INDUSTRIAL, MANUFACTURING, & SYSTEMS ENGINEERING

CAPSTONE PROJECT /INTERNSHIP
SUMMARY

Your Name: Abdullah M Alajmi, Cynthia I Arias, Daniel A Rodriguez

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

Capstone Project Title: Standardizing Shipping Process at Eureka Signs Company.

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Abdullah M Alajmi, Cynthia I Arias, Daniel A Rodriguez

INTRODUCTION

Eureka signs has a technical problem with their method of shipping and crating. One of the main factors that causes this problem is not having a standardized method for shipping and crating. Also, another thing that gives them a hard time to standardize a method is having different dimensions' signs, meaning that dimensions are different for every crate. Within these issues for shipping and crating causes another trouble which is crate cost. The company members need to know this information so they can process and deduct what standard prices they should charge their customers. Also, the other problem is there is no record for tracking or even to confirm a delivery.

PROJECT OUTCOMES

Our finality was to get familiar with all products and services that Eureka Company offers. For that reason, we made up a flowchart which will allow us to analyze and understand processes from each product of the company. As it is noticed, the company has four main products which are: structure, cabinet, signs which are built or printed and designs. Those main products from the company are described on the first level of the flowchart. In addition, the main products are divided on subtypes which are described on the second level of the same flowchart. For instance, structures can divide on four types, cabinet on two types, four signs which are built and three signs which are printed and two types for designs. We included also a small graphic design which helped us to get an idea on how looks like types of structure and cabinet. Moreover, all processes for each type of product are explained with flows. The most important thing we noticed is that only products which have to be shipped out of El Paso, TX need a crate for being delivered.

For constructing new crate designs, we implemented the idea of using pallets which make cheaper and easier to lift the products with a forklift. Therefore, we designed five new standard designs; three of four feet, one of six feet and one more of eight feet. By having some categories for our crate and having a specific step by step design, that will help us to know how much each crate cost us and to know how long it takes. Then we can minimize the cost by reducing the amount of materials used and the time that is needed to create the crate. Also, they can minimize the working time because it will be the same steps for every time, in other words they will have to follow a uniform way to build crates.

The layout was our main thing that we needed to fix before we start creating our new standards. We did few changes on the old layout by adding new departments and change some departments locations. We give the shipping and crating area their own department by reducing the welding area. Also, we add a new warehouse because that will help to organize the place and we can save some spare parts in it. The spare parts will help to reduce the shipments delays because if they messed up something they can get whatever they need to fix it from the warehouse instead of ordering it and wait. The inspection area is a really important area where they can put the finished product and the crating area workers will have the access to the finished product easily instead of moving around each department.

For improving communication between workers, we added classification column, description column and sticker area to the production order sheet. The most important part is the sticker area we added since that refers to the next process a product has to flow regarding our flowchart.

For improving customer service, we added three things to the web based system which are: classification section, process status section and SAIA Link. For the first section added, it is used the same classification we previously made. In the case of the process status, there are five status which are: not started, in progress, complete, crated, shipped and delivered. These five status described in what process is each order and also, that notifies when the product is already delivered. Moreover, we added SAIA link to make easier the way to estimate shipping cost.

INDUSTRIAL ENGINEERING PROGRAM ASSESSMENT

First, Eureka was facing some changes in the company due to change of owner. We have seen that as a disadvantage by the fact of workers and shipping process are different. Second, the lack of knowledge of the shipping process from all employees was a challenge for us since they do not have any standard for the shipping process. Employees faced problems directly with accounting and production because of miscommunication and that gave us a hard time in collecting our data. So, it took us a lot of time to visit every workstation to gather all the information that we needed. Also, they do not have a specific worker for the shipping area, as a result may cause issues with missing data. So that means we have to go and collect all the data from scratch and then as a result we spent more time than we have planned. Finally, working with an existing layout is really considered our last constraint since they are missing several departments such as the inspection area and warehouse. However, we found a way to get all information we needed to give the best results for this project. Therefore, we are very comfortable with Eureka Signs Company for gave us the opportunity to work in a real work environment.