

# INDUSTRIAL, MANUFACTURING, & SYSTEMS ENGINEERING

## CAPSTONE PROJECT /INTERNSHIP SUMMARY



**Your Name:** Grisel Rosales, Jorge Lopez, Sergio Luna

**Type of Capstone (research, teaching, practical application):** Practical Application

**Capstone Project Title:** OEE standardization on losses and creating a governance model at Johnson & Johnson

**Year and semester:** Fall, 2018



**Jorge Lopez, Grisel Rosales, Sergio Luna**

### INTRODUCTION

We were given this project which its main objective was to align the current database used to collect data on the assembly lines to a performance element and correctly categorize the specific reason of performance losses and therefore create a governance model for the OEE standardization. Johnson & Johnson Ethicon gave us the opportunity to apply our engineering skills in a real life project with the purpose to improve ourselves successfully, which is located in Ciudad Juarez Mexico. Enhancing this database we provided more accurate percentages in the OEE system, helping the company in detecting where the lines needed assistance. Our proposal presents a plan to develop a governance model that apply to all the lines creating consistency and efficiency in the

# INDUSTRIAL, MANUFACTURING, & SYSTEMS ENGINEERING

## CAPSTONE PROJECT /INTERNSHIP SUMMARY



collection of data.

Ethicon uses OEE (Overall Equipment Effectiveness) tool to measure its standards. Since Ethicon is mainly an assembly company they do not measure equipment efficiency but line efficiency including production line associates. Associates use a database called “Day by Hour” where they input every downtime the line has. By plugin the down time, the system recounts the available time and gives you the amount the line has to produce in that specific hour depending on how much down time you have. The company currently has both, manual and electronic capture of Day by the Hour database in which the performance losses are not being correctly documented and therefore, there is no history date related to performance losses neither a governance model where the associates can go for assistance and guiding. With that being said, the associates do not see this procedure as relevant as it is and plug in fictitious numbers in the database that leading to unrealistic OEE percentages.

### PROJECT OUTCOMES

After identifying the problems, changes were made and created the Governance Model. We were able to identified possible opportunities located to improve that helped us to make the OEE more efficient and productive. We left the upgrades working and implemented in all the production lines that we thought would benefit the system and that would make this system more user-friendly. Implementing the upgrades in the DBH Day by the Hour database, we were able to help and be involved with the implementation of Qlik Sense, which is a program “software” that is more related to Visual Management and would be mainly for the Top Management usage and to prevent future risks or problems. We wish to see in the near future some of these upgrades done to the system.

### INDUSTRIAL ENGINEERING PROGRAM ASSESSMENT

We think that the Industrial Engineering program is one of the best programs that the University of Texas at El Paso can offer since they gave us the opportunity to be involved in real life project. From the beginning of the project, we knew that several challenges were going to be confronted. Working for the first time in the production floor was the main challenge, where a specially dressing was required and new regulations needed to be follow. We worked together with different people such as engineers, administrative, and associates. We collaborated and learned a lot from each one of

# **INDUSTRIAL, MANUFACTURING, & SYSTEMS ENGINEERING**

## **CAPSTONE PROJECT /INTERNSHIP SUMMARY**



them. We are very thankful that Johnson & Johnson gave us the opportunity to apply our engineering skills in a real project. We learned a lot of each one of them. Working as a team, our project required assistance and approval from managers. Also we learned different kind of tools that gave us an idea on how engineers work.

Ethicon uses OEE (Overall Equipment Effectiveness) tool to measure its standards, Qlik-Sense software to collect the information getting from the “Day by the Hour” system.