Team Senior
Edwin De la Cruz
Briana Cardenas
Luis Garcia
• Clowe & Cowan of El Paso, LLC is an international leader in the design, engineering, implementation, and service of innovative waterworks and wastewater treatment systems for municipal, mining, refineries, power plants, food & dairy and commercial industries. Their portfolio of equipment supplier and distributorship solutions includes products and services that are used extensively throughout the United States and Mexico. With over 50 years of experience, Clowe & Cowan of El Paso, LLC’s industry leadership is unmatched with innovative engineering, cost-effective solutions, quality support, and unmatched customer service.
Primary Project Activities and Tasks

- Define and analyze profit and money flow
- Identify warehouse layout
- Evaluate alternative facility layouts
- Analyze and design systems for the company processes
- Determine the financial impact for the company
Project Proposal

• We have proposed the implementation of optimized communication systems between the company's departments and the developing of a better way to order materials so mistakes can be avoided through engineering methods.

• The company uses Sage 50 Accounting software to manage their sales and inventory. Our task as a team consists in improving their system through the optimized documentation of data.

• An implemented inventory system will help the company's use of Sage 50 Software and a better management of the physical equipment in the warehouse.
Goals and Objectives

- Optimize the organization for the Sage Software data for Tsurumi Pumps which involves input of data such as part numbers, and its price
- Compare different data documents to make sure all information is current and correct
- Reduce the duplicates and inactivate the items that are not being used anymore
- Verify the item location and existence physically to reduce mistakes and avoid waste of time within the warehouse
- Work though engineering systems for communication between departments and simulation for the warehouse.
- The results target the implementation for the company sales progress through engineering methods and designs
First Steps

• We met the company's employees, employers and their departments name and function
• We were introduced to the different areas within the building and the warehouse so we could understand the layout of the place better
• We identified the problems for the Sales Department and its use of the Sage Software
• We successfully extracted the key information from the company's data with the help of the employer and employees
• We worked in the research and understanding of how the equipment is used within the hydraulic systems and how to implement a better organization of the Sage Software through the data we were provided with
What is Sage Accounting Software?

- Tool for managing financial services
- Take control of accounting consolidations
- Eliminates paper waste as a modern technology
- Maximizes productivity and performance
- Accurate, consistent, current and visual
- Fast, accessible and easy to use
- Optimizes decision making
- Minimizes risks and increases process efficiency
- Secures information and reduces costs
Company Problem

• Inventory system has been manually filled through the years; items do not follow the same format
• Some inventory parts are duplicated through the system
• Some inventory parts lack information about the warehouse items such as part number or item description
• Item quantities in the system are not current
• Items have a minimum stock quality that should be optimized
• Inactive inventory utilizes too much space in the inventory and physically in the warehouse
Recommendations Objectives

- Recommend a consistent formatting for the inventory items based on accessibility optimization
- Find the inventory items that are duplicated and analyze which ones to keep
- Identify the parts that lack software information so they can be fixed
- Identify parts lacking current quantity information in the system
- Recommend ways to optimize item minimum stock quantity
- Find ways to reduce inactive inventory waste of warehouse space and software space
What are Tsurumi Pumps?

• We were required to concentrate in the Tsurumi Pumps inventory
• Tsurumi pumps have been in the manufacturing industry since 1924 throughout the world
• Pumps work as an efficient tool for all types of hydraulic problems
• Can be utilized for many areas such as construction, civil engineering, mining, industrial wastewater, domestic wastewater, sewage treatment and flood remediation
• Its manufacture ensures endurable technology
• This is the reason why Clowe & Cowan of El Paso is a distributor of these pumps are they assure client satisfaction
Tsurumi Pumps

• As the Tsurumi Pumps play an important part in the company’s supply chain, there is a variety of pump types in the inventory

• Pumps can be utilized in many different areas as they serve for different purposes. They come in different presentations and sizes; depending on the targeted problem

• These items are very common to find in the inventory, meaning that some of these part numbers are duplicated and their information is incomplete

• Our concentration for this project focuses on fixing the inventory system based on Tsurumi Pumps by the physical and logical analyzation on the storage of these
Inventory Information

- Item IDs are assigned to every part in the inventory, both active and inactive. The format follows #123-4567 most of the time. The first 3 digits identify the manufacturers for the product. In this case, Tsurumi items are categorized with #123 while the rest of the description is particular for the specific pump type. We have some items that are the same and have a different Item ID.

- Item Descriptions depend on what the product is, its use and its dimensions. Descriptions are not always consistent as sometimes it initiates with the measurements, but other times it initiates with the adequate wording for targeting the item.
Inventory Information

- The Description for Sales is based on the Item Description. Sometimes both descriptions are exactly the same, and other times the details and length varies.

- The Part Number is exclusive to a specific item. We use advantage of the Part Numbers in order to find the duplicates. These duplicated items will have the same Part Number but a different Item ID and a different description.

- For this project we are not targeting Stocking U/M, List Prices and Last Unit Costs. We will only consider and analize the Prices and Cost for the duplicate parts.
Hydraulic Systems Research

- Our project includes the research of Hydraulic Systems where the Tsurumi Pumps are used to understand the engineering processes.
Hydraulic Systems Research
Tsurumi Pumps Components Parts

- Transformers
- Motor Controllers
- Junction Box
- Wellhead
- Cable Bands
- Gas separator
- Drain Valves
Challenges

- Once we extracted information from the company's software, we created an excel document where we struggled with correct formatting.
- We had to learn what an excel VLOOKUP was along with other excel functions that we had not previously used.
- We had to manage time organization as we struggled during some parts of the project.
- We had to put in practice analyzation skills to find a concrete solution and fix what was needed for the system.
- We had to depend on the help of the employees based on their availability since they are constantly busy with their work.
What We Learned

• By observing a professional setting and having a small participation, we experienced a real-life work experience, introducing expectations for when we get a job
• How the supply chain of the company works
• How the warehouse functions
• The differences between the company's departments and their tasks
• How different skills at a workplace can come together and build better systems
• The priorities that are needed to be considered when doing any task
• Learned to consider the needs for all employees
What We Learned

• Learned how the Sage software works; how the information is stored and how to make changes to the information
• Learned how people think differently at the workplace and how that creates variety when it comes to the input of equipment information
• How to come together as a team and come with solutions and recommendations
• How the company's organization of information works based on their preferences and needs
• How to identify duplicated information, items missing descriptions and price changes for the equipment
What We Learned

• We learned new excel skills, especially a VLOOKUP as it was the tool used the most for finding the information needed to get our results, prices, and conclusions
• Communication and presentation skills were a big part of our learning
• We identified the different equipment utilized by the company and its engineering relevance
• Learned about hydraulic systems and the engineering behind it
• Learned how Tsurumi pumps play an important role within the company's industry and how they work
• Learned the variety of Tsurumi equipment and its uses
Results - Duplicates

- We found 20 items that were duplicated, meaning the inventory system listed 40 items when there was only 20
Results – Information Missing

- We found $15 + 280 = 295$ items that are missing a Part Number.
### Results – Prices Updates

- We identified # Tsurumi items sold through the company that had a price update
- We updated the price information into the system for each of these items for the purpose of the company’s benefit
• Our recommendations to the company includes deleting the duplicated items that are saved into the system and keeping the ones that are used the most.

• As we identified items that are missing information or some description, we recommend to fill out the black spaces for future uses to avoid any problems or confusion.

• We included a list of the price changes that were recommended and then changed for the Tsurumi equipment.
Conclusion

• All duplicated items were deleted from the system
• All items without a full description were corrected
• Correct price ranges for the Tsurumi Pumps were updated
• Warehouse inventory was successfully updated.
Future Work

The company can implement the ideas for this project this way....

• Choose the right inventory software.
• Identify the new stock.
• Track the inventory
• Reduce equipment repair.
• Updating Prices