

ABSTRACT

The Faculty of Industrial Engineering faces a problems due to the absence of a systematic mechanism and procedure for asset monitoring, resulting in a reactive monitoring process that lacks proper documentation. This final project aims to design an asset monitoring management information system for the Faculty of Industrial Engineering using the Scrum method. The developed system consists of five main menus: login, asset data, Quick Response (QR) code scan, report validation, monitoring report, and logout. The login menu serves as the initial authentication based on user roles, while the asset data menu contains complete information about all assets owned by the faculty. The QR scan menu enables users to conduct asset monitoring directly in the field by scanning QR codes attached to each room and filling out a digital checksheet form. Next, the report validation menu functions to evaluate monitoring results and determine asset eligibility status based on maximum service life. The monitoring report menu provides comprehensive information about all monitoring activities, including asset eligibility status, evaluation notes, and recommended follow-up actions. The system was validated using black box testing to ensure all functions operate according to the specified requirements. Testing results indicate a user acceptance rate of 85% based on User Acceptance Testing (UAT), suggesting that the system meets user needs in terms of functionality and ease of use. UAT was conducted using the ISO/IEC 25010 standard. The system is expected to establish a structured asset monitoring process, form a clearer workflow, generate accurate and measurable data, reduce the risk of asset loss, and improve asset management efficiency through the digitalization of previously manual processes.

Keywords—Asset, Faculty of Industrial Engineering, Asset Management, Monitoring, Scrum, Management Information System