

## **ABSTRACT**

*Enterprise Architecture is an approach that exists to align the business sector and information technology sector by integrating business processes, information systems, organizational functions, and stakeholders in an organization so as to form a sustainable organization. However, most companies that have implemented Enterprise Architecture do not realize and do not know whether the existing business processes in the company are running well, and are effective and efficient in achieving company goals or not. This condition occurs at Telkom University Industrial Engineering Laboratory which has five business processes including practicum registration, assistant recruitment, assessment administration, remedial recitation of Faculty exams, and studio lending. In the five business processes, there are obstacles that affect the efficiency and effectiveness of business processes, so that verification and validation of business processes is required. Testing of business processes using the Scrum method with Petri Nets supported by WoPed tools is considered to verify and validate the business architecture design. Testing using the Scrum method was carried out through six stages, namely product backlog, sprint planning, sprint backlog, and sprint review. The test results show that there are several requirements that are not met. These conditions will have an impact on the efficiency and effectiveness of business processes. Furthermore, a gap analysis was carried out with dependencies analysis, there were business processes that could not be verified and validated because there were errors in the business processes which caused time constraints to work on more than one task simultaneously optimally, there were process stages that were too long so that impede the efficiency and effectiveness of business processes.*

*Keywords: Enterprise Architecture, Business process, verification, validation, Scrum, Petri Nets, WoPed, dependencies*