ABSTRACT

Commanditaire Vennootschap (CV) 69 Wooden is a small and medium-sized enterprise (SME) engaged in the production of custom-made furniture. To date, the processes of order recording, raw material monitoring, and production reporting have been carried out manually through informal communication via WhatsApp. This condition has led to several issues, such as duplicated orders, production delays, and irregularities in raw material stock management. Various studies on the development of Warehouse Management Systems (WMS) have been conducted using methods such as Waterfall, Agile, and Prototyping. However, these methods have certain limitations, including a lack of integration between system analysis and design processes, as well as weak control over evolving user requirements during development. Therefore, this research adopts the **ICONIX Process** methodology, which combines the structured approach of Waterfall with the iterative flexibility of Agile. The ICONIX Process consists of several stages, namely requirements analysis, domain modeling, use case design, implementation, and testing. The system implementation was carried out using the **Next.js** framework on the frontend and **Express.js** on the backend. System testing was conducted using the **black box testing** method to ensure that the system's functionality meets user requirements. The results of this study indicate that the developed system effectively improves warehouse and production management processes, making them more organized and efficient. Thus, the web-based warehouse management information system can serve as an effective solution to support the digitalization of operational processes at CV 69 Wooden.

Keywords: *Warehouse Management Application , ICONIX Process, Information Technology, Next.Js,Express.Js, Business Process Digitalization*