

CI/CD Adoption for Udapeople

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[General benefits, Cost, revenue and profits]

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Introducing CI/CD into the Business

What is CI/CD

CI is an acronym for continuous integration while CD is an acronym for continuous delivery.

Continuous Integration(CI) is basically automating our application development process to a particular remote location. Each stage of integration can be managed by using a version control system.

Continuous delivery(CD) is the process of automating the stages of deploying our application to the point of release. The initial deploy stage helps to check for errors, fix and redeploy. The final stage is when the application goes live on production and becomes readily available for end users.

The significance of CI/CD in Udapeople

Currently, the process of development in Udapeople without CI/CD has introduced errors and performance issues into the application. We introduce new features, fix bugs but we merge and proceed to manually deploy. There are no extra checks put in place to ensure that the new features added were performant and the code for fixing bugs were optimised before deployment takes place.

Code review is great but it's not enough to build a reliable, performant and scalable product. This is where the adoption of CI/CD is important. Adoption of CI/CD means that there are extra checks integrated into our app repository like Github - to ensure that our features and bug fixes are reliable, performant and scalable. After CI is successful, CD would ensure that the destinations/environments where the application will be situated - are well prepared for deployment and monitoring. Also, there's an automated process of looking out for situations like:

- slow or improved performance
- downtimes or uptimes
- unexpected errors or behaviour.

The benefits of CI/CD to Udapeople

General benefits

- A performant and reliable product means a great user experience.
- Catching bugs through the CI/CD process means that we can trust what we release on production. This helps our stakeholders in presenting the new features to clients with confidence.
- A reliable and scalable product builds clients' trust, attracts new clients and generates more revenue.
- Having a process in place to continuously monitor our products helps to quickly catch errors or any performance spike through our integrated tools before the users flag them. This helps to build trust or confidence in our clients that the product is properly managed.

How the business benefits from CI/CD

Cost

It's quite expensive to maintain an application when the **SDLC** of an app is managed manually. We need to put tested and trusted infrastructures and processes in place - to avoid human errors, which can be very costly to say the least.

["SDLC": "Software Development Life-Cycle",

"Software": "**Udapeople** app is a software"]

Adoption of CI/CD helps to curb the issue of expensive maintenance in the following ways:

- Automated quality checks results in reduced human errors and faster feature releases. This has proven to be cheaper alternative to manual quality checks because, it's more guaranteed to deploy requested features and fixes faster if certain metrics are met.
- Faster deploy of features and fixes - means our customers get to use the new releases at an agreed time and solve problems faster. This is much cheaper than manual processes that would involve more hands and prone to human errors and escapes.

How the business benefits from CI/CD

Revenue and Profits

A reliable and scalable product is significant to the growth of a business.

Managing an app through a manual development and delivery process can pose the risk of losing trust in the reliability, maintainability and scalability of an app over a period of time.

Introduced technical debts, stale technology tools(including libraries) and increased regressions - can seriously cost a business it's clientele through bad reviews and avoidance of use. This can ultimately lead to loss of revenue, if left unchecked.

Bad reviews => loss of confidence => reduction in client base => loss of revenue and profits

Adoption of CI/CD helps to curb the issue of revenue loss in the following ways:

- Automated process of quality checks and deploy helps to flag regressions/escapes, outdated or unsupported libraries/tools. This helps to keep the quality, integrity and reliability of Udapeople with respect to our clients. They have a better experience with the app can make referrals on our behalf.

Great confidence => great reviews => amazing referrals => increase in client base => increase in revenue and profits.

- When an application is well maintained and performant(optimised code and little or no tech debts), it makes room for expansion. New features can be introduced with ease that can generate more profits for the business - This ultimately leads to increase in revenue. A scalable product is very instrumental to a profitable business.

Thank You.