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Application of the Blockchain Architecture in Solid Waste Management in a Small Municipality

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Abstract

This research deals with the application of Blockchain digital architecture in solid waste management in a small municipality in the interior of the state of São Paulo, Brazil.

The ongoing research is related to the technological transformation of a compensation system to the collection of waste in the municipality, aimed at the social inclusion of waste collectors through the use of social currency.

The current system uses printed cards called Green Coins, and present vulnerabilities that should be overcome with the implementation of the new system.

The new application uses social crypto-coins and security support through Blockchain in order to guarantee the necessary information integrity, enabling the management of an expressive number of collectors and contributing to the improvement of the quality of life in the municipality in relation to the typical aspects of sustainability: education, health, environment, social inclusion and local economy.

Keywords: *Blockchain, cryptocurrency, solid waste management; sustainability; social inclusion.*