ABSTRACT

This research was conducted at a company engaged in the Iot Aquaculture sector with a product in the form of a smartfeeder which was distributed to almost all islands in Indonesia. Based on an assessment made by the company in the product distribution sector on the island of Sumatra, especially Bengkulu Province, it is considered still not optimal because there are still a number of cases where the last mile point is not able to meet the demand, resulting in a decision to be sent directly through the central distribution warehouse in the city of Bandung. , this has an impact on the total distance and shipping costs to be large. Therefore, it is necessary to design long-term strategic steps in overcoming this, one of which is determining the location of the warehouse as a lastmile point to meet demand in the Bengkulu area with an optimal location by considering quantitative and qualitative aspects. The method used in this study is a feasibility analysis using the calculation of Net Present Value, Payback Period, and IRR, determining the optimal location using the P-Median method with a Mixed Integer Linear Programming approach, and determining the location based on multi-criteria using the Fuzzy Neutrosophic Topsis-Critic method. . The results showed that the location with the lowest demand-weighted distance was declared feasible based on the feasibility analysis, and the highest weight based on multi-criteria decision making, which was located in Kaur Regency. If this decision is made, the company can reduce the total cost of shipping the Bengkulu area that must be incurred by the company.

*Keywords— [**Fuzzy Neutrosophic Topsis-Critic, Mixed Integer Linear Programming P-Median, Warehouse Lease, Feasibility Study**]*