

ABSTRACT

PT XYZ is a company engaged in scheduled and unscheduled commercial air transportation services for passengers, cargo, and domestic or international shipments. PT XYZ also provides several other services, such as aircraft maintenance and repair, educational services, and training services related to aviation. In running an air transportation service business, the need for operational goods is unavoidable, and a warehouse is required as a temporary storage medium to support the continuity of the business process before the needed goods are distributed or used by the user. The goods storage system in PT XYZ's warehouse still uses floor assignment. Floor assignment storage causes high picking times that exceed the target time of 45 minutes. The objective of this research is to determine the optimal allocation of storage for goods to reduce picking time. The researchers propose a design for the allocation of storage space at PT XYZ using dedicated and class-based storage methods. The first stage in making the proposal begins with the process of identifying the problem by comparing actual time and target time, then classifying items based on their movement using FSN analysis, next calculating the needs for racks, space, throughput, and the throughput/space requirement ratio, determining the layout shape, determining the distance between racks with I/O, and finally deciding which policy is better to implement. The calculation results show that the proposed storage location using the dedicated storage method achieved a reduction of 182.4 meters in distance and a reduction of 16,873 minutes in time.

Keywords: FSN Analysis, Throughput, Space Requirement, Class-Based Storage, Layout, Picking Time, Dedicated Storage