

## **ABSTRACT**

*CV. XYZ is a company focused on producing and marketing fashion products, mountain equipment, and more for customers. The company has its own warehouse, serving as a storage facility for the products to be distributed to various clients, including department stores, retail outlets, and individual consumers such as online stores. To optimize its operations, CV. XYZ needs to address challenges, one of which is the high order picking time exceeding the company's standard due to the disorganized layout and storage in the warehouse. The warehouse faces issues such as a chaotic storage layout with random locations and no consideration for product characteristics. Additionally, the absence of proper recording of storage locations exacerbates the problem. In other words, these challenges result in a high cycle time, particularly in the order picking process.*

*Therefore, this research aims to improve the warehouse layout to reduce the high cycle time, particularly in the order picking process. In this activity, the cycle time currently stands at 9825 seconds, surpassing the standard time of 9000 seconds set for CV. XYZ warehouse.*

*To address the issues in CV. XYZ warehouse, a proposal will be made for warehouse layout improvement through the implementation of warehouse slotting. In the initial stages of this research, the approach involves assigning storage locations in the warehouse based on ZABRLS nomenclature. Following this, item classification using FSN analysis is conducted to understand the movement patterns of each item. After completing these steps, the next phase involves designing the allocation of items based on class-based storage rules, accompanied by a 3D modeling representation of the warehouse layout and product allocation for CV. XYZ.*

*Keywords: FSN Analysis, Warehouse Slotting, Order Picking, Allocation*