



# INDUSTRIAL, MANUFACTURING & SYSTEMS ENGINEERING



## CAPSTONE PROJECT SUMMARY

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**Type of Capstone:** Practical Application

**Capstone Project Title:** Coca Cola Can Line Scrap Measuring Process

**Year and semester:** Fall 2017



### INTRODUCTION

The production and quality department at Southwest Coca Cola bottling company at El Paso faced a significant lost in scrap as of 2016. A total of \$30,000 in scrap was reported as lost throughout the production lines, these include the Can line and PET line (Plastic Lines). Without any source of information to help us target an area of scrap, we faced the challenge of creating an efficient measuring system using industrial engineering methodology and approaches. After understanding their current state can line process, we were able to break down the production line and made it into simpler stations to understand and adapt our measurement system. Thus, being able to adapt our measurement system to their existing busy schedule and methods. A direct impact to scrap was not able to be calculated due to time constraints and production line halts. Yet, we were able to provide the company with an efficient system that will help them target and address instant and future production issues. Through our method of implementation, Coca Cola will also benefit of now having a system that can be addressed for scrap trends and preventive analysis.

## **PROJECT OUTCOMES**

Numerous constraints were faced throughout our project impacting our schedule and overall plans. Yet, we were able to work around our constraints and provide the company with a reliable measuring system for scrap that can be used for years to come. Our initial plan was to provide the company with solutions/reasons why they had more scrap in certain stations, but after several trials, the scrap concentration was different in every occasion, thus the company concluded that it would be more valuable for us to provide a consistent process to keep track of accurate amount of total scrap, accurate scrap concentration in each station, reasons for being within/not within target, a place to record historical data, monetary amounts spent every day, and making all staff aware that the amount of scrap exiting the system is a priority and holding them accountable for it. Our system not only has potential to save money in raw material, but also in actual product (made of syrup, H<sub>2</sub>O, and CO<sub>2</sub>). Over time, a more accurate number of scrap that is expected will be produced, along with more precise raw material orders, along with direct ingredients for the product. If anything done differently, we would have liked to push for full implementation from the beginning of the project to be able to generate predictive data for them to use to either fix mechanical machines, such as the filler, and palletizer.

## **INDUSTRIAL ENGINEERING PROGRAM ASSESSMENT**

The Industrial Engineering program was a very robust program that had direct application to multiple industries. Projects at the end of courses really helped tie the course together and understand how the class might be used in a firm. If anything, adding more emphasis on relevant software in industry to coursework, along with more expansion on learning about lean methods and six sigma would be beneficial to students.