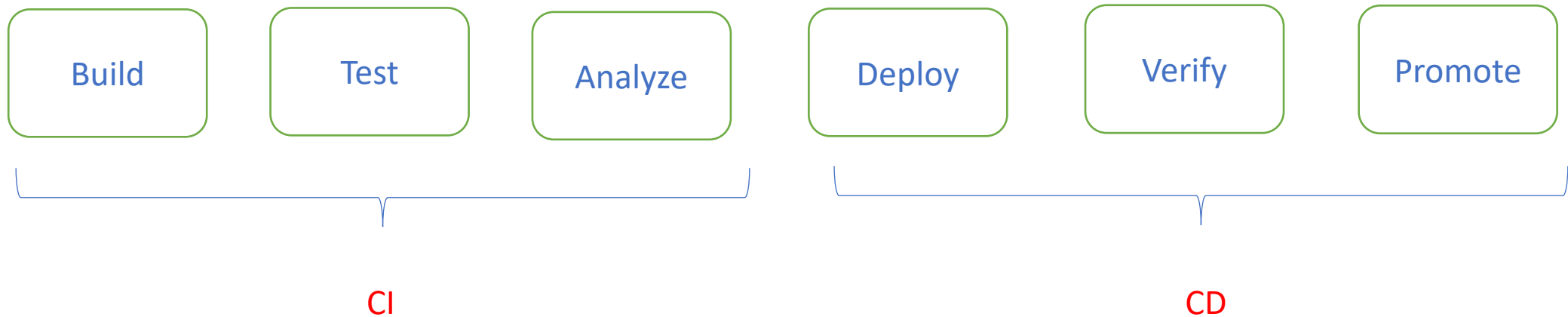# Content

1. Fundamentals of CI/CD
2. Benefits of CI/CD

Fundamentals of CI/CD

- Continuous Integration (CI) is the practice of merging all devlopers' working copies to a shared mainline serveral times a day.

- Continuos Deployment (CD) deploys all code changes to the testing environment in the build automatedly.

| Build | Test | Analyze | | Deploy | Verify | Promote |

CI   CD

Benefits of CI/CD

✔ **Less time spent on fixed issues from new development code**
   Because CI is able catch compile errors after merged.
   ✘ wasting time to fix conflict source code when merge

✔ **Less infrastructure costs from unused resources**
   Because CI/CD is able automate infrastructure clean up.

→ Reduce cost

✔ **Reduce deploy errors**
   Because CI/CD can perform automated smoke tests.

✔ **Quickly return production when there are cases go wrong**
   Because CI/CD is able to automate rollbacks when have job failures

→ Protect revenue

Benefits of CI/CD (cont.)

✅ **Less bugs in production and less time in testing**
   CI can catch unit test failures

✅ **Prevent embarrassing or costly security holes**
   CI can detect security vulnerabilities

✅ **Reduce human error, protect release on schedule**
   Because with CI/CD, everything is automated.
   ❌ manual configure/deploy
   ❌ overnigth to release
   ❌ overtime to keep release on schedule

Avoid cost

✅ **Faster release rate**
   Because with CI/CD, everything is automated.
   ❌ manual checks

✅ **Investing more time in a release cycle than delivering value**

Increase revenue