

# UDAPEOPLE --- CICD Proposal

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**What is CI-CD?**

# CI/CD consist of three major concepts

## Continuous Integration

**Continuous Integration 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 artefact.**

## 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.**

## **Our current process**

**Deployments are pretty complex. Only a chosen few experts are able to understand the whole process and tons of hand crafted helper scripts. No smoke tests and rollback mechanisms.**

**This in turn often leads to poor software quality because of which no time is left for qualitative analysis**

**Manual releases are error-prone and always leads to delays on production deployments which in turn lead to less reproducibility**

# Benefits of CI-CD

**Automate today's manual deployment steps for smoke tests and rollbacks**

**Add automated infrastructure provisioning**

**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**

# Overall Performance Improvements

**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 process and dramatically reduce costs on the long run**