

SUMMARY

The case study in the research presents tools for Six Sigma for a Telecommunication manufacturing industry as the case company. Such a practice can help the company become efficient within their operating procedure. With the implementation of VoC, Six Sigma and Lean Principles, companies can do better businesses while attracting and keeping the customer which is the primary goal of any enterprise. As a data-driven approach, Six Sigma aims to deliver near-zero defects for their product or the process in an organization.

The goal of this research was to improve the target companies manufacturing process by decreasing the rejections of the company's damaged products. In addition, the goal was also to demonstrate how this type of project can be executed using the Lean Six Sigma Methodology.

This research was executed according to Six Sigma improvement process DMAIC including the lean tools. In the define phase, the problem of the company was first identified to be rejections of damaged products. In addition, the lead time efficiency was too high for troubleshoot and repair, had to be reduced. Based on these problems, a business goal was set. In the Measure phase, the input and outputs were then measured and made a process flow for the manufacturing process to find the root cause of the damages in the PCB's. Then, on knowing the root cause of the product, in Analyse phase it was analysed and found the main problem behind the rejections. It was found out that there were issues in PCB's assembly and hardware assembly through the data.

Then, the new process flow was made to improve the whole manufacturing process. Through this reconstruction of the process, the company could work better and have fewer rejections in their PCB's and communication hardware electronics.