

1. Introduction

LoadProof (<https://loadproof.com/features>) is a Centralized Cloud based Enterprise Photo Documentation System for Supply Chain. It is built on the premise that photos and videos are vital documentation serving as compelling proof of important operations performed in the supply chain within and across organizations. These operations may be related to fulfilling customer orders, meeting contractual obligations, or while transferring merchandise across different parties partaking in the Supply Chain functions and operations.

Photo and video data are too important to be left stored in someone's smartphone, inbox or computer. They should be carefully collected and saved in a professional Centralized Enterprise system, where data can be pushed into super-fast, stored securely, and be accessible to all stakeholders, while facilitating super-fast and secure retrieval and sharing.

LoadProof is as important for your organization as an ERP (Enterprise Resource Planning) which is an enterprise system of record for critical documents such as Purchase Orders, Sales Orders, Contracts between parties etc. that have tremendous legal ramifications, or a WMS (Warehouse Management System), that holds indispensable information related to orders shipment/fulfillment data.

Just like Instagram, Facebook or Snapchat have evolved into platforms that enable individuals to showcase how pretty they or their clothes are, LoadProof is a similar

Enterprise system that holds photos, but for a different reason, not so much for show off, but to serve as proof, even in the court of law when there is a dispute between organizations while they perform many facets of their functions and operations, as well as for increased visibility within the Supply Chain.

Recently, Sara Lee Frozen Bakery implemented LoadProof in their warehouse. This Case Study describes the benefits they accrued by this process.



2. Sara Lee Frozen Bakery – Company Background

Sara Lee Frozen Bakery is a global manufacturer and marketer of brand-name frozen and other products for consumers throughout the world. It has operations in more than 40 countries and markets branded products in more than 140.

Although Sara Lee Frozen Bakery is quite a young company, it traces its history back to the Kitchens of Sara Lee, which was led by Chicagoan Charles Lubin. Lubin built a business known for premium cheesecakes and pound cakes from the mid-1930s through the mid-1950s.

It all started in 1935, Charles Lubin, at the age of 32, and his brother-in-law, Artur Gordon, bought a small chain of 3 neighborhood bakeries in Chicago called Community Bake Shops. It didn't take them long to increase their number to 7. In 1949, Charles Lubin created his first product – a fresh cheese cake, and named it after his then 9-year old daughter, Sara Lee. He also renamed his chain into Kitchens of Sara Lee. In 1951, he launched his All Butter Pound Cake. In 1952, when a customer visiting Chicago from Texas tried his product and was so impressed with the taste that he asked Charles to ship them to him all the way to Texas. This is when Charles took it as a task to find a way and freeze his cakes.

From pioneering the preparation of fresh-frozen desserts to packaging them in ready-to-use foil baking pans, Sara Lee has brought the joy of fresh, delicious baked goods to American homes for generations.

The company's founder Charles Lubin named his signature cheesecake after the only person sweet enough to match it: his daughter Sara Lee Lubin. The Sara Lee Cheesecake paved the way for a beloved brand of desserts known nationwide for their quality, freshness, and homespun flavors. Like Sara always said, "it had to be perfect because he was naming it after me."

In 1956 Charles Lubin sold Sara Lee to Chicago's Consolidated Foods Corp. A diversified consumer packaged goods business, Consolidated Foods grew and later changed its name in 1985 to Sara Lee Corp. When Sara Lee later split in 2012, its North American perishable foods business was renamed as the Hillshire Brands Company. Recognizing such an iconic brand, the private equity firm Kohlberg & Company agreed to purchase the business in June 2018. In turn, the investors formed Sara Lee Frozen Bakery, under the leadership of Executive Chairman CJ Fraleigh, a 30-year industry veteran who previously served as Chief Executive Officer at Sara Lee North America.

Today, Sara Lee Frozen Bakery has its HQ in Oakbrook Terrace, Illinois and operations in Tarboro, NC, and Traverse City, MI, with 1,160 dedicated team members and six trusted brands – Sara Lee®, Chef Pierre®, Bistro Collection®, Van's®, Superior on Main® and Cyrus O'Leary's® – Sara Lee Frozen Bakery that offer a wide variety of versatile flavors and formats of cakes and pastries.



3. Sara Lee Frozen Bakery – Supply Chain Macro Picture

Sara Lee Frozen Bakery is a manufacturer of frozen goods creating a wide variety of versatile flavors and formats full of delicious goodness. Their portfolio consists of pies, cakes, pastries, cookies, muffins, croissants, waffles and more. They take great pride in using the finest ingredients and time-honored recipes.

To ship their product, Sara Lee Frozen Bakery had to develop a complex supply chain process for sourcing, transportation, distribution and sales of its products. Cold storage and temperature-controlled transport are crucial – frozen cheese cakes must stay that way from the factory to the customers' tables, because when shipping sensitive products, any damages can create serious consequences. Their warehouse personnel perform final control and make sure that all food compliance requirements are fulfilled as well as their personal objectives – to deliver fresh, well-made frozen cakes and pastries. Then they fill in the necessary paper work. They make note of the order number, PO number, load type, number of pieces and the store number to deliver.

4. Sara Lee Frozen Bakery – Supply Chain Micro Picture

The supply chain of a frozen food manufacturer such as Sara Lee Frozen Bakery typically involves several stages, starting from sourcing raw materials to delivering finished products to customers:

1. **Sourcing:** The first step is the sourcing of raw materials, which typically includes fruits, vegetables, milk, butter and other ingredients. Sara Lee makes sure that all its sourced materials are of a great quality.
2. **Processing and Manufacturing:** Once the raw materials are sourced, they are transported to Sara Lee's manufacturing facilities where they are processed, cooked and packaged into the final, exceptional quality product.
3. **Warehousing and Distribution:** Once the frozen cakes are packaged, they are stored in a warehouse until they are ready for distribution. Proper storage is key as the products are sensitive and must be in a controlled temperature environment at all times. Once ready for shipment, they are transported to the several distribution centers across the country, in frozen or refrigerated trucks to maintain the appropriate temperature and ensure top quality.
4. **Retail Sales:** The frozen food products are sold at retail stores. Sara Lee's goods are delivered to foodservice establishments and restaurants, grocery stores and in-store bakeries.

Throughout the supply chain, products must be handled and transported at the appropriate temperature to maintain quality and safety. This involves using temperature-controlled vehicles, refrigerated storage facilities, and monitoring systems to track the temperature and condition of the products.

5. What is the Problem?

Shipping controlled-temperature food requires special care and attention to ensure that the food arrives at its destination in a safe and satisfactory condition. Here are the most important 5 aspects of shipping controlled-temperature food:

1. **Temperature Control:** The most important aspect of shipping controlled-temperature food is temperature control. The food must be kept at the appropriate temperature throughout the entire shipping process to prevent spoilage or contamination. This means that the shipping container must have the proper insulation, and temperature-monitoring devices must be in place to ensure that the temperature stays within the required range.



2. **Packaging:** Proper packaging is critical for shipping controlled-temperature food. The packaging must be strong enough to withstand the rigors of shipping and protect the food from damage. Additionally, it should be designed to keep the food at the appropriate temperature, such as using insulated packaging or incorporating refrigerants.
3. **Handling:** Proper handling is also essential when shipping controlled-temperature food. The food must be loaded and unloaded carefully to prevent damage to the packaging or the food itself. In addition, the shipping process should be as quick and efficient as possible to minimize the time that the food spends in transit.
4. **Regulations:** Regulations governing the shipping of controlled-temperature food are very strict, so it is important for Sara Lee to comply with them.
5. **Communication:** Effective communication is critical when shipping controlled-temperature food. The shipper and receiver must be in constant contact to ensure that the food is delivered on time and in the proper condition. Additionally, any issues or concerns must be communicated immediately to minimize the risk of spoilage or contamination.

Being a frozen food manufacturer Sara Lee Frozen Bakery have several very peculiar challenges.

1. **Quality:** sourcing high quality product is where greatness starts – that’s why it is important for Sara Lee to ensure that everything that enters their inbound docks complies with their high standards of quality.
2. **Regulations:** Shipping frozen food means meeting all FDA imposed compliance rules. The FDA has strict regulations regarding the production, labeling, and distribution of frozen goods in order to ensure the safety and quality of the product for consumers. Non-compliance with these regulations can result in unsafe or mislabeled products, which can harm the public and undermine consumer trust in the industry.
3. **Returns:** shipping perishable product that can be easily affected by temperature means that it can easily spoil on its way to the customer. This can result in dissatisfied customers, negative reviews, and potential loss of business. To mitigate these risks, Sara Lee Frozen Bakery is using top-notch packaging and insulation and professional controlled temperature points of storage and transport to ensure that the product travels in good condition. That’s why it is was important for Sara Lee Frozen Bakery to have clear policies and procedures in place for handling claims related to spoiled food to ensure customer satisfaction and protect their reputation.



In conclusion, Sara Lee Frozen Bakery needed a solution that would support them in their inbound and outbound docks, help them maintain the strict self-imposed quality as well as FDA compliance requirements. In addition, they wanted to make sure that they had the proof of condition when claims and damages appeared. They did try to document shipments by capturing photos of loads before LoadProof, but they were using their tablets or smartphones to

do so, and these photos were not of good quality. When employees would leave, Sara Lee Frozen Bakery would not know who had taken the photos; sometimes photos got lost, too.

All of these problems were easily solvable by a digital photo-documentation system.

6. What is the Solution?

Sara Lee Frozen Bakery reached out to LoadProof, in an attempt to transform the center's operations through the way they handled their documentation. The LoadProof solution was implemented in their distribution facility. After several short classroom-type training sessions with the relevant employees, the project was ready to roll out on the floor. The results were immediately evident.

Once equipped with LoadProof, Sara Lee Frozen Bakery personnel started capturing photos of all parts of the supply chain process, such as loads shipment and packing list of products before transit. These photos were stored and uploaded to the LoadProof Cloud and were made available to operation managers whenever they needed them. That meant that they could go back to them and use them as a proof. Searching through photos was tremendously easier compared to the paper archive. Also, there were many ways to find saved photos – searching by trailer number, GPS Coordinates, PO number or any other metadata that may have been regularly entered. With this vast metadata that was stored along with the photos, man-hours spent on search decreased to a fragment of what they used to be, and accountability could be traced within just a several clicks.

Sara Lee Frozen Bakery have been using LoadProof for the following scenarios, taking full advantage of LoadProof:

6.1 Compliance

With LoadProof, the cumbersome paper documenting processes needed for compliance requirements became so much simpler. The needed documentation was collected and stored digitally and much faster than before. This helped Sara Lee Frozen Bakery decrease their man-hours, redirecting the team's focus to more important aspects of the work, taking out some of the noise of extra work. Change management-wise, this was a smooth transition without any reluctance or resistance on the part of the personnel, who gained a tool that made their lives easier.

6.2. Claims

Once photos were added to the process of shipping, Sara Lee Frozen Bakery could resolve claims much faster. Paper documentation, if any, was hard to trace, and took too much time to do so. Even then, it was not clear who did what part of the process, making it impossible to identify gaps in the process that would help them improve. With LoadProof they could easily trace the movement of goods across their supply chain, and maintain professional yet fair relationship with their partners when dealing with claims.

6.3. Damages

Sara Lee Frozen Bakery is strongly dedicated to quality control of the work they perform. With LoadProof, any damages can be easily documented and used for later improvements, ensuring continuous growth in the quality of their operations.

7. What are the capabilities that Sara Lee Frozen Bakery gained with LoadProof?

LoadProof is a Centralized Enterprise Class Photo Documentation Solution for the entire Sara Lee Frozen Bakery Network.

7.1 Super-Fast Photo Capture

After downloading the LoadProof app from the app store, Sara Lee Frozen Bakery users could take photos using their mobile devices within just a few seconds and then upload these photos to a Cloud, by tagging them with the appropriate contextual data elements. While uploading the photos, the personnel could add notes, are tag the photos with the following data:

1. User that captured the photos
2. Date of photo capturing
3. Time of photo capturing
4. GPS coordinates of the location where photos WERE captured
5. Device used to capture the photos
6. Android OS version that was running on the device used to capture photos

The photos could be captured in multiple resolutions based on the plan - Low, Medium or High Resolution. Sara Lee Frozen Bakery use medium resolution to capture photos of documents such as Packing Slip, Bill of Lading and Load Verification sheet as well as ready loads.



7.2 Super-Fast Photo Retrieval

So now the photos are uploaded to the LoadProof cloud, users can easily log on to the LoadProof cloud through the browser and look up photos from wherever they need to. Users logon to the cloud the browser by providing their credentials, which includes a user id and password. Then users are able to input one or more of the contextual data that had tagged the Photos with and then perform a super-fast search. Now users can retrieve the Photos they need, drill down further and look at the Photos individually, zoom in, zoom out, save them locally if they need to (not recommended often) and also examine any notes that was entered and also look at the date stamp, time stamp, GPS coordinates etc. if there is a need to validate any of these data set for each Photo.

7.3 Super-Fast Photo Sharing

After retrieving Photos users can share the Photos with anybody else, usually customers, vendors, partners, carriers, cross dock facilities, insurance companies, claims processors, Retailers, consolidation facilities etc. in multiple ways as listed below,

1. By generating one PDF document for the entire load
2. By sending the entire load to a customer by inputting an email address

3. By setting up a customer as a user within LoadProof
4. By generating a LoadProof URL for each Photo and then sharing that URL in an email
5. By generating multiple LoadProof URLs for all Photos and then sharing those URLs in an email

7.5 Enterprise Supply Chain Network Architecture

1. Sara Lee Frozen Bakery has corporate level users set up that have visibility to look at Photos across all the sites
 - a. These users could be Photo taker users or Photo viewer users or both
 - b. These users could also be Admin users or Non admin users
2. Sara Lee Frozen Bakery also has Network level users that have visibility to look at the Photos at the Supply Chain Network level
 - a. These users could be Photo taker users or Photo viewer users or both
 - b. These users could also be Admin users or Non admin users
3. Sara Lee Frozen Bakery has site level users that have visibility to look at the Photos at the site level
 - a. These users could be Photo taker users or Photo viewer users or both
 - b. These users could also be Admin users or Non admin users

7.6 Integrations with other Systems

1. LoadProof supports integration with other systems.
2. LoadProof is already integrated with Mercury Gate, My Ez Claims System. My Ez Claims is a Freight Claims Processing system that helps shippers process their Freight claims with multiple carriers faster and easier.
3. LoadProof can be integrated by setting up a field to look up from any other system using a hyperlink so that LoadProof data can be pulled into a browser directly by clicking a link in the external system.

8 What are the Benefits?

LoadProof offers a simple yet extremely effective method of dealing with food manufacturer and shipper's challenges. Not only is retrieving data much easier for Sara Lee Frozen Bakery operators, but also the consistency in completing their internal checks improved as well. They could give the right kind of attention to more important parts of their operations now.

8.1 Measurable Hard Benefits

1. Now that there is one centralized place to get the photos from, and retrieval of photos is super easy, Sara Lee Frozen Bakery personnel can retrieve photos in a matter of seconds instead of spending hours on end looking for them. All the time related to this activity is saved now.
2. Sara Lee Frozen Bakery operators are doing a much better job, now that everyone knows the quality of the work they are doing is being documented. This directly results in improved customer satisfaction rating: customer satisfaction surveys show improvement on customer satisfaction ratings and hence the relationship with the customer has significantly improved.

- With the centralized sharing of photos made super easy, all Sara Lee Frozen Bakery personnel have to do is put in the email address and push a button, and the person on the other end gets the photo within minutes. There are no more back and forth conversations wasting time. All the time related to this activity is saved now.

8.2 Intangible Soft Benefits

- Everybody at Sara Lee Frozen Bakery’s facilities feel good about the centralized Photo documentation system. Nobody is losing sleep over damage claims, compliance or quality issues.
- The visibility gained in all the steps of the process to ensure better production and shipping are going flawlessly is excellent. Processes are simplified across all teams, making operations better. If there is any complaint, they can immediately pull the photos. The visibility has enhanced transparency, so the trust with partners and clients have improved significantly, our reputation in the industry has improved as well.
- Ability to set up multiple facilities and multiple personnel at the facility level and at the corporate level is very helpful also. It has eliminated unnecessary calls quite a bit, nobody has to wait for the other person to respond.

9 What are the Cost Savings?

The savings are summarized below under different sections as appropriate.

9.1 Savings due to implementing a Centralized Enterprise class Documentation System for Photos & Videos

# of Hours saver per facilities per week	25
# of facilities	1
Hourly rate of employees that manage these photos	\$20
Total Savings in a year per facility	25 X \$20 X 54 = \$27,000
Total Savings per Year within the entire Supply Chain Network	\$27,000

9.2 Savings due to less Rejected Loads and Reduced Damage claim submitted by customers

Average # of Shipments in a month	400
# of Facilities in supply chain network	1
Average value of a shipment	\$10,000
Average value of all shipments in one facility in one year	\$10,000 x 400 x 12 = \$48,000,000
Average \$ lost (0.5% damages) due to rejected and damages claims submitted by customers in one year in one site	\$240,000
Average value of all shipments in one year within the Supply Chain Network (1 site)	\$48,000,000 x 1 = \$48,000,000
Average \$ lost due to rejected and damages claims submitted by customers (0.5% of Total)	\$240,000
With LoadProof that dollars lost is reduced to 20%, hence the savings are 80%	\$192,000

9.3 Savings due to Faster Processing of Freight Claims

Average # of shipments in one facility in one year => 400 shipments per month x 12 months	4800
# of Facilities	3
Average # of shipments within the supply chain network in one year across 3 sites	14,400
Hourly rate of employees that manage these Photos	\$20

Estimated # of shipments (1% of total shipments) that results in Freight claims within the supply chain network	192
Hours saved with faster processing of freight claims within supply chain network (12 hours saved per freight claim)	192 x 12 = 2304
Total dollars saved = 2304X \$ 20/hour	\$46,080
Total Savings/Year within entire Supply Chain Network due to faster Freight Claims Process	\$46,080

The total savings with faster processing of Freight claims results in **\$46,080**

Industry Numbers: Average number of Freight claims issued for Outbound shipments is approximately 1% of the number of shipments. Sara Lee Frozen Bakery is around 1% which results in a savings of \$46,080 with faster processing of Freight claims

9.4 Total Savings per Year

Savings due to Centralized Photo Documentation System	\$27,000
Savings due to reduced rejected and damages claims submitted by customers	\$192,000
Savings per Year due to faster processing of freight claims	\$46,080
Total Savings	\$265,080

11. General Insights

1. If you are in the food manufacturing and shipping operations, with numerous shipping facilities or partners, LoadProof can be the support you need when dealing with chargebacks in order to save you both a lot of dollars and a lot of time and headaches. Having photos taken at every step of these processes, even though it might seem like an extra step at first, is actually a huge time-saver. The reason for this is that photos documented by LoadProof contain numerous metadata, such as user who took the photo, date stamp, time stamp, GPS stamp, etc. As such, these photos are stored in an organized manner in a safe Cloud. Hence, when you really need the photo as a proof, you can find it in a matter of minutes, instead of hours. The frustration poorly organized documentation brings will be gone forever with the proper photo-documentation in place.
2. Compliance penalties can be expensive, but more importantly, misconduct in this area can mean losing your business. Dealing with easily perishable food is a complex business and requires a great deal of attention. This is where LoadProof comes in handy – it gives you the peace of mind that you have done your job well and completed your part of the obligations. It will protect your reputation where it is most fragile.
3. The warehouse operators usually question why they have to do this one extra step now, documenting everything they do with photos. Once they see how helpful it is, it helps them find the cause of their issues quickly, and it protects them, especially when they do a great job. Soon they realize that spending those few extra seconds is well worth it, because somebody cannot just blame them when the fault is not theirs. Once they realize this benefit, they embrace the system whole-heartedly.
4. Another unexpected benefit is that when staff in your facility realize that the quality of work they do is being documented, they do a better job, their quality of work improves and that results in better overall output.
5. When the operators realize that they are doing a great job and know that their work is being documented with photo proof, the overall operator morale improves, also the operators trust the systems, the operations, the leadership team, and the overall management, resulting in better trusting, truly collaborating culture and work environment.