

# CI/CD IMPLEMENTATION IN THE CREATION OF A WASTE SALES APPLICATION IN A MOBILE-BASED SERIALIZED WASTE BANK

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## ***ABSTRACT***

*The development of waste banks as a system for purchasing and selling waste within communities currently faces challenges due to manual processes in transactions, price management, and waste categorization. These challenges lead to inefficiencies and potential errors in waste management. To address these issues, the author designed and implemented software aimed at digitizing the Bank Sampah Berseri Bengkalis system. The proposed solution is a mobile-based application developed using the Dart programming language and the Flutter framework, employing the Continuous Integration and Continuous Deployment (CI/CD) approach. CI ensures smooth code integration and early problem identification, while CD enables automatic deployment of changes to the production environment, accelerating the application development and deployment process. Automation processes, including testing and deployment, reduce manual workloads and increase efficiency. The results of this research demonstrate that the application successfully improves the efficiency of waste purchase management at Bank Sampah Berseri Bengkalis. Moreover, the implementation of CI/CD has proven to accelerate the development process, reduce the risk of errors, and ensure the production of a higher quality application that can be swiftly deployed to users with faster updates.*

**Keywords:** *Waste Bank, Waste Sales, Digitalization, CI/CD, Flutter, Dart, Waste Management Efficiency, Mobile Application.*