

ABSTRACT

Agriculture is a key sector in Indonesia's economy, especially in areas with fertile land such as Garut. However, challenges in managing farmland quality often affect productivity. The Selaawi Agricultural Extension Center (BPP) in Garut has an important role in supporting farmers through counseling and the application of agricultural technology. This research aims to design an agricultural land quality monitoring system using the Human-Centered Design (HCD) method, which focuses on user needs and experience. HCD ensures that the technology developed is relevant and easy to use in agricultural extension. The system prototype was designed using the Figma application and tested on 10 officers using the System Usability Scale (SUS), which showed a score of 80, signifying good acceptance by users. The designed system is able to provide real-time information on farmland conditions, such as soil nutrients (N, P, K), pH, temperature, and soil moisture. The application also facilitates the presentation of weekly and monthly reports based on the collected data, assisting officers in farmland management. In conclusion, the application of HCD in the design of the farmland quality monitoring system proved to be effective and could increase user engagement and satisfaction at BPP Selaawi, Garut.

Keywords: Land monitoring, Land Quality, Human-Centered Design, Agriculture