

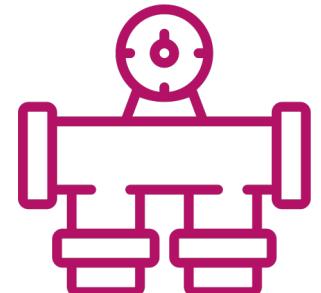
Leveraging CI/CD for UdaPeople

INCREASING REVENUE AND SAVING COSTS THROUGH CONTINUOUS INTEGRATION
& CONTINUOUS DEPLOYMENT

What is CI/CD?

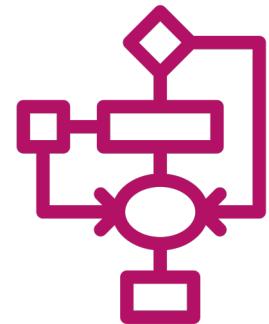
- ▶ A collection of DevOps practices and tools used to achieve:
 - ▶ consistency & replicability
 - ▶ thorough testing
 - ▶ efficiency

in the course of software development
- ▶ In practice, this means:
 - ▶ using “pipelines”: source code → build → test → deploy to production
 - ▶ automated building, testing, and deployment
 - ▶ steady, incremental, and measurable progress
- ▶ CI/CD brings a variety of benefits – ultimately, it increases our ability to deliver value



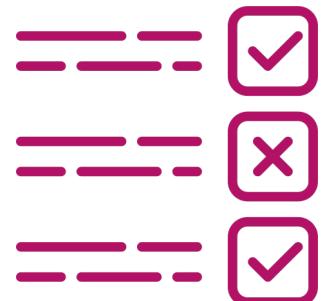
Increasing development productivity

- ▶ Code is contributed through smaller and more frequent changes
 - ▶ easier to test
 - ▶ easier to integrate with the codebase
- ▶ Improved workflow for developers
 - ▶ simplify the processes of contributing code, building, testing, and deploying
 - ▶ better co-operation between developers
 - ▶ increased team satisfaction
- ▶ CI/CD increases the productivity of developers individually and as a team, and will enable us to accelerate the development of the UdaPeople offering, thereby generating more revenue



Improving testing and debugging

- ▶ Focus on automated testing
 - ▶ encourages test-driven development
 - ▶ testing occurs regularly, with each incremental code integration
 - ▶ testing brings consistency: each build must pass the same set of well-defined tests
- ▶ Streamline finding errors and causes
 - ▶ easier to identify errors, with less time spent debugging
 - ▶ attribute errors to specific breaking changes, informing developers what to fix
- ▶ CI/CD avoids costs and saves time, allowing productivity to increase as developers are enabled to focus more on other aspects of a project



Simplifying deployment

- ▶ Built-in safety mechanisms
 - ▶ automated smoke tests to catch bugs before going live
 - ▶ automated rollback to quickly rectify any issues with recent deployments
 - ▶ monitoring tools to ensure the ongoing health of live applications and services
- ▶ Deploy updates and new features more frequently
 - ▶ makes the ongoing development of the service more tangible to stakeholders
 - ▶ gather user feedback from samples of users for improvement and bug fixes (through various deployment strategies)
- ▶ CI/CD protects revenue through built-in safety mechanisms that guarantee quality of service, while also increasing revenue through greater customer satisfaction and developer productivity



CI/CD is the right choice for UdaPeople

- ▶ CI/CD will bring significant net gains across the board
 - ▶ costs will be reduced, while revenue will increase
 - ▶ overall: make UdaPeople a more profitable service
- ▶ CI/CD will improve outcomes for all stakeholders
 - ▶ developers: increased individual and team productivity, with greater ease and satisfaction in their work
 - ▶ business: improved product offering, and ultimately greater profitability
 - ▶ users: consistent, fully-functional service that continually and frequently improves with new features

