# ABSTRACT

*PT XYZ is a company engaged in food sector, specifically in the industrial sector that produces ready-to-drink processed milk has 3 types of products. The company has a warehouse location located in the Bandung area. This warehouse manages the storage of finish good and this warehouse has an area of 1404 $m^2$. In storing products in PT XYZ warehouse, there is no use warehouse space, there are form the number of available rack, PT XYZ is expreciecing an overcapcity problem so that 24% of goods are not accommodated with number of exisisting rack 648 pallets while the highest on-hand inventory is 866 pallets.*

*The purpose of this is to reduce the number of products that are not accommodated in the proper place by adding rack cell in the PT XYZ warehouse and minimaize the picking time by creating a storage assignment optimization model for products stored in the PT XYZ.*

*The stages carried out for this problem by expanding the warehouse in the form of adding rack cells and determining the storage assignment of products in the warehouse. With the addition of 24 rack thath previously only stored 648 pallets to 864 pallets. So 24% of products that are not accommodated on the rack can be stored on the rack. This proposed condition can also increase the utility of warehouse use form 63% to 80%. Meanwhile the storage assignment is made aims to minimize the picking time by allocating products based on the fastest time from each distance of rack cell where the product with the highest frequency will be placed adjacent to the loading area or point (I/O). with the determination of allocation of product storage with this model, it was obtained that the time to picking was reduced from 46604,29 seconds to 44256,67. The result of the difference fork the exixting picking time with the proposal can minimize the picking time of 2341,62 seconds.*

**Keywords:** *Warehouse, Utilization, Overcapacity, Storage Assignment*