UdaPeople Pipeline CI/CD

## PRESENTATION

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Context

UdaPeople product is a revolutionary concept in Human Resources which promises to help small businesses care better for their most valuable resource: their people.

To make that product available effectively and in a fastest way from development to production into the hands of target businesses, a better approach/process is needed. We suggest a Continuous Delivery Process. Let's motivate our choice below.

Continuous Delivery - Definition
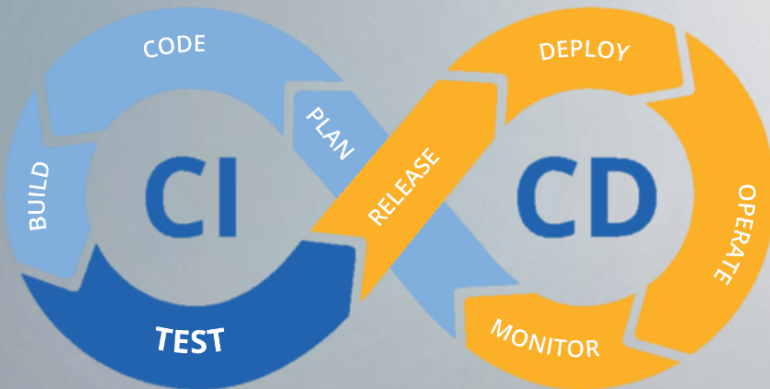
Continous Delivery paradigm is an engineering practice or mindset in which teams produce and release value in short cycles. It has proved to be the solution in current development processes, in order to make transforming code into cash process as automated and predictable as possible, thus reducing deployment time and saving cost.

In the next slide we discuss some key objectives of this approach.

Objectives

Continuous Delivery is mad of 2 mains elements: Continuous Integration and Continuous Deployment. Tools may differ and automation may start from partial to full, but when put in action, it has a goal to allow better software quality and frequent and frictionless deployment, in short cycles. We refer to it as **CI/CD Pipeline**.

Continuous Integration	With Continuous Integration (CI) in place, it will be possible to get high quality, deployable software merged in single place several times a day. CI deals with source code.
Continuous Deployment	With Continuous Deployment (CD) in place, it will be possible to get the value delivered frequently through automated deployments. It's also possible to rollback when a failure occurs, or to promote to production easily.

Benefits – Business value

The CI/CD Pipeline implementations has great objectives for our business:

1. Continuous Integration enables these business values:

   a. Reduce cost: Less developer time on issues from new developer

   b. Avoid Cost: Less bugs in production and less time in testing and Prevent embarrassing or costly security holes

2. Continuous Deployment enables these business values:

   a. Avoid Cost: Less human error due to manual tasks, Faster deployments

   b. Reduce Cost: Less infrastructure costs from unused resources

   c. Increase Revenue: New value-generating features released more quickly

   d. Increase Revenue: Less time to market, faster customer feedback

   e. Protect Revenue: Reduced downtime from a deploy-related crash or major bug

   f. Protect Revenue: Quick undo to return production to working state

Conclusion

As we can well see, CI/CD benefits are so important and outstanding that we cannot afford to ignore them or do without them.

Less bugs shipped to production, easy release build, reduced testing cost, quality improvement, frequent release, frequent feedback from customers, much less pressure and faster iterations, all of these benefits will turn into high positive impact on revenue, whether in the sense of avoiding cost, reducing cost, protecting and increasing revenue.

Setting up the CI/CD pipeline will take us some time and money, but the benefits are worth it and so our expert suggestion is to adopt it for this strategic project.