

## **ABSTRACT**

*Laboratory management plays an important role in supporting learning activities. A very important aspect in laboratory management is budget management and laboratory asset management, including consumables management.*

*Currently, the laboratory of Faculty of Industrial Engineering (FRI) has used Spreadsheet to manage the budget and record the procurement of Consumables. Although Spreadsheet is quite popular, this system has several significant weaknesses. One of the main problems is the lack of data integration, which causes difficulties in tracking lost or unrecorded data. In addition, the system is unable to track who is requesting items, and there are no effective reminders of item request deadlines. This makes management vulnerable to human error, which can negatively impact of laboratory operations.*

*To overcome these obstacles, it is necessary to implement Odoo-based Enterprise Resource Planning (ERP) technology using the Quickstart method. An ERP system that offers data processing and integration through one database and has a variety of modules that can be customized to the needs of the organization. The modules that will be applied in this research are the Accounting and Purchase modules. The Accounting module will be used to manage the budget properly, while the Purchase module will be used to manage the procurement of consumables in a more organized manner.*

*The designed system will be evaluated through Black Box Testing and Expert Judgement which will be carried out by the Laboratory. The result of this research is the design of an ERP system for the Accounting and Purchase modules to support the budget management business process for the procurement of Consumables at the Faculty of Industrial Engineering Laboratory. It is hoped that this research can help the laboratories of the Faculty of Industrial Engineering to improve data accuracy and reduce human error in budget management and procurement of Consumables.*

**Keywords— Enterprise Resource Planning, Odoo, Quickstart, Accounting, Purchase**