Abstract

The lean methodology allows organizations to identify and eliminate waste activities or steps without value within a process or processes. The project follows the Define, Measure, Analysis, Implementation, and Control (DMAIC) model to eliminate and mitigate waste impact to the effectiveness of Cotecmar’s procurement process.

The Define stage applies lean tools such as the Swim Lane Flowchart and the Supplier, Input, Process, Output, Customer (SIPOC) to breaks down the details for each step of the process.

The Measure stage presents information from two main sources, the estimation report, and the ERP reports.

The Analyze stage presents a cause-and-effect diagram to identify the main causes for inefficiency. Additional analysis include the waste classification.

The Improve stage includes the recommendations to Cotecmar to eliminate waste on their procurement process.

The Control stage presents the Lean strategies to maintain the lean changes implemented and recommendations for future improvements.

Recommendations

• In the supply chain environment, further improvement and research might focus on achieving a fully automated acquisition plan.

• The presented Lean strategy might extend to the Mamonal complex and eventually, to the shipbuilding complex. Furthermore, by including the information from the ships built by Cotecmar, the repair and maintenance process will reduce the procurement process lead time.