

INDUSTRIAL, MANUFACTURING, & SYSTEMS ENGINEERING

CAPSTONE PROJECT /INTERNSHIP SUMMARY



Your Name: Mariana Meraz, Francisco Villarreal, Eduardo Munoz

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

Capstone Project Title: Johnson & Johnson “Day by the Hour Electronic Usage”

Year and semester: Fall 2017



Eduardo Munoz, Mariana Meraz, Francisco Villarreal

INTRODUCTION

Johnson & Johnson had the necessity to implement a new method of collecting data, measuring efficiency and controlling the number of pieces produced. At the beginning, this company which is located at Juarez, Mexico, used to collect everything in paper, and then they would transfer all the information to an excel spread sheet, but in this process, a lot of information would be lost. After being familiarized and after

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having understood the problem, in collaboration with the Process Excellence Team and with some IT analysts, we would have to design and implement a system that would perform the calculations in an electronic way and would be available for most of all the employees in all the Torres plant. Out of this, we can say that our objective was to implement and Day by the Hour tool management in all the Torres facility plant. Since there were about 35 lines in this plant, we would implement this system one line at a time, performing the necessary trainings to the corresponding employees.

PROJECT OUTCOMES

This project was completed in 8 months and we were able to meet our main goal which, as we mentioned before, was to design and implement a Day by the Hour Electronic tool. The 35 lines have this system implemented and working properly. It is true that we had to face some challenges and constraints, the main constraint was the culture. In our personal opinion and the reason as to why we thought that the culture was the main constraint was because there were a lot of people that had been working in the same way for more than 10 years and we had to change that way of working in about 8 months. It is important to say that we had to deal with some unconformities from the people, but at the end, they were happy this this new system. Another important thing to mention are the challenges we had to overcome in order for us to succeed. One of the principal and that is directly connected with what the Industrial Engineers do is that we had to challenge most of the cycle times that the Master Plan had. At the end of the project all the managers, staff, engineers, and even the plant manager were very happy with what we did. We basically transformed the way things were being done for years and years. We were told that that system is going to last for a long time, that they could upgrade it in the future, but that it will continue to have the basic principle. As I mentioned before, at the beginning, the associates were a little bit concerned and nervous because of this change, but at the end they were also very happy since they are the ones who are directly involved with this system, they realized that this new method to do things would make their way of working easier than the one they used to use. It is probably that is project is not directly connected to the clients, but for sure this will help to improve the quality of the employee's work. We left the system working and implemented in all the lines, but besides that, we also left some upgrades that we thought would benefit the system and that would make this system more user-friendly, we really wish to see in the near future some of this upgrades done to the system. In general, we think that our contribution was

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crucial for this project to be completed, they gave us the opportunity to work with them, and in return we gave them the power to have their plant more controlled in terms of production, scrap rates and downtimes. Besides implementing this Day by the Hour system, we were able to help and be involved with the implementation of Qlik Sense, which is a program that is more related to Visual Management and would be mainly for the Top Management usage and to prevent future risks or problems.

INDUSTRIAL ENGINEERING PROGRAM ASSESSMENT

We think that the Industrial Engineering program is one of the best programs that the university can offer since they gave us the opportunity to be involved in real world problems. In every class, you have the opportunity to apply everything you learned. The professors are very knowledgeable persons and the most important thing is that they are always willing to help their students to become good engineers. It is very important to say that we really enjoyed our Senior Project since we were exposed to something real, also, while we were doing our project we were able to understand most of the technical words they used at the company. We felt so good to see this happening because it was our objective at the time we chose this career at this university, to learn and fall in love with this amazing type of engineering. We leave this university very confident that we learned what we needed to learn and that this knowledge that we now possess was transferred from the best engineers that this university has.