

**PENENTUAN LOKASI *DISTRIBUTION CENTER* DAN ALOKASI
PRODUK PADA JARINGAN DISTRIBUSI *MULTI-PLANT* DAN *MULTI-
ECHELON***

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ABSTRAK

PT. XYZ merupakan perusahaan produsen semen nomor satu di Asia Tenggara. *Demand* terhadap produk semen, semakin tahun semakin meningkat khususnya pulau Jawa. Sehingga, perusahaan dituntut untuk dapat memenuhi permintaan konsumen dengan cepat dan tepat. Maka dari itu, penelitian ini berfokus pada perbaikan jaringan distribusi perusahaan, karena jaringan distribusi yang saat ini sedang diterapkan dirasa belum efisien dan efektif karena terjadi peningkatan biaya distribusi. Meningkatnya biaya distribusi disebabkan karena lokasi *distribution center* dan alokasi jumlah produk yang kurang tepat. Tujuan dari penelitian ini adalah menentukan lokasi *distribution center* dan alokasi jumlah produk pada jaringan distribusi perusahaan agar dapat memenuhi *demand* dengan biaya distribusi yang paling minimum. Masalah dalam penelitian ini dirumuskan dengan menggunakan model PLANWAR (*Plant and Warehouse*). Berdasarkan hasil penelitian diperoleh keputusan bahwa lokasi *distribution center* yang dibuka berjumlah 2 yaitu DC 23 Bandung dan DC 25 Cirebon. Total biaya distribusi mengalami penurunan sebesar Rp 123,693,083,016 atau sebesar 16,9% dari total biaya distribusi kondisi *eksisting*.

Kata Kunci: lokasi dan alokasi produk, model *PLANWAR*, biaya distribusi

***DETERMINATION OF DISTRIBUTION CENTER LOCATION AND
PRODUCT ALLOCATION ON MULTI-PLANT AND MULTI-ECHELON
DISTRIBUTION NETWORK***

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ABSTRACT

PT. XYZ is the biggest cement producer in Southeast Asia. The demand for cement products is increasing every year, especially on the island of Java. Thus, companies are required to be able to meet consumer demand quickly and precisely. Therefore, this study focuses on improving the company's distribution network, because the distribution network that is currently being implemented is deemed not efficient and effective due to an increase in distribution costs. The increase in distribution costs was due to the location of the distribution center and the inappropriate allocation of the number of products. The purpose of this study is to determine the location of the distribution center and the allocation of the number of products in the company's distribution network in order to meet demand with the minimum distribution costs. The problem in this study was formulated using the PLANWAR (Plant and Warehouse) model. Based on the results of the study, it was concluded that there were 3 distribution center locations are DC 23 Bandung, and DC 25 Cirebon. Total distribution costs decreased by Rp 123,693,083,016 or 16,9% of the total distribution costs of the existing condition.

Keywords: *location and allocation product, PLANWAR model, distribution cost*