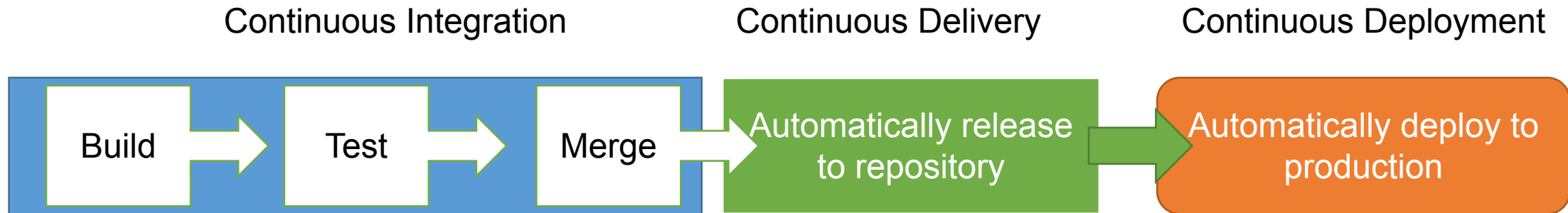


BUSINESS VALUES & BENEFITS OF CI/CD TO BUSINESS ORGANIZATIONS

Basic Understanding of CI/CD.

- CI/CD means Continuous Integration & Continuous Deployment. It is a practice used by the development and operations team in implementing code changes more frequently and reliably from release to production. It is considered the best practice when it comes to DevOps Engineering.
- It introduces a high degree of automation that is appealing to teams of developers that are concerned with gradual production and allows them to focus on the more important aspects of their jobs.

DIAGRAM OF HOW CI/CD PRACTICE LOOKS.



- **Continuous Integration:** This is where the frequent code changes by the developers are taken care of. The code changes are automatically built, tested and packaged in a shared repository enabling team production.
- **Continuous Delivery:** continuous delivery and/ or continuous deployment. Both can be synonymously used. Continuous delivery is more concerned with providing an automated and repeated way for the completed code to be delivered to the environment used for testing and development.
- **Continuous Deployment:** It inherits from continuous delivery where the changes that passed the automated tests are automatically pushed to production server reducing the extra efforts required for deployment.

Benefits of Continuous Integration and Continuous Deployment (CI/CD).

- Improved Productivity:** CI/CD is automated and this helps ease developers from manual tasks thus making it faster and quicker to deploy codes that enhance quick product production. Also they have the ability to commit smaller chunks of codes on a daily basis to version control (eg. github) thereby reducing chances of conflict between them when editing codes.
- Improved Product Quality:** The practice of CI/CD ensures that developers do not prioritise quality over speed but instead offers a medium where the developers and the the operation teams collaborate to find and fix problems faster especially during the early stage of development. This means that manual management of a large application can be extremely difficult and can threaten the quality of the product over time. Where as automating the process using CI/CD improves the quality of the product. This can help product owners to attract new clients providing a window for improved revenue and profits.
- Cost Reduction And Improved Profits:** Standardised CI/CD practice in an organization overtime reduces the likelihood of bugs in the product as customers interact with it there by increasing its effectiveness. This cuts down the cost incurred when manually built and tested and increases the value of the product thus attract more customers to the product thereby increasing revenue and profits.

- **Customer-Centric:** With the frequent small code changes made by the developers, customers are able to interact and keep track of the features implemented on the product. This gives them the opportunity to give feedbacks immediately instead of waiting at the end for the final product launch. This will enable us to achieve high customer satisfaction. This means more clients for us.
- **Quick and Faster Time to The Market:** CI/CD effective implementation will help us bring new products to the market faster & quicker. This enables us to avoid errors while we start revenue generation immediately after new features are deployed. If these features are not satisfactory to our customers' expectations, the features can be pulled from the market for quick fixes using CI/CD automation process.
- **Performance Gathering and Metrics:** Through CI/CD, applications are monitored after release to check for possible issues. The metrics monitoring will help us gain actionable insights that will help in product improvement and ensure that our deployments are not accumulating unjustified costs.
- **Timely Resolution of Fixes:** The CI/CD feedback and monitoring enable the development and operations teams to quickly identify and fix issues related to the product. This shows how effective the DevOps team is and is super important since it directly affects the business's bottom line.