Decreasing Turnover Rate and Increasing Productivity at Daiwa Massage Chairs

Senior Design Project

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Executive Summary

The company Daiwa Massage Chairs faces a critical challenge characterized by an issue of low employee productivity and a concerning retention rate. This problem is rooted in the absence of adequate training and support mechanisms for employees, leading to negative consequences that extend beyond its internal operations. The effects of this problem include decreased market competitiveness and profitability as well as making it difficult to meet customer expectations. The existing situation not only hinders the organization's ability to retain skilled employees but also obstructs the company's operations by compromising product/service quality. This poses a direct threat to the company's long-term strategy by restricting growth prospects and sustainability. To address the challenges of low productivity and high turnover, our group proposed a comprehensive solution encompassing a Training Development Plan, Systematic Checklists, Documentation Maintenance, Safety Gear Emphasis, DOT Implementation, and Optimization of Company Equipment. The Training Development Plan adopts a comprehensive approach, integrating visual, auditory, and on-the-job training techniques to enhance employee skills. The implementation of Checklists across various operational facets, including Deliveries, Vehicles, Shows, Uniforms, and Onboarding, ensures systematic monitoring and compliance. Weekly checklists will be submitted to management for review, while the development of Standard Operating Procedures (SOPs) will establish clear protocols for streamlined processes. Emphasizing employee safety, we will introduce mandatory training on safety gear, incorporating visuals through photos and videos, alongside implementing sign-out sheets for accountability. A dedicated focus on DOT compliance, including thorough research and implementation of regulatory protocols, reinforces our commitment to operational excellence. Lastly, the Optimization of Company Equipment proposes combining the usage of certain items, such as clock-in tablets, for both time tracking and training purposes, ensuring an efficient

utilization of resources. This multifaceted approach aims not only to resolve immediate issues but also to foster a culture of continuous improvement, employee engagement, and sustained organizational success. The proposed comprehensive solutions address the company's challenges by decreasing turnover and improving employee productivity. Through the implementation of these resources the company aims to enhance employee skills, streamline operations, and establish clear protocols. Overall, the implementation of these strategies not only resolves immediate issues but also fosters a culture of continuous improvement, positioning the company for sustained success, increased customer satisfaction, and long-term competitiveness in the market.

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Summary

Our team aims to improve the turnover rate, efficiency, and productivity at Daiwa Massage Chairs. Some implementations towards this goal include the establishment of safety training, standard operating procedures, training manuals with videos/quizzes, and a 5s improvement plan. It is important to work with the warehouse employees and collect as much information as possible to create an effective training standard. The Standard Operating Procedures (SOPs) will be detailed in outlining the steps that are needed to complete certain tasks. The project itself will serve as groundwork for the goals of the company to continue to be successful. Safety and satisfaction of employees is crucial in decreasing the turnover rate and for the overall value of the company. For the future of this project, the team plans to continue meeting up with the admin of the company for additional information that will assist in the completion of the project.

Project Background

Company Background

Daiwa Massage Chairs opened back in 1982 in California after the owner, Minoru Kogure, immigrated from Japan. They specialized in small health and wellness items. Over 40 years, he has opened 13 Branch offices across the U.S and has integrated a business of massage chairs, health, and wellness items, and more such as vending, wholesale, and show partnerships. Over 40 years, the company has accrued 100-200 employees and has a wide range of employee positions. From sales reps to branch managers and warehouse members, a small team operates at each branch and keeps items delivered to customers and shows operational. After the COVID-19 pandemic, the company saw a huge decrease and then an increase in employees, many of whom were new employees. While they were operating at a small level before, though, the company

has faced major backlash from employees that feel as though they lack training and a system to operate sustainably. Productivity has decreased and customer dissatisfaction has increased. After careful consideration, the company decided to investigate the turnover rate and develop a system to smooth operations out. Specifically, they asked our team: Elizabeth Kimber, Alvin Skaria, and David Lopez-Reynoso to figure out how to address the turnover rate. After questioning staff and gaining feedback from the workers, our team determined that the company lacked proper training and development as well a proper 5S implementation and proposed to start the development of Warehouse training procedures through the creation of Standard Operating Procedures and the company's first training manual.

Stakeholders
Within the company, the immediate stakeholder is the CEO: Minoru Kogure. As the company is small and developing, it does not have any partners or investors. The company is set to turn over to its successor Yoko Kogure and she plans to push the company to sell shares within the next five years, though. Because of this, there are few shareholders in the company's current state, but the company will come to have several other stakeholders in the future. Because of this, most of the management and admin have been with the company for many years and hold an interest in the outcome of the company. As of right now, this makes the operations of the warehouse team directly affect the branch performance, the company performance, as well as client perception of the company and places the stakes of their performance of that much more importance. Failure to have proper training and 5S techniques in place promotes a high turnover rate as employees are not only feeling inconsiderable but are also placed in unsafe situations from lack of training and are more likely to discontinue working with the company.

Initial Site Visit

Upon the first site visit, the team questioned the company and employees to gain insight. We investigated customer complaints and investigated former employees that had been terminated or quit on short-lived employment (less than a year). What we found was that many employees had been terminated or left from failure to follow company procedures. We also discovered that at one branch alone, out of 20 employees hired that year, only seven have passed the probationary period and are still with the company. When asked to see the procedures, we discovered that there were no written procedures, no standard training, and no basis for new employees. After talking to employees that had been with the company a long time, many of them stated they had to learn on their own and were thrown into the job. The employees valued the company due to its leadership and CEO's commitment to staying involved in branch operations and attempting to address concerns and issues of the company. This was a commonly stated reason for employees staying.

After discussion with the Admin Team, CEO, and his successor, we discovered that they had a great passion for the employees and wanted them to be comfortable. As a small team and company that grew so swiftly, the company lacked the manpower to enact many necessary changes with training and development. The owner, Michael (Minoru), stated that he wanted a visual aid that employees will follow along with and understand. He wanted employees crossed trained and well versed in the company values and quality statement. He expressed that he wants to eventually be able to be on parr with other quality leaders and to have the ability to conduct an effective Kaizen event and continuous improvement plan.

After suggesting benchmarking other companies and doing a full evaluation of employees, the team and owner determined the best solution to establish stability within the company is to develop a training plan through a training needs assessment. It would also include the

establishment of basic SOP manuals and a basic training manual/program that would introduce the basics, cross training, and company values efficiently to the employees. We also determined that creating visual aids (videos, quizzes, manuals) would be effective in training employees to meet most employee needs and implementation of 5S techniques and Poka-Yoke techniques will increase employee retention, decrease customer dissatisfaction, and decrease turnover rate for the long run. With these implementations, employees will be properly trained and gain a better respect and loyalty to the company that invests in them.

Benchmarking Research Lit Reviews

Lit Review 1
The Effect of Training on Employee Engagement and Employee Retention by Lynn Dia covers a study that examines the role of training and the relationship of employee retention and engagement. Employee retention is crucial for many reasons like reducing the turnover rate, cost savings, knowledge retention, workforce stability, and more. It can affect a company positively or negatively, but the main goal is to ensure that the employees stay with a company and enhance the company's reputation. Dia explains that the hiring process is not inexpensive, therefore, should not be taken lightly, "…employers have reported that the recruitment fees of a worker are worth 50 to 60% of his or her first-year income meanwhile in other instances this figure could reach 100% due to incompetence" (Dia, 2022, pg.11). An advantage of retaining employees can improve a firm's capacity to reach goals and maintain an advantage against its competitors (Dia, 2022). Moreover, she describes the relationship between proper training and employee retention and how it can improve employee performance which then stimulates employee turnover (Dia, 2022, pg.13). Proper training allows the employee to feel connected and confident which leads in the process of retaining employment.

Lit Review 2

An Empirical Investigation of the Effect of Workload and SOPs on Employees Work Morale by

Emi Wakhyuni and Dian Septiana Sari is a study that focuses on the influences on work morale

of employees. This information was analyzed quantitatively using data analysis methods like

multiple linear regression and its components that suffice the goals of this study. The bulk of this

paper emphasized quantitative analysis which can be explained using significance levels. The

conclusion was that SOPs have a statistically significant impact on employees' work morale, so

it is critical to include SOPs in the workplace (Sari & Wakhyuni, 2018). The results in the

multiple linear regression analysis give a significant value of 0.00 for the effect of Standard

Operating Procedures on work morale. This value is less than the standard alpha value, 0.05,

which indicates that the original hypothesis that the SOP does not influence work morale would

be rejected.

Lit Review 3

The literature from F. Curtis Barry & Company emphasizes the critical role of operational

metrics in measuring order throughput, inventory accuracy, departmental operations cost, and

customer service. For over three decades, the company has been a leader in assisting clients with

defining key metrics and implementing best practices for measuring operational performance. A

key principle highlighted is the significance of continual process improvement and the

fundamental idea that "If you have not measured it, you cannot improve it," echoing Lord

Kelvin's age-old observation about the importance of measurement in scientific experimentation.

The literature introduces a forthcoming benchmarking program, illustrating the company's

commitment to providing practical insights for consumer brands. Key benchmarks, such as Cost

Per Order (CPO), selected warehouse service levels, initial customer order fill rate, and

department productivity, are outlined as crucial metrics to consider for benchmarking warehouse

operations. The literature emphasizes the importance of historical measures and process improvement through regular data collection and analysis, promoting a culture of ongoing improvement and performance comparison.

Lit Review 4

Warehouse safety is a paramount concern for sustainable operations, as highlighted by regulatory guidelines and best practices aimed at ensuring a secure work environment. The Occupational Safety and Health Administration (OSHA) underscores the significance of prioritizing health and safety, given that the warehousing industry shows a higher fatal injury rate compared to the national average across all industries. Warehouses inherently pose risks, with an average of 16 fatalities annually and a reported injury and illness rate of 5 per 100 workers in the U.S. warehousing and storage sector, according to the US Bureau of Labor Statistics.

While specific OSHA regulations for warehousing exist under general industry requirements, including Hazard Communication, Emergency Action Plan, Fire Safety, Exit Routes, Walking/Working Surfaces, and Medical and First Aid, the literature emphasizes the need for warehouse operators to implement comprehensive safety measures. Key hazards such as forklifts, docks, conveyors, materials storage, manual lifting/handling, hazardous chemicals, charging stations, and energized equipment are identified, with corresponding safety tips and resources provided. Improper handling of these hazards can lead to injuries, emphasizing the critical role of safety measures.

The literature advocates for ongoing improvement in warehouse safety through regular training, proper ergonomics, minimizing cutting dangers, and enforcing safe handling of sharp objects. It underscores the importance of tailored warehouse safety programs that include rules, standard operating procedures (SOPs), training, inspections, and the establishment of safety committees.

An initiative-taking approach involves regular safety meetings to discuss topics such as PPE-related signages, handling hazardous materials, forklift safety checks, working at heights, and emergency procedures for fires caused by faulty electrical distribution. The literature emphasizes that disregarding safety procedures in warehouses not only jeopardizes workers' well-being but also poses significant risks to the overall efficiency and sustainability of warehouse operations.

Design Problem Formulation

Initial Problem Statement

Daiwa Massage Chairs has noticed low employee productivity and retention rate at the company. This has negative consequences on the organization by decreasing competitiveness/profitability and making it difficult to meet customer expectations. Improving this issue would also help company culture by enhancing employee engagement, which is beneficial for long-term strategy.

Initial Interview Questions

While collaborating with the team, we first decided to meet with the warehousing teams across the 13 branch offices within the United States. We constructed a series of questions aimed at getting a feel for employee motivation and perspective at the company. We conducted the interviews using the online video platform, Zoom, privately and without any managers around. We also asked the Coordination and Management teams at each branch to provide their perspectives on the interview questions. Lastly, we met with the admin team and asked their perspective on what they feel warehouse teams should excel at, key needs, and key challenges. We utilized these questions overtime to monitor the progression of our initial objectives through repeated check-ins and feedback forms.

Questions
How are you feeling about your workload lately?
Is there anything specific that's been challenging for you recently?
Are you satisfied with the training and resources provided to you for your tasks?
Have you been able to meet your goals and targets effectively?
Is there anything you'd like to see improved in the warehouse's processes or operations?
Do you feel adequately supported by your colleagues and supervisors?
Are there any safety concerns you would like to address?
Is there anything you need in terms of additional training or development opportunities?
How can your manager/supervisor better support you in your role?
Are you experiencing any difficulties with team communication or collaboration?
How do you handle stress during busy periods in the warehouse?
Are there any suggestions you have for enhancing the overall work environment?

Figure 1: Interview Questions posed to warehouse employees. The list was utilized to monitor the process throughout the interviewing process.

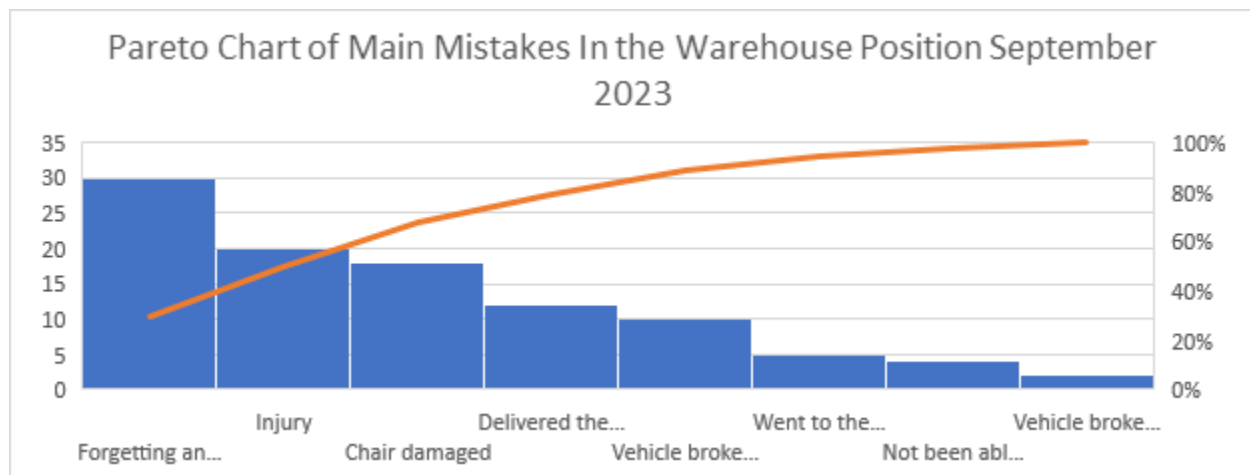## Customer Satisfaction Curves

After conducting interviews with employees, admin, and management teams, we then conducted a check sheet analysis to determine where the frequency of mistakes came from. We discovered in the interviews that many employees were scared to lose their jobs over forgetting items or

failing to do tasks properly. Check Sheet analysis was conducted at one branch located in Doraville, GA. They were completed over the course of one month in September and were inclusive of all employees at the branch. We instructed the branch to keep a tally of every time a mistake was made that impacted customer wait times or satisfaction. The figure below shows the outcome of the instructions and the total counts.

Check sheet of Problems		
Issue	**Description**	**Count**
1.Forgetting an item	Driver forgot to bring an item on the delivery resulting in team having to be rescheduled or items having to be shipped out. This includes full chair sets, small items, gifts, moving blankets, gas cards, etc.	30
2.Vehicle broke down	Miscellaneous break downs delaying deliveries and set ups	2
3.Vehicle broke down due to lack of maintenance	Drivers or managers knew about Maintenace being needed, but did not do it resulting in vehicle breaking down	10
4.Went to the wrong location	Drivers went to the wrong address and resulted in more time being needed to schedule and delivery or set up	5
5.Delivered the wrong item	Drivers brought the wrong color chair or chair part or item part to the customer. Usually results in delivery not being able to be completed and having to be rescheduled/ the set ups too.	12
6.Injury	Warehouse workers injured on the job	20
7.Not been able to deliver chair	Drivers ran into another issue such as blocked road, sickness, etc.	4
8.Chair damaged	Chair comes out of the box damaged or malfunctioned. Usually forklift damage or a manufacturer defect. Chair has to be replaced and wasted.	18

Table 1: Check sheet of mistakes at the GA branch over one month. Table was used to develop a Pareto Chart.

We used these values to construct a Pareto Chart to provide a visualization to the admin team at Daiwa Massage Chairs. The Pareto Chart constructed helped to emphasize how drastic the problem of forgetting an item was. When shown to the admin team, we asked reasons items may be forgotten. We requested to see proof of checklists or procedures for deliveries and found that the company was unable to provide this information to us. This prompted us to delve further into the reasonings behind so many mistakes as well as employees leaving.

Figure 2: Pareto Chart of Main Mistakes in Warehouse Position Affecting Customer Satisfaction

The above chart depicts the main mistakes warehousing teams made while conducting company procedures. The main mistakes all affect customer satisfaction. For example, the most common mistake was forgetting an item at the time of delivery. Forgetting an item can lead to cancellations or customer dissatisfaction and is a simple fix for the company to implement.

Root Cause Analysis and 5 Whys
Although we had initially suspected that there was a greater root cause of the employee retention problem, after conducting the check sheet analysis, we delved deeper into the reasonings behind employees leaving as well as the mistakes being made. We questioned how employees were shown how to do perform tasks and many employees informed us that they were shown on the job and asked to follow along. From there, that prompted us to push the employees further and truly understand the training process of the company.

There was a huge disconnect between the branch offices and the company had no training process and allowed employees and branches to conduct their own form of training, if any at all. We found that there were even instances of employees feeling as though they could do tasks at their own pace and own way. For example, there were employees making huge changes in schedules without consulting managers first. Not only this, but there were even employees that were making huge charges to the company because there was such a lack of direction.

We decided at this point that the company would not have an employee base of customer base for long term success without establishing specific training and procedures to reference. We advised the creation of a training manual with several monitoring processes in place based on our root cause analysis.

With the conclusion of our five whys process, we were able to determine several key elements the company lacked for training as well as issues that could be optimized. Some of these elements included, but were not limited to:

- The company was utilizing equipment in a very expensive manner. They purchased tablets for every branch with the sole intention of employees clocking in and out on them. We figured these tablets could be optimized to streamline the training process as well as monitor and decrease mistakes.

- There were several training events that could not be training until they happened. This included a huge portion of their job. We found that warehouse employees set up and maintained trade shows and the process of setting up the show was very extensive. They had no system in place to train without an experienced trainer and an event going on. The issue with this was that the events were one-time events and oftentimes the set ups were one day events and mistakes resulted in several thousands of dollars for the company to rectify them. This made training imperative for these events, but we needed a way to train without the event happening.

- The company would oftentimes forget key onboarding tasks such as HR orientation, account creations, and uniform distribution.

- The company initially was operating on a very small scale and their system worked perfectly for a small company. After the COVID 19 pandemic, the company experienced a huge economic boom and quickly grew from 50 employees to over 200 employees and did not have the time to establish a new system.

Proposed Solutions

Based on what we discovered from our initial root cause analysis, we proposed several solutions. These solutions were introduced to the admin teams and the CEO of the company — which they believed could make a significant impact. Our team made sure that these solutions were not static, but a blueprint for solutions that could be continuously improved forever. Throughout the timeline available, the goal was to initiate each one of these solutions and aim to complete as much work as possible.

Comments For Improvement

1. Create a **Training Development Plan** that utilizes visual, auditory, and on the job training techniques

2. Create Checklists to monitor Deliveries, Vehicles, Shows, Uniforms, Onboarding, and more.

3. Maintain documentation. Have weekly check lists filled out and submitted to management. Develop SOPs for processes

4. Greater focus on safety gear. Mandatory training on proper gear with photos and videos. Sign out sheets for belts, gloves, etc.

5. DOT implementation and research

6. Optimization of company equipment – combine usage of certain items such as company clock in tablets for training

Figure 3: List of proposed solutions based on research and discussion with the company.

Initial Challenges

One of the biggest issues we ran into over the course of this project was the fact that there was virtually no training or documentation established beforehand. We had to pioneer a training program as well as establish many documents based solely on our meetings with administration and employees. Overall, we ran into three key problems:

1. Massage chair companies are not commonplace companies and do not have very many benchmarking opportunities. We were not able to reference many other companies because most operated as distributors that sold wholesale to other companies that are more established. Because of this, we had to rely more heavily on

the general idea of training and had to pioneer training regimens specific to the company.

2. The company operated across the US with 13 branches. We had virtually zero face-to-face interactions with employees, which made it extremely difficult to establish a baseline comparison point. We had to rely on the main office directions and key points that they wanted emphasized to know where to start. Not only this, but due to the branches being so spread out, in small employee bases, and needing training on events that only happened at specific times, we were challenged to develop a training plan that could be translated across the branches and in different, attention keeping, ways.

3. The company was already at risk of losing their DOT status. With this, they would have to eliminate the warehouse position in total and rely on very expensive, third-party companies to deliver their products to customers. If this happened, the company would not be able to transport materials over state lines and would likely cease to exist. Because of this, we had to work fast to find a way to train and emphasize the importance of following DOT regulations.

Project Engineering

Problem Statement

After analyzing our root cause analysis, we refined our problem statement to better reflect the true needs of the company. Due to the lack of training and support at present, the company currently has a low employee productivity and retention rate. Lack of training has caused employee turnover to be at an all-time high. With a constantly growing economic state, this has drastic negative consequences on the organization by decreasing their market competitiveness/profitability and making it difficult to meet customer expectations. It also makes

it near impossible to provide support and structure to the company as the company cannot hold employment long enough to ensure results. Improving this issue by implementing proper training resources would also help company culture by enhancing employee engagement and retention, which is beneficial for their long-term strategy.

Major Problem Objectives
We discovered that the company had several major issues that needed to be addressed. They were as follows:

1. High turnover rate

2. Lack of DOT implementation

3. Improper safety settings and standards

4. Zero training and direction in place

5. Multitudes of mistakes conducted by the company and employees alike.

Project Objectives
The major objective for this project is to research, design, and implement a training program for the warehouse staff at Daiwa Massage Chairs. This will be done through a variety of methods including safety training, standard operating procedures (SOP), training videos/quizzes, mistake proof checklists, feedback forms, and instruction manuals. Implementing these resources into the company's structure will improve employee productivity and decrease the turnover rate.

Scope of Work
The scope of work for this engineering project of creating and implementing a training program for the warehouse employees includes several factors that must be considered. The project primarily aims to improve safety within the jobsite, staff skills, and operating efficiency. It involves multiple steps such as researching viable solutions, determining a needs analysis, creating a program specific to this company, and producing the training materials. During the administration stage, the group plans on organizing the company's resources to facilitate a new

training program. Employees that go through the program are then assessed on its effectiveness by submitting feedback forms and completing quick assessments. The roles for this project include Training and Development Project Lead (Elizabeth), Process Improvement Lead (David), Operations Manager (Alvin), and HR Assistant/Admin Team (Brandon, Natsue, Camila). The primary constraint for this project is time restrictions, while progress is defined through improved employee performance and feedback.

Reporting Procedures

Throughout this project, communication and reporting materials were handled in several ways. To communicate with upper management, our team utilized online video platforms like Zoom and Microsoft Teams: however, email was the main form of communication. For evaluating success, the project team will work alongside employees at the company. Constant feedback forms and one-on-one interviews were conducted to evaluate employee feelings and success from the training implementation. Customer feedback was also considered. The turnover rate, although the main goal of this project, will not be able to be fully evaluated until several months after the project ends so employee interviewing is imperative to the success of this project.

Cost Analysis

Operating for an impressive four decades, Daiwa Massage Chairs has encountered a series of challenges that underscore the need for strategic improvements. While extensive history reflects resilience, the absence of a designated authority to enforce Department of Transportation (DOT) regulations exposes the company to federal audits, with the looming threat of losing their DOT status and facing substantial fines ranging from $1,000 to $10,000. In response to these challenges, we introduced a manual to instill DOT compliance and provide essential training for the Warehouse Teams. However, the persistently high turnover rate among employees significantly inflates the cost of maintaining a stable workforce, with the training of one new hire

at a singular branch costing $30,720 per year. To address this, the extended turnover time of over a year is both an advantage and a challenge, impacting on the frequency of training. This financial strain, coupled with the significant cost of shipping each chair through a third-party service at $2,500, emphasizes the importance of optimizing operational strategies to fortify regulatory adherence, enhance workforce stability, and reduce overall expenditures.

Proposed Cost Savings

Before Training Manual Implementation	After Training Manual Implementation
DOT: Fine amount: $1-10K!!! Cost to ship 3rd party: $2.5K per chair Average deliveries per week: 200 Total: $ 500,000 for chairs + 1-10K fines	**DOT:** Fine amount: $0 Cost to ship 3rd party: $0 Total: $0
Cost to Train: Average turnover time: 4 weeks = repeat the process 12 times a year! Average Starting Wage: $20 an hour 40 hours a week =$800 a week Seasoned employee wage: $22 x 2 x 40 (one week training 2 trainers for safety) =$1760 a week Total: $30,720 a year just to maintain one stable employee's training at a branch	**Cost to Train:** Average turnover time: 1+years Average Starting Wage: $20 an hour 40 hours a week Seasoned employee wage: $22 x 2 x 40 (one week training 2 trainers for safety) = Total: $2,560 to maintain training for one new hire at a branch

Table 2: This figure highlights the proposed cost savings the implementation of the manual could have for the company.

On top of that, for the sake of the project scope, we treated our team as though we were employed by the company. We asked the company to advise an average range they would be willing to pay for hourly work for certain positions. They provided us with an average range, and we conducted a budget analysis based on their numbers. We proposed costs based on salary for the length of the project had this been a paid project. Below are the results:

Budget

Team Member Pay Breakdown (40 hours a week, 480 hours during project life)			
Elizabeth Kimber	Training and Development Project Lead	$32/hour	$15,360
David Lopez	Process Improvement Lead	$40/hour	$19,200
Alvin Skaria	Operations Manager	$35/hour	$16,800
Brandon, Natsue, Camila	HR Assist/ Admin Team	$30/ hour	$14,400

Table 3: Budget Table

Pictured above is the proposed budget table for someone conducting the work of the team. Implementation of training has not increased the budget for the company as it goes in place of training days. Implementation is proposed to decrease the budget due to lower turnover rate and customer dissatisfaction rates.

Responsibilities Table

From there, we assigned responsibilities to each member including the admin team that was working with us based on current roles and roles needed. We assigned general responsibilities and oversights to each person.

Role/ Person	Responsibility
Shipping Coordinator/ Noemi Herrera	Oversees Warehouse in the main office. Works with the crew to get a better understanding of issues at hand. Key interviewer for warehouse team members.
Admin/ Camila Rossenblum	Leads admin team. Determines when coaching and training sessions must be put into play. In charge of pushing out any policies and procedures

Admin/ HR/ Brandon Stevenson-Mattews	HR assistant. Attends interviews for coaching and leads training meetings. Main contact for Training and Development changes as well as SOPs
Training and Development Lead/ Branch Manager/ Liz Kimber	Oversees the branch and responsible for new hire training. Developing Training Manual and policies and procedures. Benchmarks other massage companies to see operations. Leading new Training program and 5S implementation starting with the GA branch
Process Improvement Lead/ David Lopez	Industrial & Systems Engineering student at Kennesaw State University. Enhance the effectiveness of the goal to retain employees and reduce turnover. Assist with optimization, training, and development of training programs.
Operations Manager/ Alvin Skaria	Senior Industrial & Systems Engineering student at Kennesaw State University. Monitor performance through indicators and strive to reduce costs while improving productivity. Also, will be focusing on developing and implementing the training program.

Table 4: Responsibilities Table

The pictured table depicts the responsibilities of each team member on this project. Every task needs to be processed through upper management and HR from the Team and each member is responsible for a different aspect of the project. For example, David oversees improvement policies in the warehouse.

Team Schedule and Iterative Design Process

The scope of time that the team had to work on this project was limited, 16 weeks (about 3 and a half months); therefore, a team schedule and iterative design process (IDR) was also restricted but well thought out. The project was initiated by communicating with the manager of the Georgia branch of Daiwa Massage Chairs and considering the ways to decrease the turnover as well as retaining employees. The process of gathering information involved meeting with the administration team, employees at the warehouse, and meeting with some branch managers. After, the collected data would be evaluated using problem-solving techniques like Root Cause Analysis (RCA) and the "5 Whys" technique to address the main causes of the turnover rate. The analysis would help our team with discussing the needs and improvement possibilities within more meetings with the admin team and even the CEO of the company. A training manual development plan was proposed as a continuous improvement solution to begin the process while still gathering data from the employees and admin teams. The figure below visualizes the IDR during the timeline of this project from beginning to end.

Team Schedule & Iterative Design Process

1. Meet with Admin Team to determine key employee ksills within warehouse
2. Meet with employees for a better understanding of their duties
3. Meet with branch managers to discuss current errors and future implications
4. Root Cause Analysis
5. 5 Whys- Check Sheet
6. Training needs assessment
7. Training manual development - videos, SOPs, check ins, walkthroughs, etc.
8. Check ins with employees throughout manual creation
9. Consider employee/company feedback to monitor process and adjust modules
10. Final feedback forms
11. Final creation of training manual implementation

Figure 4: The scheduling chart above includes the main steps that the team would abide by during the implementation of the project. It also serves as an IDR to show what approaches the team took for creating/finishing the project.

Work Breakdown Structure: Training Schedule

With the execution of the training manual development plan, it was important to update the steps that employees need to ensure they are trained properly on their first week of employment. A proper structure for a new hire is crucial because it can assist with a smooth onboarding experience, contains clear expectations, employee retention, and faster integration with the team. A Work Breakdown Structure (WBS) is a hierarchical decomposition of a project into steps and deliverables — mainly used in project management. Similarly, the planning and organizing of the first week for a new hire could be composed using this method. The WBS was created to organize the first week of training into five phases — days in this case — that will guide the trainer and trainee to a successful first week.
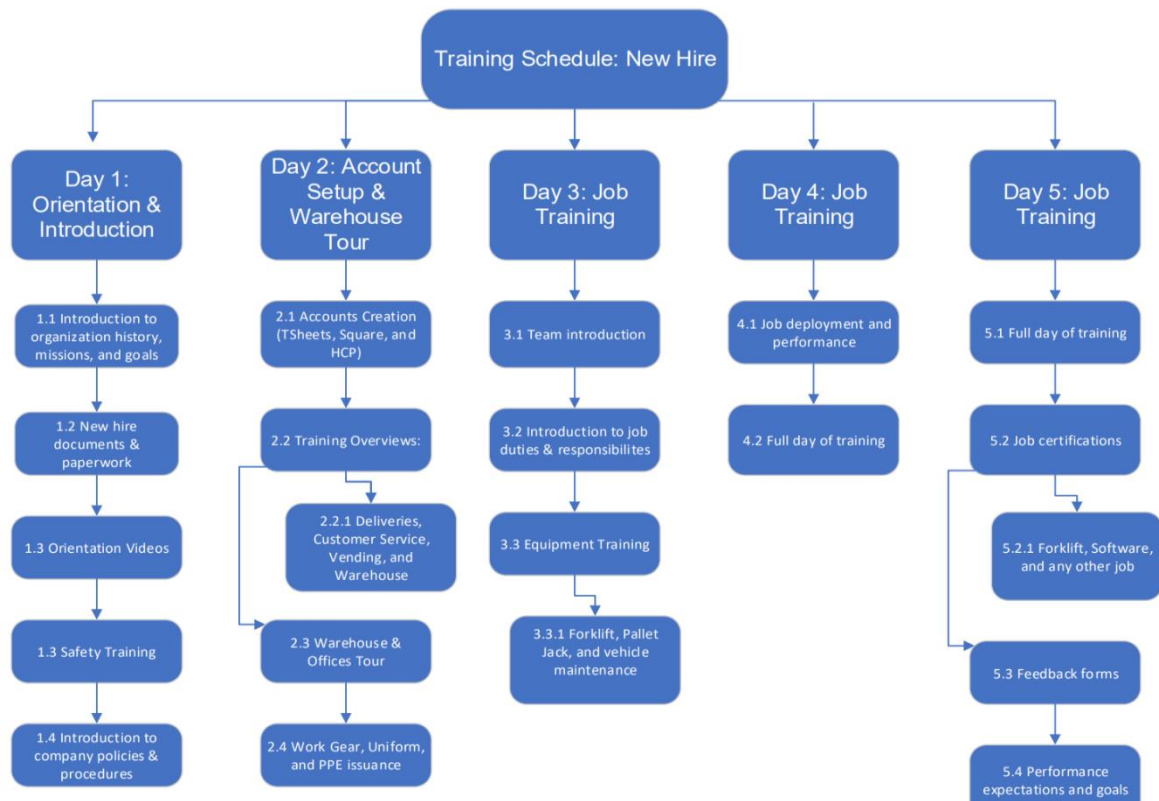
Figure 5: Training Schedule

The pictured training schedule shows a 5-day proposed plan for training the warehouse Team. The manual was designed to follow the basic layout of the plan so the trainer and trainee can follow along with the content while they are training. Trainees will perform a series of checkpoints to ensure understanding along the way.

Gantt Chart and Timeline

Our team understood that time was a restriction, and that there was a possibility that the team would fall off track during the implementation of this project. A Gantt Chart was created to depict a visualization of our tasks that would fit within the timeline of the project — approximately four months. The project schedule was broken down into 12 basic tasks that dealt

with assignments with the team itself, the company, the project, our class assignments, and the training manual execution. Each task was to be completed within a duration period that ranged from one week to 3 weeks. The Gantt Chart was a valuable tool for the project that aided with dependencies, overall project structure, effective planning, communication, and ethical decision-making as the project progressed.

Task #	Task	Start Date	Duration (Days)
Task 1	Project Initiation	14-Aug	14
Task 2	Preliminary Design Review - ISYE 4900	21-Aug	7
Task 3	Research	28-Aug	14
Task 4	Create Schedule	11-Sep	14
Task 5	In-Progress Review - ISYE 4900	11-Sep	14
Task 6	Training Manual Development	25-Sep	14
Task 7	SOP Template Creation	2-Oct	7
Task 8	Critical Desgin Review - ISYE 4900	9-Oct	14
Task 9	SOP Implementation	16-Oct	18
Task 10	Checklists	16-Oct	18
Task 11	5S Initiation	6-Nov	7
Task 12	Final Design Review - ISYE 4900	30-Oct	14

Figure 6: The figure above shows the list of tasks that were set to describe the behavior of the Gantt Chart. The 12 tasks would be depicted as horizontal bars on a timeline graph which is shown in the Gantt Chart below.

Employee Retention Initiative Project Timeline
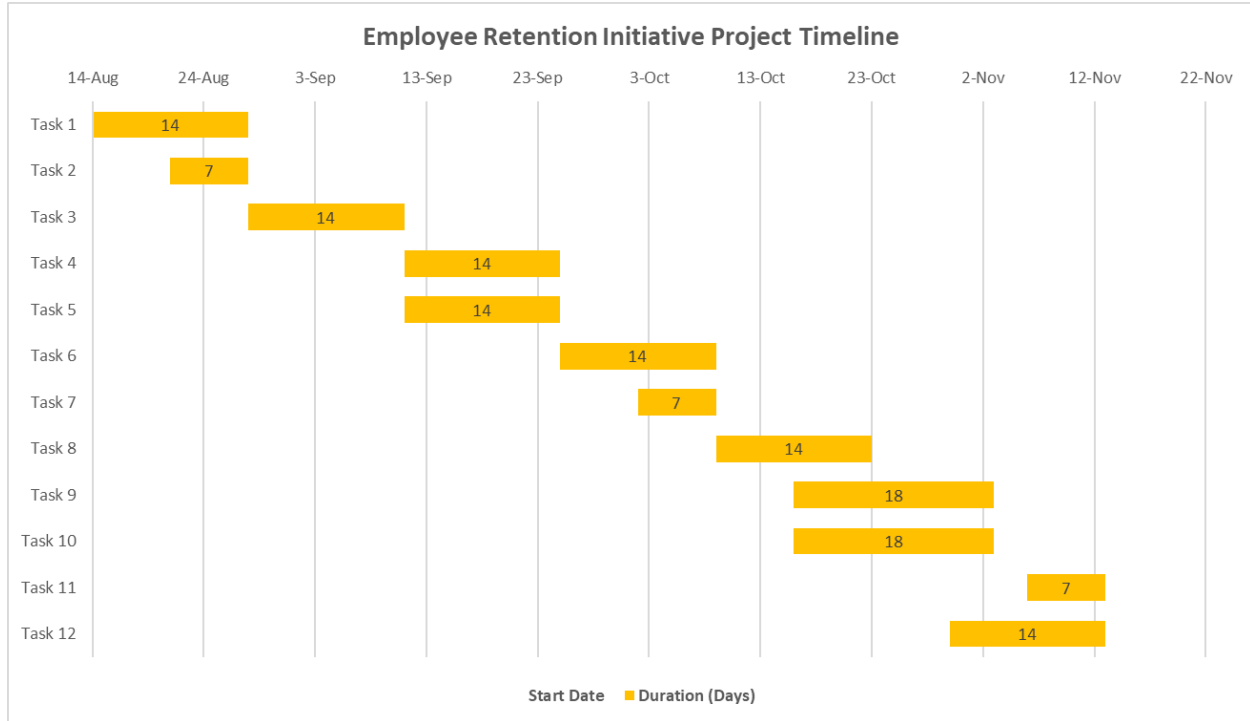
Figure 7: Pictured above is the proposed project timeline. The project started in mid-August and is projected to run through mid-November. The training manual and policies developed from the initial project will be utilized over the next three years as the standard for the rest of the positions in the company.

Training Needs Assessment

One of the first things we looked to do was establish a training needs assessment for the employees and company. Within a training needs assessment, a company will introduce a new topic to the employees. They check to see how familiar the employees already are with the new topic and then establish critical points to evaluate employees as well as how they will test them and teach them. As most employees were familiar with the processes already, we utilized our

data collected, interview questions, and needs of the company to establish the training needs

assessment. Below are the 4 steps we followed for our training needs assessment.

1. Define goals: The company had a goal of keeping employees within the company

   through motivation and proper training that made them comfortable and happy to

   work. They also needed these goals to correlate with customer needs. Because of this,

   we established key goals such as "employees should utilize checklists to avoid

   forgotten items" with the idea being to decrease forgotten items tenfold.

2. Define relevant job behaviors: In this step, we had to address what actions and

   processes drivers should be comfortable doing by the end of the assessment and the

   ways they react and are influenced by these actions. For example, drivers would deal

   with angry customers often. How to address upset customers was not an established

   goal or process of the company. We had to evaluate how things like this would affect

   their behaviors.

3. Define required knowledge and skills: After working with the teams and systems

   they had, an example of this was with Housecall Pro. The employees had access to

   this software, but did not have the relevant knowledge base to utilize the app. We had

   to incorporate these needs into the training.

4. Training: We then had to evaluate the goals, knowledge and skill sets, and

   behaviors and establish the actual training as well as monitoring systems. We

   monitored training through feedback from trainers, managers, employees, and we also

   conducted follow ups with customers to get their feedback through a review system.

Prototyping and Testing

Prototyping

Prototyping and testing play vital roles in an engineering project by ensuring the designs functionality and practicality. This phase reveals potential flaws early on and is a great way to check if the project's standards and specifications are being met. Prototypes also facilitate valuable user feedback and are extremely important in making improvements. The standards put into place by this project will serve as the baseline for all other employee positions at Daiwa Massage Chairs. Next semester, Elizabeth will continue to improve the manual by generating more feedback from employees and identifying areas of improvement. This project is a part of a three-year initiative currently underway to improve training and support for employees and decrease turnover in the company.

Some things that will be created and tested will be a safety training manual, standard operating procedures, mistake-proofing checklists, and other training videos/quizzes. The implementation of a training program will create a framework for the future of the company in decreasing the turnover rate. Due to all the material for this project being created online, the group currently has no expenses for prototyping materials and supplies.

Current State

In the current state, the company faces notable challenges marked by low employee productivity and a concerning retention rate. The absence of a structured training program, clear operational protocols, and comprehensive documentation contributes to a lack of operational efficiency. Daily tasks such as deliveries, vehicle management, show preparations, uniform adherence, and onboarding lack standardized checklists, which results in potential errors and inconsistencies. Safety gear protocols are not well-defined, and the absence of mandatory training on proper

usage poses risks to employee well-being. Moreover, compliance with DOT regulations remains

a concern, and the company's equipment utilization is not optimized. The current state

underscores the need for a transformative approach to address these issues systematically and

foster a culture of continuous improvement and operational excellence.

Standard Operating Procedures

A Standard Operating Procedure (SOP) is a detailed set of instructions that outlines the steps and

tasks that are needed to perform a job, process, or machine. For this project, it was crucial to

create well-defined SOPs to reduce turnover rates and foster increased employee productivity.

When employees are exposed to clear guidelines of their duties/tasks, they are more likely to

contribute to job satisfaction, maintain high-quality standards, work safely, and optimize

productivity. The SOP is a method of continuous improvement that conforms to the goals of U.S

Jaclean to continue improving their processes and the company overall.

SOP Example 1

The first SOP we created was for the Forklift Operator and contained a hierarchical structure.

Within the SOP, we made sure to include Poka-Yoke tools within it. It was designed to help to

minimize damage to the forklifts and the expensive charges that came along with them. We

discovered that many employees did not know proper techniques for forklift Maintenance as well

as how to check the equipment every day. This resulted in several charges such as replacing the

batteries which would be upwards of $5K a battery.

Daiwa by U.S. JACLEAN

Document Title: **Forklift Operator SOP**	Branch:
Revision Date:	Approved by:

Required PPE & Equipment	
Orange Vest Safety Glasses	

Procedure	

1. All Forklift operators must be properly trained and certified to drive. They must also possess a valid lift truck operators license.
2. Before the shift, conduct a thorough inspection of the forklift, checking for any defects or malfunctions.
3. After step 2, fill out the Daily Operator Checklist – Forklift Checklist.
4. Ensure that all mechanics work and all gears are functioning properly. Notify your supervisor of any issues.
5. Always drive at a safe speed and watch for any pedestrians that are working around the warehouse.
6. Use the seatbelt at all times when operating the lift truck.
7. Do not carry passengers on the forklift.
8. Forks must be approximately 8 inches above the ground while operating.
9. Avoid all sharp turns and sudden stops when carrying any load.
10. Ensure the load is stable and within the forklift's capacity (check the driver's manual on the back of the seat).
11. Do not use your cellphone while operating the lift truck
12. Report any accidents or near-misses to a supervisor immediately.
13. Regular maintenance should be conducted by authorized personnel. Ensure that all maintenance and repair activities are documented.

Figure 8: Figure shows an example of a Standard Operating Procedure (SOP) created for a forklift driver. The SOP includes a detailed set of instructions that outlines the steps and tasks that are needed to perform the job. In addition, the SOP also references a checklist that must be filled out every day to maintain a mistake-proof procedure.

SOP Example 2

Another example of an SOP was one created for the delivery drivers that would aid them in

performing a successful delivery. This SOP contained a chronological structure so that no steps

would be missed within the process. The delivery driver would have a much more concise

understanding of their duties before, during, and after performing the delivery process. This SOP

would include mistake-proof techniques to avoid errors during the main procedures.

⨿ Daiwa®ʙʏ **U.S. JACLEAN**®

Document Title: **Massage Chair Delivery SOP**	Branch:
Revision Date:	Approved by:

Required PPE & Equipment	
Safety Gloves (cut resistant or heavy duty) Safety Glasses Safety Back Support Belt Closed Toe Shoes	

Procedure	
Pre-Delivery	

1. Communicate with your supervisor and make sure that the delivery date and location is correct.
2. Ensure that the vehicle has been under maintenance within the last week.
3. Fill out US JACLEAN, INC Vehicle Checklist and check over the Safety Kit & Emergency Kit List before using the vehicle. Turn in checklists to your supervisor.
4. Perform pre-work safety stretching before leaving the warehouse.
5. Do not forget to carry a company gas card.
6. Familiarize yourself with the Housecall Pro application.

Delivery Overview	

7. Ensure that you are utilizing Housecall Pro on your smart device to facilitate communication with the customer and to use the GPS to arrive at the correct location.
8. On the *Calendar* tab, click on the *On My Way (OMW)* tab prior to leaving for the customer's location.
9. Make sure to notify the customer with **AT LEAST** a 30-minute courtesy call before arriving to their location.

Figure 9: The figure shows the first page of the SOP for a delivery driver when performing a delivery to the customer. The structure of the SOP is in chronological order.

SOP Example 3

This SOP is portrayed in Module 3: Warehouse of the training manual and it goes over the steps of setting up the banner for shows. U.S Jaclean encourages employees to handle the banners with care because they are expensive and can be damaged easily. This SOP has a visual structure as well as chronological based on the different phases of setup. The motivation for the creation of this SOP came from an email from the CEO that explained the importance of handling the banners with caution.

RETRACTABLE BANNER SET UP

1. Begin assembly, insert pole into unit base.
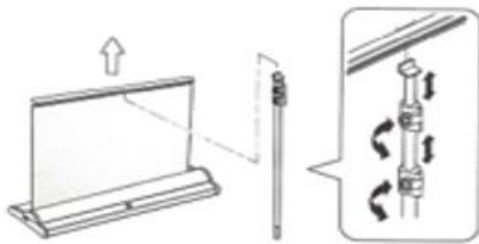
2. Extend retracted banner to full height of pole.
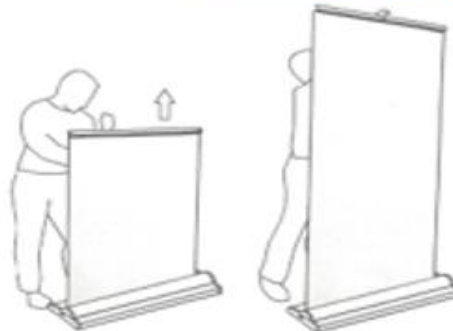
RETRACTABLE BANNER BREAK DOWN

1. To break down repeat steps in reverse. Place your foot on one of the banner stand's support to hold it steady.

2. Grasp the hook at the top of the pole and unhook it, and SLOWLY retract the banner back into the stand.

If you encounter any difficulty, please follow the steps below:

1. Remove the metal cap on the far right side of the unit.
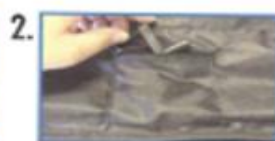
2. Remove the key from its zippered pouch, located on the top inside flap of the unit's carrying case.

KEY ➔

3. Insert the key into the hole at the center.

Turn key counter-clockwise to increase tension and retract the banner.

WARNING: DO NOT TURN CLOCKWISE

4. Cover right side of the unit and place the unit back into the carrying case.

Figure 10: The figure shows a visual SOP for the warehouse employees on how to carefully set up the banners at a show.

Why a Training Manual?

We went into the project thinking we would find a more specific reason for the turnover being as drastic as it was, but we quickly discovered that the root cause was lack of training and direction. After speaking with the admin team, we concluded that they needed to establish a base employee structure, or they would never be able to address their turnover rate.

Structure

We structured the manual to follow a 5-day process. The manual was placed on the tablets that the company had purchased for the employees to use for clocking in and out and was designed so that the trainee could follow along with the manual as the trainer demonstrated and showed certain topics.

We broke it down into six modules and each module consisted of multiple tools in them. For example, some modules contained videos for the trainee to watch. Others contained checks for understanding where the trainee would have to demonstrate successful completion and understanding of the module to move on. Essentially, we designed it to have a fall back on plan in the case a trainer is not available to dedicate their full time to the employee. As well as this, we had items in place designed to allow the trainees to reference the topic later and also to have proof that they were trained on the topic.

TABLE OF CONTENTS

Table of Contents

Figures 11 and 12: Table of Contents of the Final Training Manual. The above demonstrates the structure of the manual near its final state.

The six modules were as follows:

1. **Brand Philosophy:** This module was utilized to introduce the employee to the company. Within it, we included articles written about the company in which we were featured, as well as several emails from the CEO that depicted goals and company mindsets. One of the key features that Michael mentioned was wanting his employees to understand and appreciate the business history so we made sure to include as much as we could that would reflect the company motto, statements, and more. As one of the issues the company was having was with making sure they had a

lot of the base accounts created, we also included several checklists and mistake-proofing tools for the new hire when they start. As a matter of fact, we included it right before the Brand Philosophy module and set it up, so trainees and trainers had to check off completed accounts. We made sure topics such as "received uniform" and "Clock in account created" were included.

2. **Shift Basics:** Within this module, we designed it so that the trainees are able to follow along at their own pace. We did this because, when interviewing the employees, we found that many of them were not trained because they did not have people available as they were outperforming the tasks. While we knew we would not be able to do this for every topic, we tried to incorporate more of a self-paced, visual learning tool for shift basics. This included things such as how to clock in, when bonuses are given, uniform rules, and basic product learning. We included checks for understanding and, at the end, asked the trainer to verify that all accounts that been created and the trainee was able to go through and understand each topic in the basics module before moving on to the actual on the job training.

3. **Warehouse:** The Warehouse module was the first official on the job training day. With this, this module was a lot more interactive and contained significantly less videos and more performance-based checks. We included basics for 5S tools here as well as most of the safety learning. We focused heavily on the forklift operations as the company had expressed concerns about this in the past. We made sure to include several pass/fail options throughout this module and made it more difficult for the trainee to be able to move on without truly understanding the module or topic. The trainee had the opportunity to address the bulk of the company issues here such as

banner management, carpet management, inventory control, container arrivals and more.

4. **Vehicle Management:** The next module demonstrated the company goals and expectations for operating vehicles. As one of their largest issues was the company failure to keep vehicles in good condition, which was costing them several thousands of dollars in repairs here, we made sure to address vehicle procedures. This module was mainly a module of reading as there were not many things that could be tested on, but we made sure to enact several check-ins throughout the module to make sure the trainee understood. Another issue the company had was with employees claiming to not have been taught certain topics they were getting reprimanded for. Because of this, even simply including many of these topics in writing benefited the company coaching policy and procedure.

5. **Shows and Clubs:** The last module with learning consisted of the show module. This module was the most difficult to enact as it was the biggest struggle to train on in the first place. Within the company, as the shows and events only happen at specific points, there was not always a guarantee that the trainee would be able to witness a set up within their week of training. Despite this, to keep trainees from simply never getting trained and just being expected to perform the task in case they cannot witness a set up, we made sure to include as many details as we could about the show set-ups. This way, in the case they do have to cycle back to the training later, they would at least have a base understanding of the processes, expectations, and would have seen video and photo examples of them as well.

6. **Final Assessments:** This module was the last module and was used as a final reference point for training. Trainees conduct performance evaluations at the end as well as submit feedback forms to HR. Doing this allows us to monitor the process and make sure that employees are happy. We included feedback in an open manner and asked trainees to let us know what they believed could be improved or focused on. We also intended for the company to follow up with them about the training process a their 3-month evaluations and the end of the probationary period to ask for feedback then as well. Lastly, we used this module as a final mistake proofing effort and asked trainees, HR, and trainers to complete a sheet confirming all modules were taken, tested, and passed before they complete their training. After completion, we instructed branches to keep a physical and digital copy of proof of completion. This way, if an employee says they were not trained on it down the road, the company can protect themselves and offer appropriate coaching.
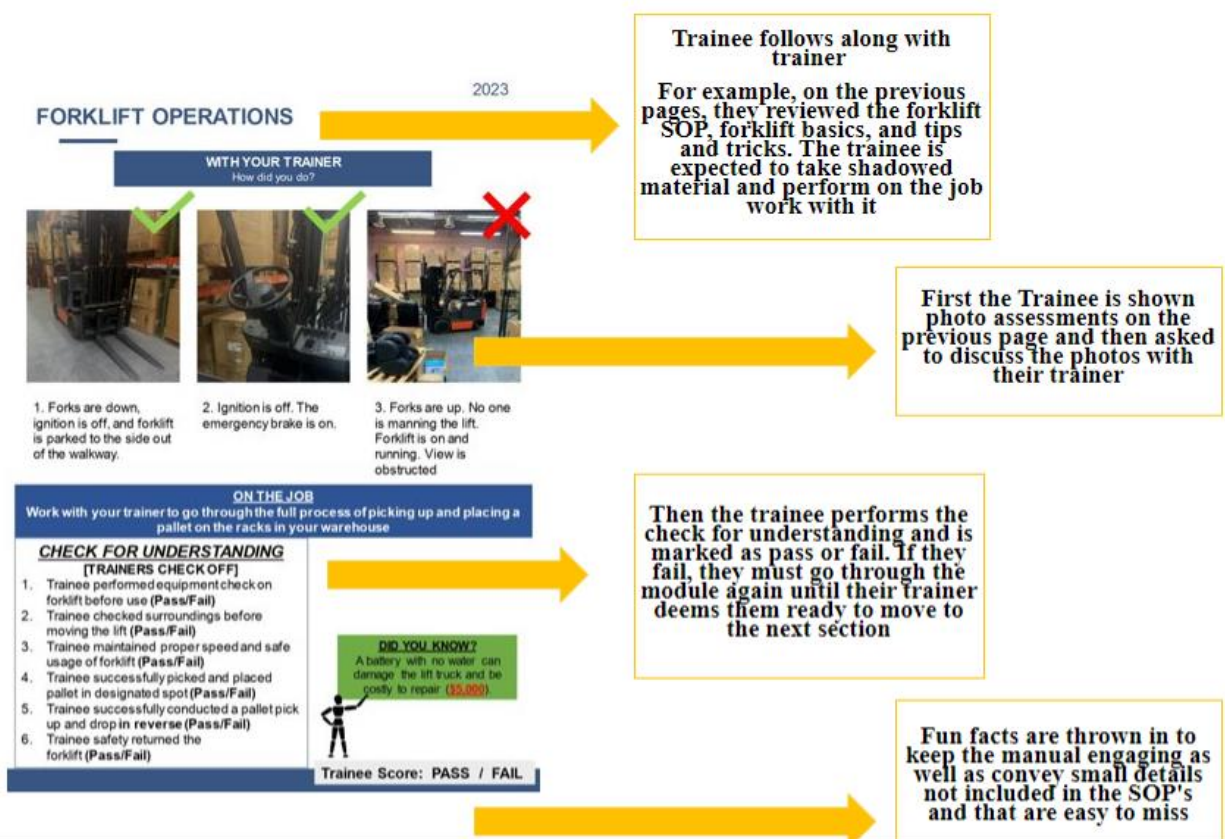
Figure 13: Basic Structure Breakdown

The above photo depicts a breakdown of one of the pages in the manual. It shows how each page was set up to include work on the job as well as checks for understanding.

Poka-Yoke
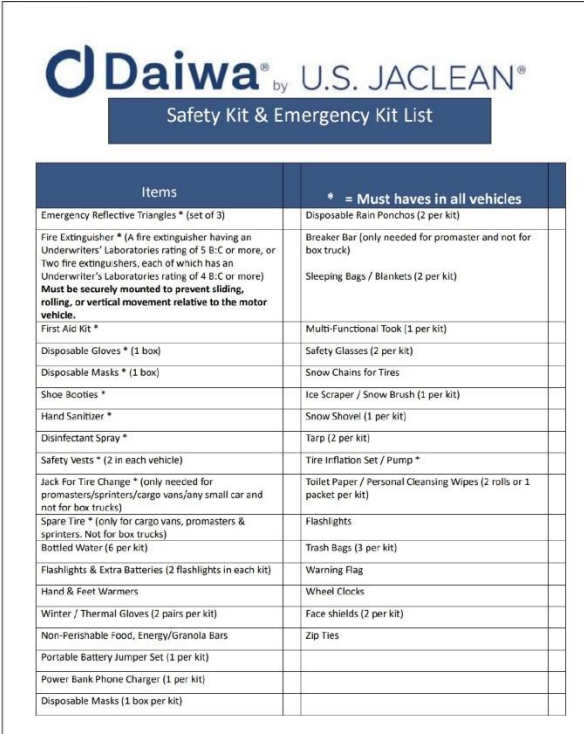
Poka-Yoke involves the implementation of mistake-proof principles in the workplace which is vital in decreasing turnover rates, increasing employee retention, and total productivity. The team understood the importance of including mistake-proof techniques in the training manual to ensure that the new hires understand the information that is given. Some Poka-Yoke examples include short quizzes, interactions with trainer, checklists, and visual cues for instructions. These techniques will apply to warehouse workers, forklift drivers, supervisors, delivery drivers, and

others. In addition, a mistake-proof training manual ensures that new employees are receiving adequate training that will help the company's future success.

Poka-Yoke Example 1

Figure 14: Safety and Emergency Kit List for Vehicles

The above photo depicts an example of mistake proofing within the vehicles. As the company had been struggling with vehicle management and employee retention, we needed to make sure they had proper equipment in all vehicles in case of an emergency. This not only enhanced the safety aspect of the job, but also coincided with DOT compliance.

Poka-Yoke Example 2

Figure 15: Trade Show Checklist

The above photos show a checklist that was created to make sure that shows were getting loaded correctly. As the company had been experiencing issues with failure to conduct proper show set up, we set up a sheet where management could check off what was needed, and warehouse teams could load and be quality checked. As many shows were across state lines, improper set up cost the company thousands of dollars to go back out and correct it.

Poka-Yoke Example 3

2023

BEFORE WE START!

WITH YOUR TRAINER
Make sure all the following documents have been completed and submitted to begin the training process

Check Upon Completion

✓

1. Background Check
2. W-9
3. I-9 Documents
4. Direct Deposit Form (*if applicable*)
5. General Acknowledgement
6. At Will Statement
7. HR Orientation
8. Company Overview
9. Position Overview
10. Safety Overview
11. Cash Handling Policy Agreement
12. Gas Card Agreement
13. TSheets (Account Creation)
14. Square (Account Creation)
15. Housecall Pro (Account Creation)
16. Acuvend (Account Creation)

Figure 16: Before We Start! A checklist for onboarding

The company was failing to conduct proper onboarding. This meant many employees would fail to have many systems and accounts needed for smooth deliveries such as House Call Pro. By enacting this mistake-proofing technique, management could make sure that the employee had everything before even getting started. This makes the employee feel better about the structure of the company and makes sure they avoid any issues down the line such as an employee not getting paid.

Poka-Yoke Example 4

DELIVERY INSTALLATION CHECKLIST

U.S. JACLEAN, INC. _____
1816 W. 135th Street Gardena, CA 90249
Phone (310) 538-2298. Fax (310) 538-4521

Chair Installation Checklist

Chair Model:		Demo: ☐	New: ☐
Serial #:		Date:	

1.	Left Arm (Air Bag)	
2.	Right Arm (Air Bag)	
3.	Left Speaker	
4.	Right Speaker	
5.	Remote	
6.	Updated Software	
7.	Leg Rest (Air Bag & Rollers)	
8.	Leg Rest Motor	
9.	Leg Rest Extension	
10.	Zero Gravity Motor	
11.	Back Rest Motor	
12.	Heating Function	
13.	Twist Function	
14.	Hip Airbags	
15.	No squeaking/cracking noises	
16.	Bluetooth/USB Port	
17.	Shoulder Airbags	
18.	Headrest Airbags	
19.	Arm Extension (In/Out)	
20.	Tablet Charger	
21.	Wireless Charger (QI)	
22.	Manual Controller (on armrest)	
23.	Back Rollers	
24.	Child Safety Sensors (Hood & Armrest)	
25.	Run a Program Inspect Functions	

Customer Print Name _____ Date _____

Customer Signature _____

Inspection by _____ Date _____

Signature _____

Figure 17: Chair Installation Checklist

The company was experiencing issues with a couple of things. For starters, many customers were calling in to complain and say their chair was not working after the warehouse team left. Not only this, but the company would even get customers calling in claiming their chair was not working simply to get a discount or free items. To combat this, we enforced a chair installation checklist. The idea behind it was that the employee would be forced to go through the list and verify everything is working. They are required to get a customer signature during this. This means that they not only have to make sure it works, but we also have a customer signature stating that it worked before they left, and it avoided gifting many free items.

5 S Implementation

The 5S methodology, derived from five Japanese terms, represents a systematic approach to workplace organization: Sort, Set in Order, Shine, Standardize, and Sustain. It is a set of principles aimed at creating an efficient and organized work environment. "Sort" involves eliminating unnecessary items, "Set in Order" arranges remaining items for optimal accessibility, "Shine" focuses on cleanliness and maintenance, "Standardize" establishes consistent procedures, and "Sustain" emphasizes the ongoing commitment to these practices. Implementing 5S fosters improved efficiency, safety, and employee morale by minimizing waste, reducing clutter, and creating standardized processes. The methodology cultivates a culture of continuous improvement, contributing to increased productivity, reduced errors, and a more organized and streamlined operation for the organization.

5S Example 1

Figure 18: Uniform Visualization

The above shows a visualization tool to see an appropriate uniform example. The company was experiencing issues with employees not knowing how to wear their uniforms. This would result in them wearing ripped jeans or even open-toed shoes which not only looked unprofessional but could also easily result in injury. By adding this visualization, we decrease the risk of an employee reflecting negatively on the company or getting injured.
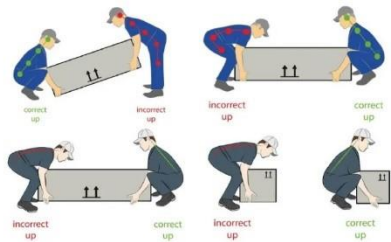
5S Example 2

Figure 19: Safety Stretching Demonstration

The above shows a safety demonstration for the warehouse teams to utilize. It includes a graphic element, procedures, an email from the CEO, directions to do it alongside the trainer, and a video example. Although the video example was not input in the manual at the point of submission due to final edits and consent forms being obtained, this was an amazing 5S technique for the warehouse teams to limit injuries.
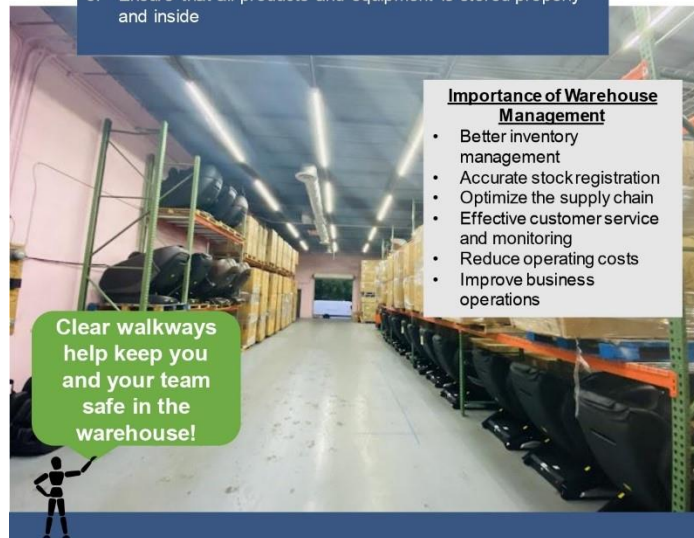
5S Example 3

Figure 20: Warehouse Management and Duties introduction page

The above provides an example of how the walkways of the warehouse should look. It also provides company direction and expectations for employees working in the warehouse. This was page one of many, but the rest that followed were used to demonstrate how they could apply for those duties. For example, there is a page later that ties into the inventory control and exactly how they can apply it to the warehouse.

5S Example 4

2023

THE 12 ESSENTIALS OF A PROFESSIONAL

"Dear, U.S.J staff,

In this issue, I have bulleted the most important points from the business material I once read that I believe are the most important for our job. If you incorporate these into your daily work and make them a habit, you will become a professional at your job."

-Michael Kogure

No. 1 Continuously improve the way you work

No. 2 Decide where to store tools and office supplies, and organize your surroundings

No. 3 Make it a habit to return used items to their original place

No. 4 Make a memo of "things to do" instead of memorizing them

No. 5 Set a time limit for each task and finish it within the time limit

No. 6 Setting goals makes a difference in "motivation"

No. 7 Have a clear image to take action

No. 8 Plan first and finish quickly

No. 9 What are your top priorities in life?

No. 10 What you need to achieve your goals is the tenacity to "get it done"

No. 11 Look at the people around you and delegate tasks

No. 12 Get into the habit of "doing it right away"

DISCUSS IT!

WITH YOUR TRAINER:
How can you show these 12 essentials in your day-to-day job? What are some ways you have demonstrated the essentials in the past?

Figure 21: The 12 Essentials of A Professional

This was a direct email from the owner of the company and one of the goal mindsets he wanted to standardize for everyone. He had communicated it through email in the past, but we wanted to include it as a 5s tool that helped to not only convey the direction, but also provide a layout for employees to feel comfortable and supported. As well as this, he felt that by speaking to employee motivation, it would help them to actively apply 5s tools in the warehouse such as keeping the warehouse organized. He aimed to create a sense of importance for each employee.

Monitoring the Process

Monitoring the process involves systematically overseeing and evaluating the various operational facets outlined in the comprehensive solution. This includes regularly tracking and analyzing the effectiveness of the Training Development Plan to ensure that employees are acquiring the necessary skills and knowledge. The use of systematic Checklists for deliveries, vehicles, shows, uniforms, onboarding, and more is monitored to ensure adherence to established protocols and to identify areas for improvement. Documentation maintenance involves overseeing the completion of weekly checklists and the adherence to Standard Operating Procedures (SOPs) to maintain organizational transparency and consistency. Additionally, the monitoring process involves tracking the utilization of safety gear through sign-out sheets and ensuring that mandatory training has been completed successfully. Continuous evaluation of the optimization of company equipment ensures that resources are efficiently utilized. Regular assessments and feedback loops are integral to the monitoring process, allowing the organization to identify successes, address challenges, and adapt strategies for ongoing improvement.

Monitoring Example 1

Figure 22: Warehouse Management and Organization

The above shows a simple process for items coming in and out of the warehouse. There were several other pages showing exact goals of organization in the warehouse and this page was meant to be an on-the-job demonstration. The trainee was to follow along with the trainer and then be able to demonstrate understanding of the topic through a small discussion quiz. In the case they could not demonstrate the topic, they would go back through the module and review. The idea was to ensure they had understanding, and the training manual was giving results.

Monitoring Example 2

Figure 23: Forklift Water Video and Check for Understanding

Since the company wanted to stress the forklift training so heavily, we included several monitoring check points throughout the module specific to the forklift. In this instance, we focused on the forklift water: an issue that was costing the company about $5K in damages each time. For this page, they would watch the video demonstration and then take the quick quiz after to ensure understanding. Then, while being shadowed by their trainer, they would show the ability to conduct a forklift water refill or change. The trainee would not be allowed to do these tasks without confirmation of training completion first.

Monitoring Example 3

WAREHOUSE:
CHECK FOR UNDERSTANING

2023

WITH YOUR TRAINER
Have your trainer quiz you on the following questions

1. What is the purpose of the second-floor release of liability form?

    1. If a customer denies signing the form, what do you do?

2. What forms of payment do we accept?

3. How far in advance should you give customers a curtesy call?

4. How should you store banners and carpets in the warehouse?

5. How much is the per diem for food allowances?

LET'S RELATE IT!
Go back to "Duties of an Organizer".
How do those duties relate to
warehouse management and how
can you apply them to your
warehouse shift?

At this point: confirm with your
trainer that you have a good base
understanding of Warehouse Basics

**Let's move on to Vehicle
Management now!**

Trainee Score: PASS / FAIL

Vehicle Management

Figure 24: Warehouse Check for Understanding

This page was a check for understanding placed at the end of a module. It summarized key parts of training with a follow up quiz that the trainer had to confirm passing for. Not only this, but it included several other checks and monitor systems to ensure that the trainee was retaining information from prior modules. For example, we included a "Let's relate it" section to add discussion and allow any questions to come up as well as just make sure they truly understood the prior module.

Monitoring Example 4

TRAINING COMPLETION CHECKLIST 2023

TOPIC	SCORE (IF APPLICABLE)	DATE COMPLETED	TRAINEE SIGNATURE	TRAINER SIGNATURE
MODULE 1: BRAND PHILOSOPHY				
BRAND PHILOSOPHY: CHECK FOR UNDERSTANDING				
KEY COMPARISION				
MODULE 2: SHIFT BASICS				
SHIFT BASICS : CHECK FOR UNDERSTANDING				
MODULE 3: WAREHOUSE MANAGEMENT				
FORKLIFT WATER: CHECK FOR UNDERSTANDING				
FORKLIFT OPERATIONS: CHECK FOR UNDERSTANDING				
WAREHOUSE: CHECK FOR UNDERSTANDING				
MODULE 4: VEHICLE MANAGEMENT				
VEHICLE MANAGEMENT: CHECK FOR UNDERSTANDING				
MODULE 5: SAM'S CLUB AND SHOWS				
SHOW: CHECK FOR UNDERSTANDING				
FINAL CHECK				

Figure 25: Final Training Checklist

This was done to ensure all trainees were completing training. It was also made as a fallback plan in case the employee claimed they were not trained on a topic. By keeping accurate records of training, the company is able to enforce and enhance monitoring systems as well as enforce better coaching procedures.

Results and Analysis

Challenges

Implementing the manual presents a set of challenges that revolve around the acceptance of change, operational complexities, and financial considerations. Resistance to change from employees is a common challenge, as adapting to new processes and technologies may face initial reluctance. The manual implementation requires a concerted effort to communicate the benefits clearly and involve employees in the transition process to mitigate resistance. The inherent busyness of day-to-day operations poses a hurdle, making it challenging for employees to allocate time for training and adapting to new procedures. Moreover, while digital platforms could streamline processes more efficiently, the potential expense associated with their implementation presents a financial barrier. The company may be hesitant to invest in costly digital solutions, emphasizing the need for a manual approach that aligns with budget constraints. Balancing the imperative for change with practical considerations is crucial in navigating these challenges and ensuring a successful implementation that aligns with the company's resources and goals.

Future Implementation

Within the constraints of the timeframe of the project, we were only able to complete most of the manual creation for the warehouse team. Despite this, this is part one of a 3-year long development plan. The company will pull from Warehouse development to create training timelines, procedures, and manuals for every other position. The goal of the company is to move Public within 5 years and to have a strong employee base first in which case the company eventually wants to conduct a Kaizen event and place continuous improvement processes in place.

This project helped to establish the base for training within the company and, although we did not get to see the full extent of results, we were able to see some immediate results. We were able to work with the Georgia team new hire to test the manual out. In doing so, his answers to our initial interview questions were much more highly rated than other employees. Not only this, but the GA branch was able to increase their Google reviews by 40 5-star reviews during this implementation. Mistakes decreased drastically and customer satisfaction went up. The new hire has also officially made it to his 3-month period with the company, which is a significant increase from the average 4-week turnover rate.

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team has been vital, making her a key interviewer for warehouse team members. Their collective efforts and commitment to excellence have profoundly influenced the success of this project, and we are genuinely grateful for their collaboration and support.

Appendix

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Reflections

Our project serves as a transformative journey that not only addresses the immediate challenges of low productivity and high turnover but also hones our collective skills and capabilities. The development and implementation of the Training Development Plan epitomizes our commitment to a holistic and innovative approach. Through the integration of visual, auditory, and on-the-job training techniques, we not only aim to elevate the skills of our workforce but also to enhance our prowess as engineers in crafting comprehensive and forward-thinking solutions.

The meticulous introduction of systematic Checklists and the creation of Standard Operating Procedures (SOPs) showcase our collective engineering precision. As we collaboratively navigate the complexities of Deliveries, Vehicles, Shows, Uniforms, and Onboarding, our project becomes a platform for refining our ability to streamline operational processes with transparency and accountability. The emphasis on safety, coupled with the pragmatic Optimization of Company Equipment, reflects our shared commitment to not only resolve immediate issues but to engineer solutions that resonate with efficiency and long-term success. This project, in essence, serves as a catalyst for our growth as engineers, enhancing our problem-solving skills, collaboration, and strategic thinking for the benefit of the organization we collectively strive to improve.