

## ABSTRACT

This research aims to develop a data-based throughput rate prediction model that can be used as an operational performance indicator to build and improve performance assessment satisfaction at PT XYZ. Throughput rate is one of the main Key Performance Indicator (KPI) in manufacturing operations that plays an important role in assessing the effectiveness of production and operational processes. The best prediction model based on error test and gap analysis is decision tree, because it produces predicted values that are in the range of employee perceptions, namely 22-27 tons/hour. The average throughput rate achievement at PT.XYZ is 22 tons/hour. Then the value of 27 tons/hour is used as the ideal predicted value to be tested whether it has a good performance appraisal satisfaction score. The level of satisfaction with the performance appraisal was tested using a questionnaire with a scale of 1-6 for the measurement of satisfaction scores for dimensions and overall performance satisfaction. The performance appraisal system at T1 when using current indicators resulted in a satisfaction score of 17.375 while the satisfaction score at T2 with data-based performance indicators increased to 28.625.