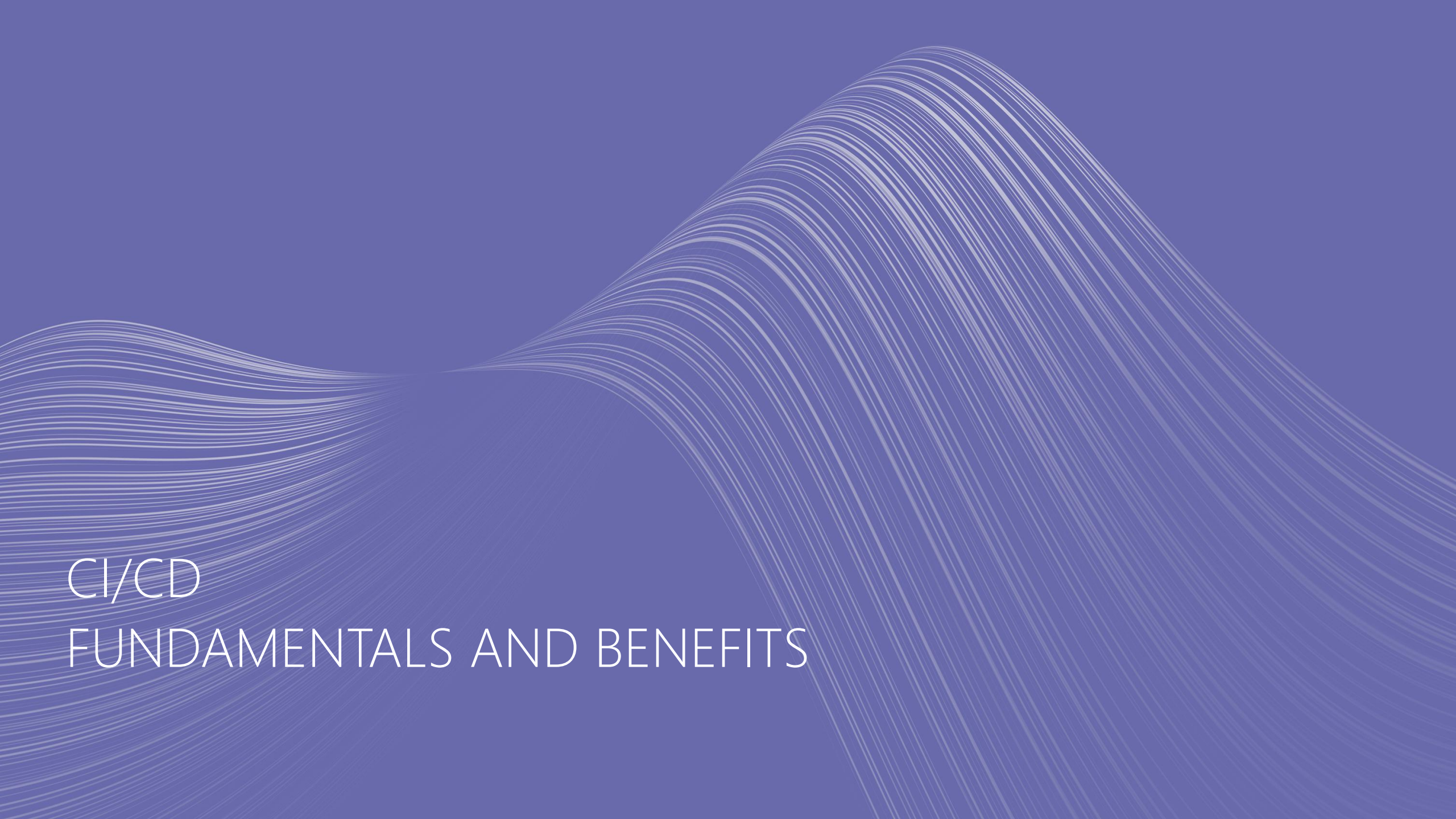
CI/CD
FUNDAMENTALS AND BENEFITS

FUNDAMENTALS

Continuous Integration

The practice of merging changes from multiple developers into a shared repository in an automated way several times a day. CI deals with everything related to the code. From compiling, unit testing and static analysis all the way to storing the artifact.

FUNDAMENTALS

Continuous Deployment

A software engineering approach in which software features and functionalities are delivered frequently through automated deployments. Everything related to deploying the artifact fits here. It's the process of moving the artifact from the shelf to the spotlight.

BENEFITS

- Catch Compile Errors: Since CI/CD handles catching compile errors, developers will spend less time on catching issues and more time developing, which would help us to reduce costs.
- Catch Unit Test Failures: CI/CD allows us to avoid cost by filtering out bugs and failures before they make their ways to production.

BENEFITS

- Reduced deploy errors: Using CI/CD, we can reduce deploy errors, which allows us to avoid costs. Because less human error means faster and more consistent deployments.
- Faster release rate: CI/CD gives us a faster release rate, which leads to an increase in revenue. Because we would have new value-generating features released more quickly.

BENEFITS

- Automated Smoke Tests: Having automated smoke tests will not only help us to reduce downtime, it'll also allows us to protect revenue by making sure everything functions as expected before redirecting traffic to the new version.

- Automated Rollback: By having rollback triggered by a job failure, we can quickly restore the production to a previously working state if anything goes wrong.