

**A Decision Support Making Process for Selecting  
Plant Re – layout Planning : A Case Study**

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**Abstract**

In the show economy in Asia, is a need to achieve the most efficiency out of the manufacturing plant. In particular at small and medium enterprises (SMEs), there are a variety of jobs which can arrive in many manufacturing forms, which necessitates plant re-layout. The objective of this research, therefore, is to develop a decision support system that can assist the decision maker in the selection of plans in plant re-layout. The value of this research is in a methodology for integrating quantitative as well as quantitative analysis which can be implemented in a real industry. The contribution of this research is in the development of a single programme to analyse the calculation of Net Present Values (NPV), Benefits/Costs, Analytic Hierarchy Process (AHP) and Delphi that are flexible and applicable to any industry which is planning to re-layout its plant. The model has had its validity tested in a collaborating industry that manufactures chains for motorcycle. The results of the research play a pivotal role for an industry for plant re-layout planning. The recommendations and limitations are also presented.