

# PERANCANGAN ULANG TATA LETAK FASILITAS DI GUDANG BARANG PT. X DENGAN METODE CRAFT

ESTER MEGA MUTIARA

## ABSTRAK

Merancang tata letak fasilitas yang tepat adalah faktor signifikan dalam menaikkan efisiensi operasional dan produktivitas dalam pengelolaan barang. Berdasarkan observasi di PT. X, ditemukan bahwa terdapat permasalahan dalam tata letak gudang yang tidak sesuai, menyebabkan jarak tempuh dalam material handling yang tidak baik dan menghambat mobilitas operasional gudang. Oleh karena itu, diperlukan evaluasi dan perbaikan tata letak fasilitas memakai teknik CRAFT (Computerized Relative Allocation Of Facilities Technique) demi mendapatkan layout yang menghasilkan jarak total pergerakan material lebih singkat. Dalam proses perbaikan tata letak fasilitas, digunakan dua software yang berbeda: WinQSB 2.0 dan Microsoft Excel Facility Layout Add-Ins. Hasil analisis serta pemetaan ulang susunan fasilitas menunjukkan bahwa memakai jarak Rectilinear Distance, jarak perpindahan material dapat diperkecil dari 2702 m/hari menjadi 2461 m/hari, mengalami penurunan sebesar 8,9%. Hal ini menunjukkan bahwa layout usulan memberikan potensi peningkatan efisiensi dan produktivitas dalam pengelolaan barang di PT. X. Maka, perusahaan dapat mempertimbangkan hasil layout usulan sebagai acuan untuk melakukan penataan ulang tata letak fasilitas di PT. X guna meningkatkan efisiensi operasional dan memaksimalkan produktivitas dalam pengelolaan barang.

**Kata Kunci:** Tata Letak, CRAFT, *Material Handling*

**REDESIGNING FACILITY LAYOUT IN PT. X GOODS WAREHOUSE  
WITH CRAFT METHOD**

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**ABSTRACT**

*Designing the right facility arrangement is key factor in improving operational efficiency and productivity in the management of goods. Based on observations at PT X, it was observed that there were problems in the layout of the warehouse that were not appropriate, causing poor distance in material handling and hampering the mobility of warehouse operations. Therefore, it is necessary to evaluate and improve the facility layout using the CRAFT (Computerized Relative Allocation Of Facilities Technique) method to get a new layout that results in a shorter total material transfer distance. In the process of improving the facility layout, two different software are used, namely WinQSB 2.0 and Microsoft Excel Facility Layout Add-Ins. The effects of the analysis and redesign of the facility setup show that by utilizing the Manhattan Distance, the distance for material transfer can be minimized from 2702 m/day to 2461 m/day, a decrease of 8.9%. This shows that the proposed layout provides the potential for increased efficiency and productivity in the management of goods at PT X. Thus, the results of the proposed layout can be a consideration for companies to rearrange the layout of facilities at PT X to improve operational efficiency and maximize productivity in the management of goods.*

**Keywords:** *Layout, CRAFT, Material Handling*