

# **Optimization of the Automotive Manufacturing Plant Using Systematic Layout Planning (SLP) with Modular Layout**

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## **ABSTRACT:**

The project is a part of the improvement activities carried out in the automotive part manufacturing lines. Facilities layout planning become a very crucial task due to the nature of the industry that deals with various kinds of automotive component production. Dealing with the increasing demand and the variation of the components to be produced, the company faced limited space to locate their machines. Failure to properly set up their layout will cause waste in time, cost, space and production processes. Moreover, the quality of the components produced will also be affected and turned down the customers which mainly come from the international automotive brands. The research implements a prominent tool for layout plan called Systematic Layout Planning (SLP). The SLP tool mainly consists of several stages of analysis for facility planning. Apart from that, an extensive analysis is employed by using modular layout. The result indicates the reduction of the area used on the production floor which leads to the reduction of material travel distance and increases the production rates.

## **KEYWORDS:**

Systematic layout planning; Modular layout; Plant simulation analysis

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