Proposal for CI/CD Adoption

Introduction

In the era of high competition among businesses, the ability to deliver satisfactory services to customers continuously provides the assurance to stay in the competition and grow.

This is seemingly impossible without the cost reduction, cost avoidance, and revenue maximization.

In the light of this I propose the implementation CI/CD for the UdaPeople product.

What is CI/CD ?

CI/CD stands for Continuous Integration and Continuous Deployment.

It is a method that seeks to automate the delivery of products/ services to customers. Whilst the Continuous Integration (CI) component refers to the practice of merging all developers' working copies to a shared mainline at any time, the Continuous Deployment (CD) component refers to the approach in which the value(product) is delivered continuously through automated deployments.

CI/CD is engulfed in the Concept of Continuous Delivery - a mindset of producing and releasing value in short cycles. The diagram in the next slide gives a pictorial summary of the CI/CD.

CI/CD Concept

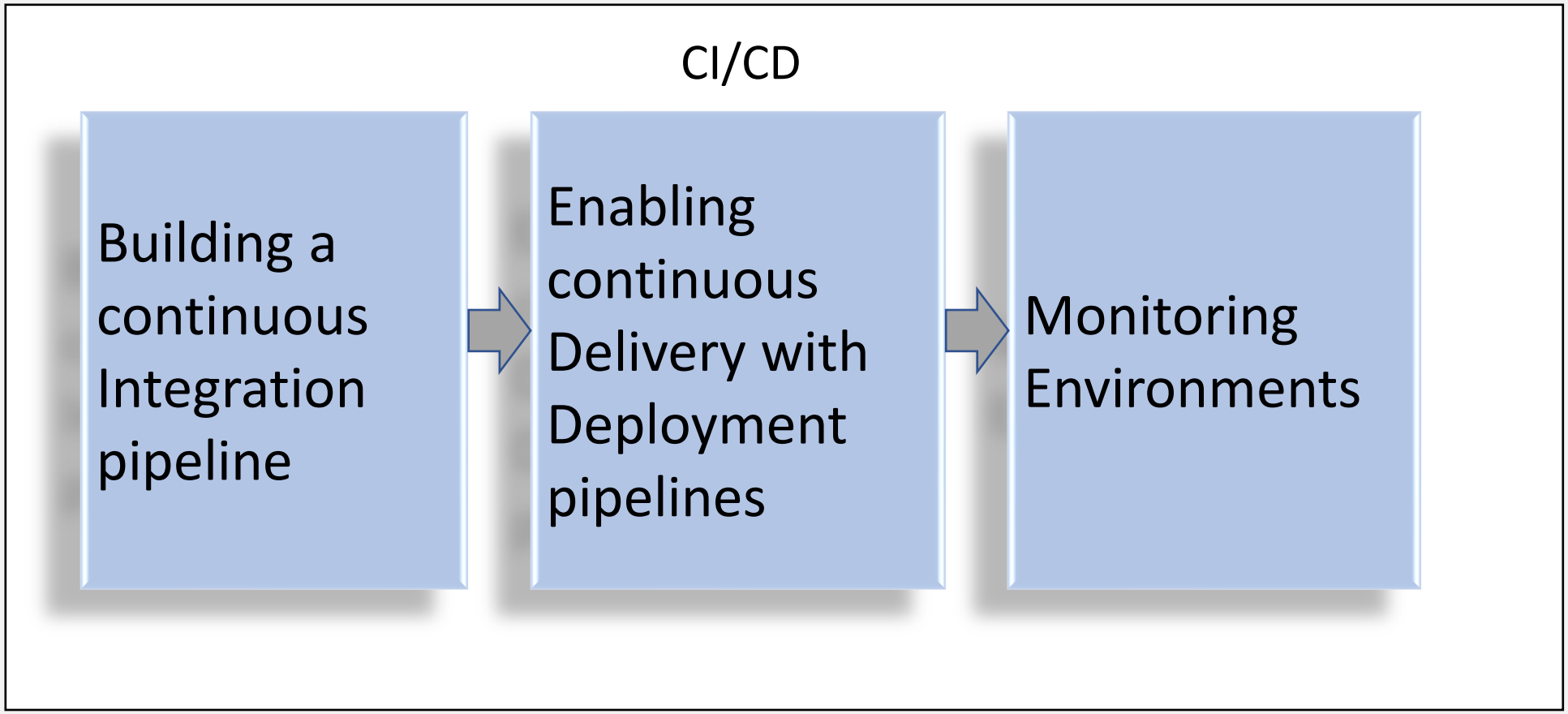


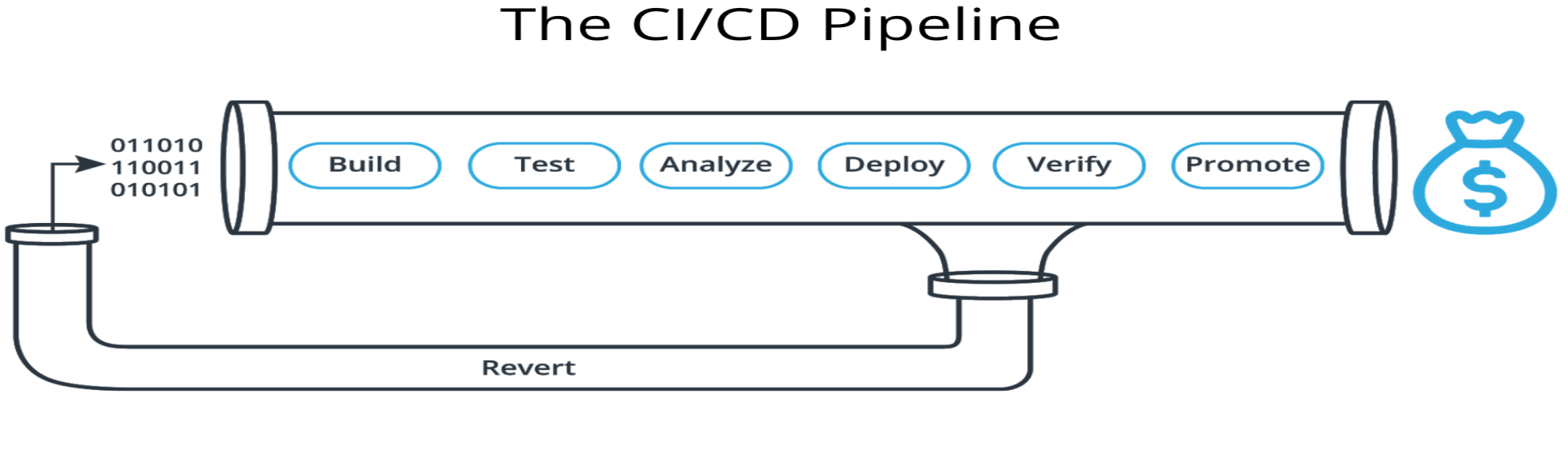
Diagram source: author

How does CI/CD work?

CI/CD works by creating a pipeline that allows the integration of codes to built a product, test , and analyze the product codes.

It deploys a product and carries out different verifications to ensure that the product works as expected.

If the product works as expected, it is then promoted into service which yields revenue. If not, the necessary correction is done.
The diagram below illustrates the CI/CD pipeline.



Why go for CI/CD?

CD/CD is a go for because it helps to :

1. Reduce cost
2. Avoid cost
3. Increase revenue
4. Protect revenue

How CI/CD avoids cost, reduce cost, increase and protect revenue.

- CD/CD helps to catch unit Test Failures, detect security vulnerabilities, automate Infrastructure creation leading to cost avoidance as time is saved, production bugs, human errors, security holes are prevented, product deploys faster and infrastructures are only created when needed.

- CI/CD ensures automation of infrastructure cleanup, faster and more frequent production deployments. These reduce cost, increase revenue because value-generating features are released more quickly and takes less time to market.

- CI/CD also allows automated smoke tests, automated rollback triggered by job failure, which helps prevent down-time caused by bugs or deployment crash hence protect revenue.

Considering these benefits of CI/CD, I highly recommend it's adoption for the Udapeople product.