# ABSTRACT

Waste is activity that uses resources such as time and cost but does not add value to the activity. One of the types of waste is transportation waste. Through observation, transportation waste is found in assembly department of Panzer A. In order to prevent similar occurrences in the future, the waste needs to be minimized by lean manufacturing approach.

The study began by collecting and processing the data which are data of existing layout of assembly department, material handling equipment, transportation time, dimension of facilities in existing layout, cycle time of assembly process, and assembly process flow. The data will be used to map existing condition by using current state mapping which consists of a value stream mapping and process activity mapping. Then to identify the causes of transportation waste, the tools used are fishbone diagram. After the cause of waste is identified, an improvement is designed with layout and facility planning to minimize the waste.



Keywords: Lean manufacturing, Transportation waste, Value Stream Mapping, Process Activity Mapping, layout and facility planning.