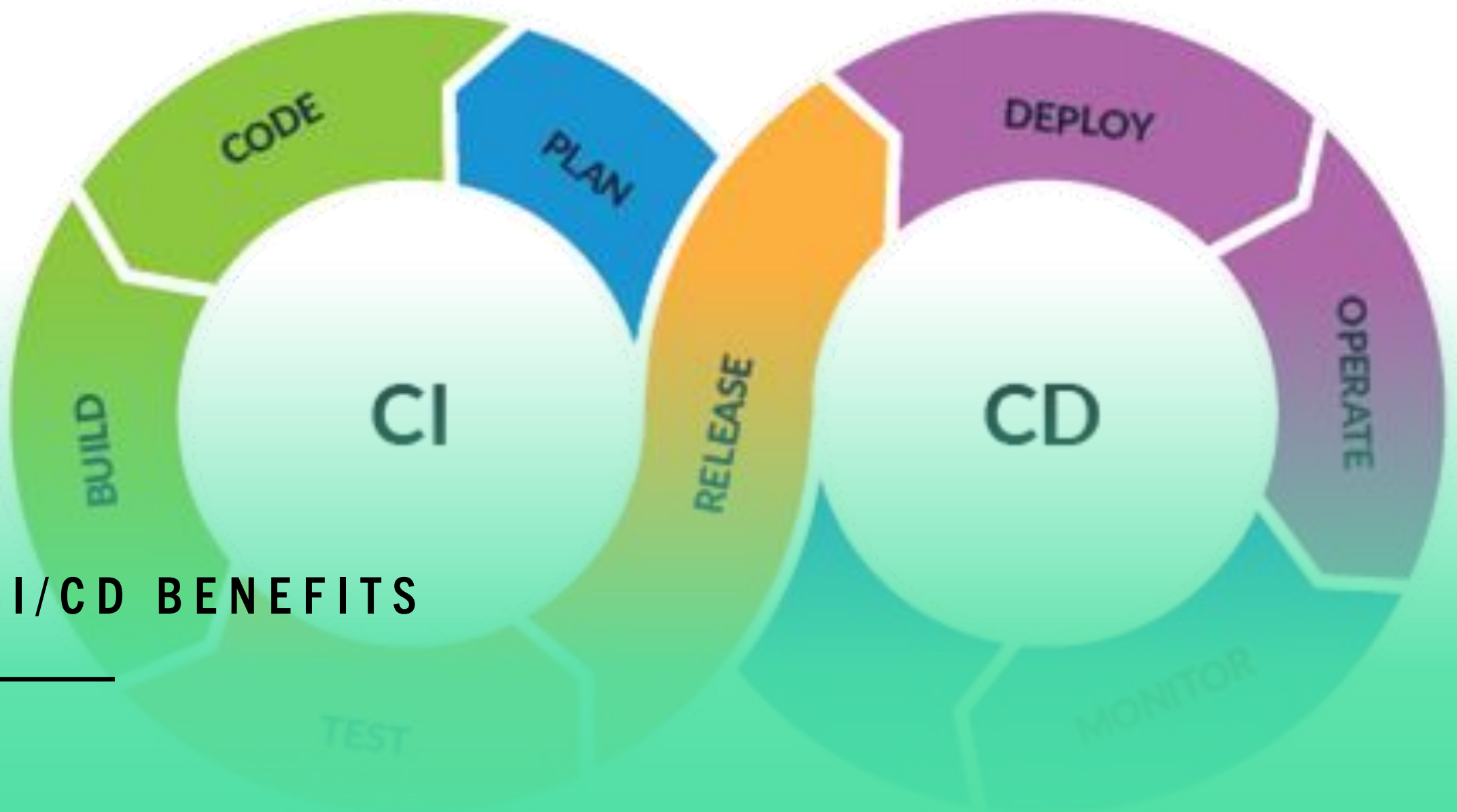CI/CD BENEFITS

AGENDA

- What does CI/CD stand for?

- How we could benefit from DevOps principles

- Challenges we will be confronted with

WHAT DOES CI/CD STAND FOR?

- CI/CD consist of three major concepts

- Continuous Integration

It describes the process of merging developer branches to the main branch several times a day. CI puts an emphasis on test automation and finally generates a high quality, deployable artifact.

- Continuous Delivery

In addition to Continuous Integration, Continuous Delivery makes sure that changes of a software product can be released quickly to customers in an automated way and at any point in time.

- Continuous Deployment

Continuous Deployment extends Continuous Delivery in such a way that it allows frequent automated deployments without any human interaction. Typical phases in Continuous Deployment are Infrastructure Provisioning, Smoke Testing, Production Deployments and automated Rollbacks.

HOW WE COULD BENEFIT FROM DEVOPS PRINCIPLES

- Cost reduction due to less human errors and faster deployments

- Reduce complexity and safe manual troubleshooting time

- Automated Smoke Tests and Rollbacks will protect project revenue due to reduced downtimes from deploy-related crashes and fast and automated rebuilding of production ready state

- Faster feedback cycles of customers lead to higher customer satisfaction rates since they are involved right from the beginning of feature development/deployment and not just at a fixed release date

CHALLENGES WE WILL BE CONFRONTED WITH

- Establishing CI/CD comes with a high amount of initial cost and learning. At first sight this might seem overwhelming compared to current best practices

- Delivering CI/CD pipelines is not a one-time effort, but requires constant support and maintenance as well as continuous development and improvement

- Even though there are some challenges, CI/CD will improve overall business processes and dramatically reduce costs on the long run