

ABSTRACT

Clean water is a basic necessity for society that still faces various challenges, especially in regions with unique geographical characteristics such as the city of Padang Panjang. This study examines the implementation of a traceability system to enhance transparency and accountability in the clean water supply chain management at Perumdam Tirta Serambi, utilizing technology as a supporting tool.

The research method employs a qualitative approach through in-depth interviews with stakeholders and document studies. The main focus of the study is to identify critical points in the water supply chain and evaluate the effectiveness of the traceability system in improving service quality to the community.

The results show that the traceability system can monitor the entire water distribution flow in real-time. The application of business process reengineering successfully developed a more efficient distribution model by optimizing key processes within the supply chain.

Blockchain technology is used as a supporting technology to secure critical data and enhance process transparency. This system has proven capable of increasing accountability in clean water management from the source to the consumer, while also facilitating the identification of vulnerable points in distribution.

This study provides an important contribution to the development of a more modern clean water management system. Moving forward, this system has the potential to be further developed by integrating IoT technology for more comprehensive and sustainable monitoring

Keyword: *Blockchain, Business Process Reengineering, Quality Assurance, Qualitative, Traceability.*