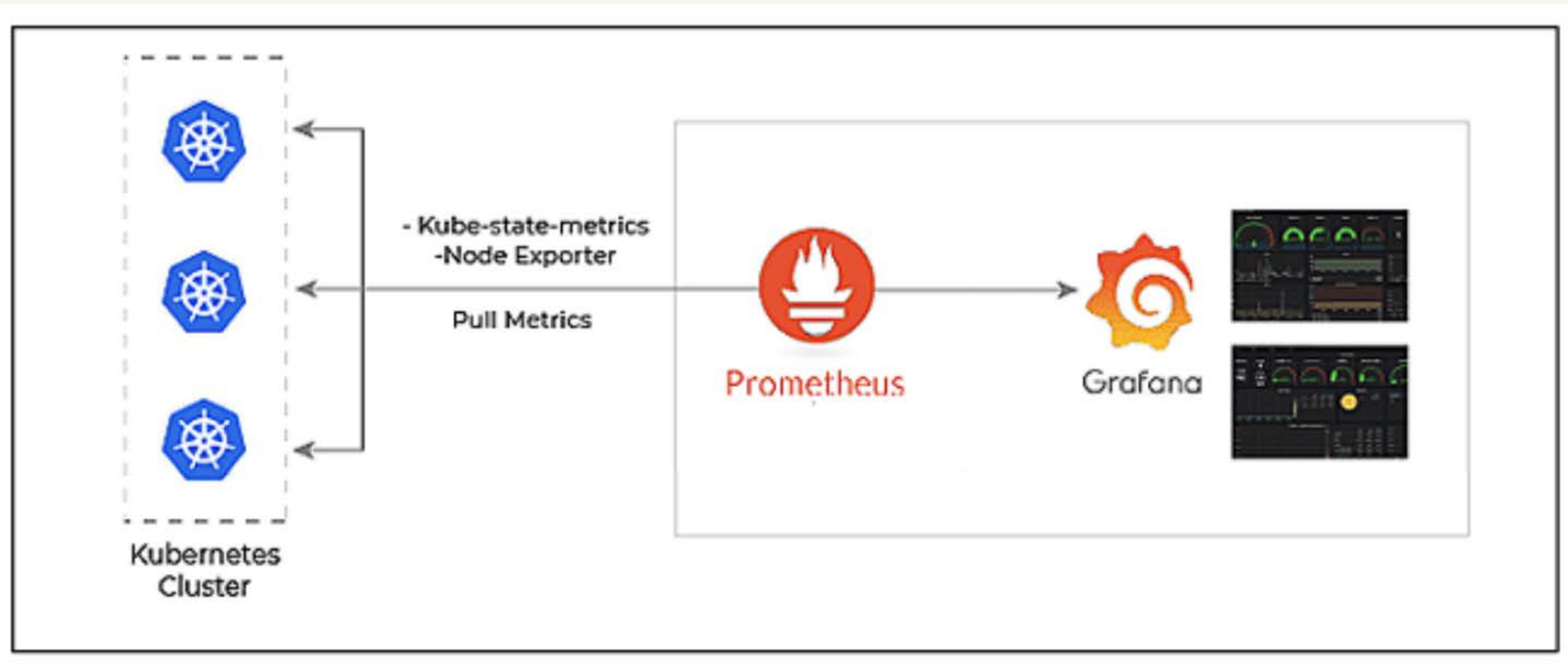


Preliminary Design Concept

DESIGN & DEVELOPMENT PHASES

CI/CD Pipeline

Monitoring with Prometheus and Grafana



Design Compatibility

How design requirements are satisfied?



The CI/CD solved the problems of:

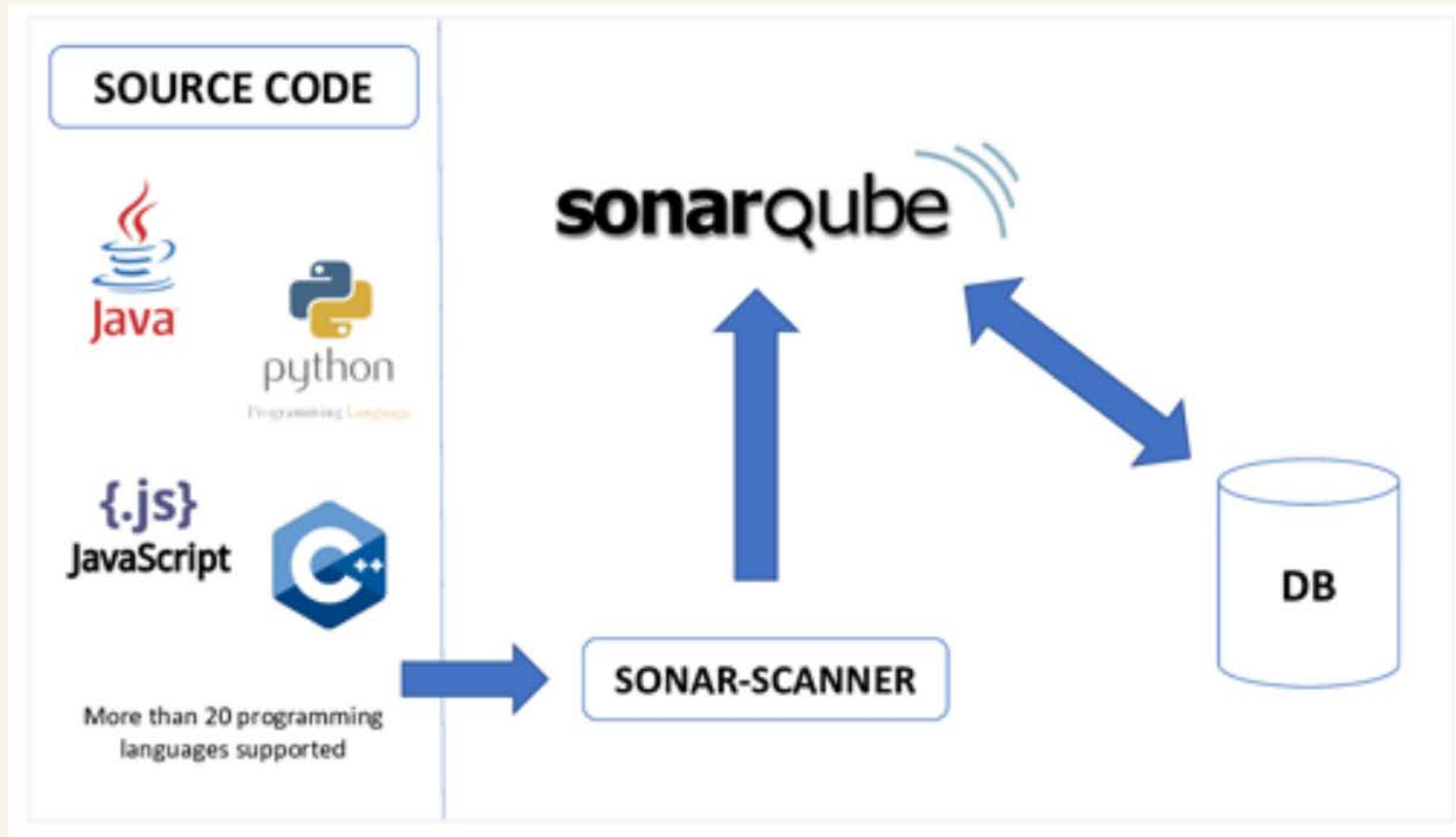
- Inconsistent and insecure deployment
- Lacking automation testing
- Collaboration
- Scalability

The CI/CD Pipeline is integrated into the e-commerce platform and works correctly!

Additional Security Features

CI/CD Pipeline

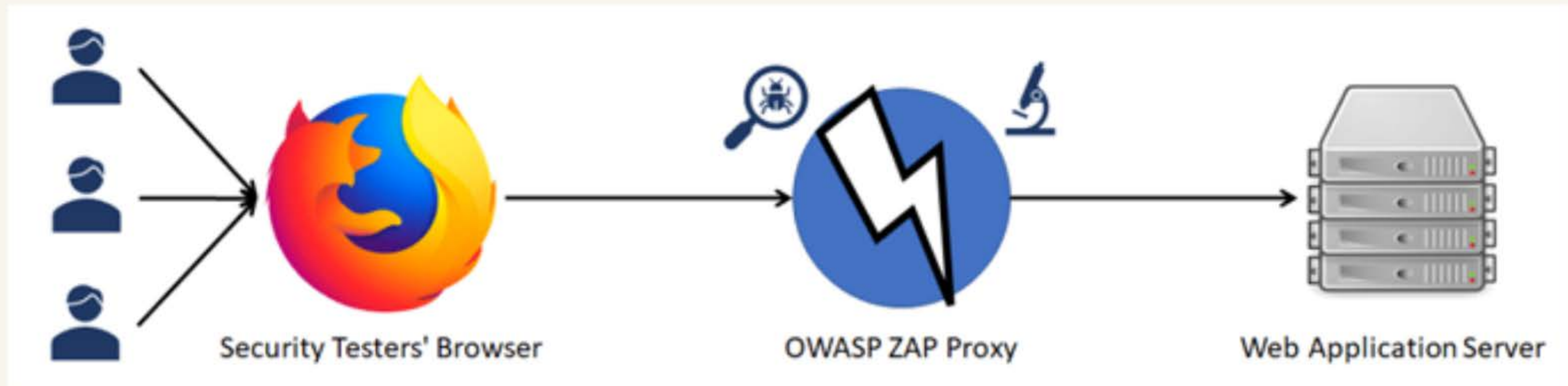
Static Application Security Testing (SAST) using SonarQube



Additional Security Features

CI/CD Pipeline

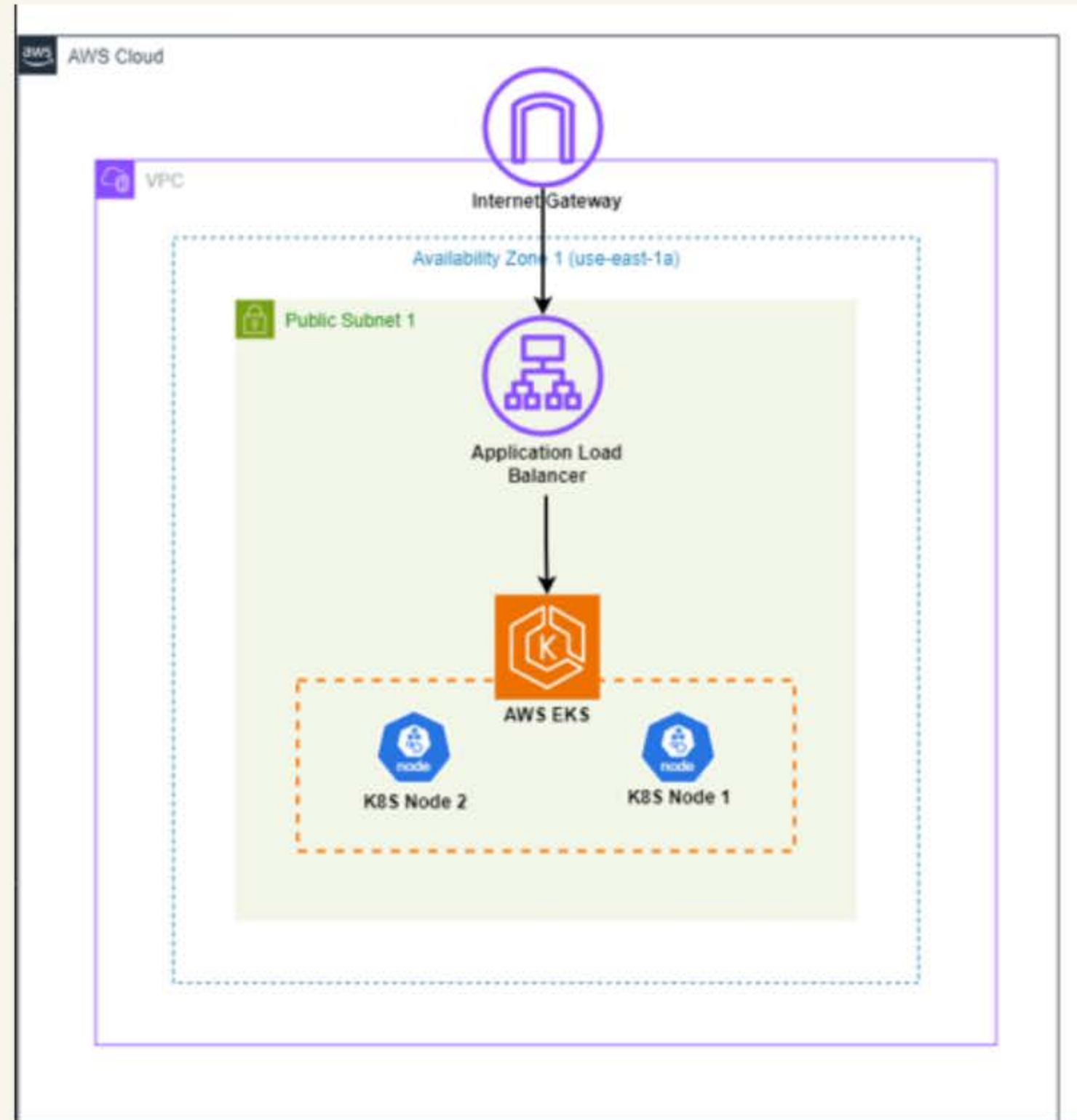
Dynamic Application Security Testing (DAST) using OWASP ZAP



Additional Security Features

CI/CD Pipeline

Deployment on AWS Elastic Kubernetes Service (EKS)





SOLUTION DEMONSTRATION



TRUNG
The End

*Thank You
for listening!*

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