

ABSTRACT

This study aims to improve service quality and profitability at Telkom Access Witel Tangerang through the application of the Six Sigma method based on the DMAIC (Define, Measure, Analyze, Improve, Control) approach. The background of this research is based on the high level of IndiHome service interruptions and re-interruptions which have a direct impact on reducing the technician's Key Performance Indicator (KPI) and the Integrated Operation Access Network (IOAN) unit profit. This problem not only reduces customer satisfaction, but also increases the Cost of Poor Quality (COPQ) and company operational costs.

The research method used is mixed method, with a case study approach and quantitative analysis supported by historical data from January to June 2024 and repair observation data from September 2024 to February 2025. Data was collected through fault dashboards (Q-HVC, Sugar), KPI reports, COPQ, and interviews with technicians and field supervisors. Analysis was conducted through DMAIC stages to identify root causes, design improvement solutions, and test their effectiveness through DPMO measurements, sigma levels, and Paired t-Test.

The results showed that service interruptions could be reduced from an average of 5.86% to 1.95% per month, technician KPIs increased from an average of 77% to more than 90%, and unit profits changed from negative to positive. The findings confirm that the implementation of DMAIC supported by the 4DX execution strategy and the utilization of data-based dashboards significantly improves operational efficiency, service quality, and company profitability.

Keywords: Six Sigma, DMAIC, Service Disruption, KPI, Profitability, Telkom Access, IndiHome, COPQ, IOAN, 4DX.