

## ABSTRACT

### DESIGN AND IMPLEMENTATION OF SIMOSA (WASTE MONITORING SYSTEM) FOR INTEGRATED WASTE MANAGEMENT

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Waste generation is intensifying worldwide due to population growth and urbanization, with households as primary contributors. Uncontrolled waste threatens environmental sustainability and requires both public and government involvement through effective policies. However, events like National Waste Awareness Day (HPSN) have been insufficient. Technological advances offer new opportunities for better waste management solutions. This study presents the design and implementation of SIMOSA (Waste Monitoring System), a digital platform for integrated waste management. SIMOSA enables real-time tracking of waste movement from the point of origin to final disposal, facilitates data collection on waste volume and types, and supports analysis for decision-making. The system features map-based visualization, service quality ratings, and user feedback tools, directly involving both government officials and the public. By consolidating data and enhancing transparency, SIMOSA aims to optimize government oversight, improve waste management efficiency, and increase community engagement, thus supporting environmental sustainability objectives.

**Keywords:** Waste, Waste Management, Technology, SIMOSA, Monitoring

