ASBTRACT

The Faculty of Industrial Engineering (FRI) at Telkom University is one of the faculties at Telkom University. The Faculty of Industrial Engineering manages five study programs: Bachelor of Industrial Engineering, Bachelor of Information Systems, Master of Industrial Engineering, Master of Information Systems, and Bachelor of Logistics Engineering. The Faculty of Industrial Engineering has sixteen laboratories for conducting practical and research activities. The large number of laboratories in the Faculty of Industrial Engineering requires each laboratory to have assets to support practical and research activities. However, in practice, the FRI Laboratory faces challenges in asset management, namely the absence of a system capable of integrated and comprehensive asset data recording, tracking, reporting, lending, and supervision.

This research aims to design a web-based monitoring and lending system to improve asset management at the FRI Laboratory. The proposed solution involves integrated asset recording, monitoring, tracking, mapping, lending, and reporting. The method used in the development of this information system is agile scrum. The system development process using the scrum method is divided into several stages: product backlog, sprint planning, sprint backlog, sprint execution, sprint review, and sprint retrospective. Once the system is developed, functional testing is conducted using black box testing and user acceptance testing (UAT) on the system features. The results of this research show that the web-based monitoring system can increase efficiency and effectiveness in laboratory asset management. With this proposed application, it is expected that laboratory assets can be managed and maintained according to needs.

*Keywords — **Asset Management, Scrum, Monitoring System**.*