

## ABSTRACT

In the construction industry, the risks of workplace accidents and non-compliance with operational procedures remain major challenges that can impact project continuity. Therefore, there is a need for a system capable of monitoring and reporting on Quality, Health, Safety, and Environment (QHSE) aspects. This study resulted in the development of a web-based QHSE application designed to support digital and real-time monitoring and reporting of occupational safety. The application was developed using the PHP programming language with the Laravel framework, Tailwind CSS for the user interface, and PostgreSQL as the database system. The development method employed was the ICONIX Process, which focuses on a use case-driven approach as the foundation for system design, starting from requirements identification to implementation and evaluation. System testing was carried out using the black-box testing method to ensure that each function operates according to user needs without examining the internal code structure. The results of the study show that the web-based QHSE application was successfully developed using the ICONIX Process method, and all functions operated as expected based on the predefined testing plan.

**Keywords** : QHSE, occupational safety, web application, ICONIX Process, construction