

## ABSTRAK

### **INTEGRASI TEKNOLOGI *BLOCKCHAIN* PADA *FRONTEND* *ENTERPRISE RESOURCE PLANNING* BERBASIS *WEBSITE* UNTUK MENDUKUNG *TRACEABILITY* DAN *CIRCULAR ECONOMY* DI INDUSTRI *CASSAVA***

Oleh

**CHAIRUNISA ADISTIAPUTRI**

Penelitian ini bertujuan untuk merancang dan mengembangkan sistem *frontend* berbasis *website* untuk platform Cassava Super guna mendukung *traceability* dan transparansi dalam rantai pasok industri singkong melalui integrasi teknologi *blockchain*. Pengembangan sistem ini merupakan respons terhadap berbagai tantangan yang dihadapi industri singkong, seperti rendahnya efisiensi operasional, kurangnya transparansi rantai pasok, serta keterbatasan dalam penerapan prinsip *circular economy*. Sistem dikembangkan menggunakan React.js dengan metode *Software Development Life Cycle* (SDLC) dan dirancang responsif serta mudah digunakan. Pengujian dilakukan dengan metode *blackbox*, *performance testing*, dan *usability testing*. Hasil menunjukkan seluruh fitur berjalan baik, responsif, dan memperoleh skor kepuasan pengguna di atas 8. Evaluasi performa juga menunjukkan skor tinggi pada aspek kecepatan, *best practices*, dan SEO, serta kompatibilitas di berbagai perangkat dan *browser*. Dengan demikian, sistem ini dinilai efektif dalam mendukung transformasi digital dan keberlanjutan industri singkong di Indonesia.

**Kata Kunci:** *Blockchain*, Ekonomi Sirkular, *Enterprise Resource Planning* (ERP), *Frontend*, Industri Cassava, *Traceability*

## **ABSTRACT**

### **INTEGRATION OF BLOCKCHAIN TECHNOLOGY IN FRONTEND WEB-BASED ENTERPRISE RESOURCE PLANNING TO SUPPORT TRACEABILITY AND CIRCULAR ECONOMY IN THE CASSAVA INDUSTRY**

**By**

**CHAIRUNISA ADISTIAPUTRI**

This research aims to design and develop a website-based frontend system for the Cassava Super platform to support traceability and transparency in the cassava industry supply chain through the integration of blockchain technology. The development of this system is a response to various challenges faced by the cassava industry, such as low operational efficiency, lack of supply chain transparency, and limitations in applying circular economy principles. The system was developed using React.js with the Software Development Life Cycle (SDLC) method and designed to be responsive and easy to use. Testing was conducted using blackbox, performance testing, and usability testing methods. The results show that all features run well, are responsive, and get a user satisfaction score above 8. The performance evaluation also showed high scores on speed, best practices, and SEO aspects, as well as compatibility across various devices and browsers. Thus, this system is considered effective in supporting the digital transformation and sustainability of the cassava industry in Indonesia.

**Keywords:** Blockchain, Cassava Industry, Circular Economy, Enterprise Resource Planning (ERP), Frontend, Traceability