

Abstract

Six Sigma is a management concept to increase process performance by minimizing process variance. It is a way to enhance processes in order to decrease defects (quality improvement), enhance productivity, shorten cycle time, and lower costs. The Six Sigma approach uses a number of tools to increase process performance; such as value stream map, Cause and effect analysis, five whys analysis, Pareto analysis, and the 5S.

The goal of this project is to implement such tools for increasing production efficiency at the National Carton Manufacturing Company. It is a public joint stock company with a capital of \$5 million , the company is based in Nablus -Palestine.

Many firms and businesses today strive to increase productivity, improve efficiency, use fewer resources, and create the least amount of waste possible. Productivity is defined as the ratio of input to output. It indicates how an output and any or all connected inputs are related. In this project necessary data will be gathered to assess the effect of applying six sigma tools at the National Carton Manufacturing Company.

The study found that The factory is facing challenges in optimizing its production processes to meet increasing demand while maintaining quality and reducing cost and defects and has been experiencing high defection rates. Several recommendations were given to improve production efficiency.