

## **ABSTRACT**

PT Kartika Naya is a company engaged in the printing, packaging and photo album creation. PT Kartika Naya itself is now more focused on the printing production activity is to manufacture cardboard packaging or wrap for customers. From the results of the observations made, there are some problems on the production floor in PT Kartika Naya. Those issues include:

- a. Storage products production is not in place, because the area is still broad, so many products are put away.
- b. Use of the plant that is too broad, especially in the area of printing so many goods are placed on the place.
- c. The distance between the storage interdepartmental far enough to prolong the production process.

By counting the amount of machine needed for production process, it could be measured how wide the area needed for each machine. CRAFT algorithm is being used to look for smallest material movement moment so that the most efficient layout in distance and material movements could be achieved.

In this study, the addition of the machine that is contained in the paper cutting machines, Shoei Star, and Komori Excel 32 that each machine requires additional increments of 1 piece. Besides the material displacement obtained a more efficient torque transfer. This is evidenced by a reduction in the moment of displacement reached 63%. It has the potential to be able to save the production area and reduces material displacement distance so as to increase production output.

**Keywords:** Facility Layout, Algorithms CRAFT, Moment of Movement, Efficiency, Distance of Movement