

## ABSTRACT

CV XYZ is a tofu producer located in Tangerang Regency and sells its products B2B to traditional market merchants. The existing production facility is located in Tangerang Regency, Banten, and has been established since 2021. From 2022 to 2023, CV XYZ experienced an increase in tofu sales volume which caused the company's revenue to increase. Seeing this increasing sales trend, the business owner of CV XYZ plans to expand the scale of the company's business while reaching new markets. The business owner plans to build a new production facility located in Tangerang due to the availability of a network of raw material suppliers owned by the company. In the design process, the location of the new production facility was determined first using the factor rating method. The location of the new production facility site was selected in Gunung Kaler, Tangerang Regency to reach market locations in Tangerang Regency, Serang Regency, and Serang City. The design process of the new production facility was carried out by reviewing market, technical, operational, and financial aspects. The market aspect of the design process was carried out by calculating the market potential in 2024 and projected to 2028 using a growth rate projection. The technical aspect reviews the need for machinery, labour, and facility layout. Then, based on the financial aspect review, the investment is feasible because the NPV of Rp1,352,049,234 can be said to be feasible because  $>0$ . The IRR value is  $56.27\%$  from the MARR value of  $26.49\%$ . PBP for 2.7 years or two years and eight months.

Keywords— Feasibility analysis, NPV, IRR, PBP, sensitivity