

ABSTRACT

PT. XYZ is a national subsidiary of ABC Group Company which is engaged in the FMCG (Fast Moving Consumer Goods), that is a provider of products such snacks and beverages. One of the branches of PT. XYZ is located in Rancaekek, which also serves as a distribution center that is also called as Rancaekek Distribution Center (RDC). The presence of delay at the warehouse activity, especially in order picking and storage activities do not lead to optimal order fulfillment and inhibits the activity of inbound and outbound. In addition, the placement of clutter causes the accumulation of goods are approaching expiration.

The initial step is to map the entire flow of information and activities that exist at the RDC warehouse using Value Stream Mapping (VSM) and Process Activity Mapping (PAM) to obtain the processing time and the value for each activity. Then, obtained an order picking and storage activity has a non-value added time at most. For product placement allocation is done in order to reduce the delay, especially in order picking and storage activities, with grading of products based on product characteristics by using ABC Analysis, then do slotting and zonafikasi to determine the placement area for each SKU's based classification. Then, proposed an application of the Warehouse Management System (WMS) that is First Expired First Out (FEFO) where the system will inform the location of the product and give priority to products that have expired nearest time.

Based on the proposed design of the future state map, obtained decrease delay time of 299.22 seconds, or 5 minutes per pallet and value added activities can be increased by 7.72% per pallet.

Keywords: Fast Moving Consumer Goods, Value Stream Mapping, Process Activity Mapping, ABC Analysis, Warehouse Slotting, Zonafikasi, Codefication, Warehouse Management System, First Expired First Out.