

**PERANCANGAN TATA LETAK GUDANG DENGAN  
ALGORITMA BLOCPLAN DAN ALGORITMA  
COMPUTERIZED RELATIONSHIP LAYOUT PLANNING  
(CORELAP) DI PT. XYZ**

**Handy Hafiizh**

**ABSTRAK**

Seiring dengan globalisasi dan kompleksitas pasar, perusahaan semakin bergantung pada perusahaan *Third Party Logistics* (3PL) untuk mengelola layanan logistik. Hal ini terutama penting dalam konteks industri yang terus berkembang dan kompetitif, untuk mempertahankan keunggulan kompetitif melalui optimasi operasional dan fokus pada inti bisnis mereka. Salah satu faktor penting adalah pada *layout* gudang itu sendiri. Maka dari itu, penelitian ini berfokus untuk memberikan usulan *layout* optimal di PT. XYZ. Pada penelitian ini, digunakan 2 algoritma yaitu *Hybrid Algorithm* (BLOCPLAN) dan metode *Computerized Relationship Layout Planning* (CORELAP). Dari kedua metode tersebut, akan dibandingkan dan dipilih yang terbaik berdasarkan total jarak tempuh per hari yang lebih pendek. Hasil penelitian ini didapatkan bahwa jarak tempuh dari metode CORELAP 5% lebih kecil dibandingkan dengan metode BLOCPLAN dan 21% lebih kecil dibandingkan *layout* awal. Dengan kata lain, *layout* usulan CORELAP dapat mengurangi total jarak tempuh *layout* awal sebesar 5,8 km per harinya. Berdasarkan kesimpulan diatas, *layout* CORELAP dipilih sebagai rekomendasi untuk usulan perancangan tata letak gudang PT. XYZ.

**Kata Kunci :** BLOCPLAN, *Computerized Relationship Layout Planning* (CORELAP), Tata Letak, *Activity Relationship Chart* (ARC)

**WAREHOUSE LAYOUT DESIGN USING BLOCPLAN  
ALGORITHM AND COMPUTERIZED RELATIONSHIP  
LAYOUT PLANNING (CORELAP) ALGORITHM AT PT. XYZ**

***Handy Hafizh***

**ABSTRACT**

*Along with globalization and market complexity, companies are increasingly relying on Third Party Logistics (3PL) companies to manage logistics services. This is especially important in the context of an ever-evolving and competitive industry, to maintain competitive advantage through operational optimization and focus on their core business. One important factor is the layout of the warehouse itself. Therefore, this research focuses on providing suggestions for optimal layouts at PT. XYZ. In this research, 2 algorithms were used, namely the Hybrid Algorithm (BLOCPLAN) and the Computerized Relationship Layout Planning (CORELAP) method. Of the two methods, the best will be compared and selected based on the shorter total distance traveled per day. The results of this research show that the distance traveled from the CORELAP method is 5% smaller than the BLOCPLAN method and 21% smaller than the initial layout. In other words, the proposed CORELAP layout can reduce the total distance traveled by the initial layout by 5.8 km per day. Based on the conclusions above, the CORELAP layout was chosen as a recommendation for the proposed PT warehouse layout design. XYZ.*

**Keywords:** *BLOCPLAN, Computerized Relationship Layout Planning (CORELAP), Layout, Activity Relationship Chart (ARC)*