ABSTRACT

The challenge of waste management in Indonesia is a pressing environmental issue, coupled with the high volume of waste generated every day. To address this challenge, a comprehensive web-based information system was developed with the main objective of improving the efficiency of waste management practices in the campus environment. This research incorporates innovative technologies and methodologies to enable real-time monitoring, accurate data recording, and incentivize waste segregation. In addition to focusing on system development, the research also involved a comparative analysis with three other waste management applications using different methodologies. The results showed a positive response to the system implementation, with 68.5% of participants recognizing the potential of the web-based application in changing waste management practices. However, waste management is a multidimensional problem that requires collaboration from various stakeholders. This research uses the prototype method and the Laravel framework, and conducts a needs analysis and project schedule. It is expected that this system can improve waste control, build awareness and knowledge among the campus community, and improve the efficiency of waste management data management by janitor.

Keywords : Waste Management, Environmental Sustainability, Web-based Application, Prototype, University