

## ABSTRACT

Improving productivity of order-picking operations is becoming more lucrative to firms as it has a significant impact on operating costs. Manufacturing productivity is also dependent on the aforementioned productivity, as more efficient order-picking operations means that the warehouse could respond to manufacturing demands rapidly. However, the order picking performance in AAA's Company warehouse is not efficient. By using warehouse data during January-December 2012 with data analysis by Microsoft Excel, it shows that A class, the most frequently picked of packaging material products, consumes higher travelling time in comparison with B class, the medium movement material, and class C, the lowest picked up material. This is different from the result for raw materials, which has the same travelling time because of randomize storage policy. Both material types have opportunities in terms of travelling time improvement. The traveling time can be reduced by re-writing the storage policy and combining it to the ABC classification. For example, the most frequently picked products should be stored closest to the point of consumption.

Order-picking locations are rearranged into two proposed options according to the strategic need of each model; the first model is the interspersion of packaging and raw materials and the second option is the separate zoning model. It shows satisfactory results and improvements in order picking performance. This is done by applying the ABC classification method for the proposed options when compared with the current model. Option I: Interspersion of packaging and raw material items offers 27-28% better picking performance in terms of travelling distance and time. Option II: Separate zoning of packaging and raw material items, which offers 24% improvement over the current model. By implementing the models, the company could save travelling time in the region by 881-887 hours per year for Option I and by 786 hours per year for Option II.