



Implementation & Results for a Leading Plumbing Manufacturing Company – Case Study

1. Introduction

Recently, this leading Plumbing manufacturing company implemented LoadProof – the centralized enterprise photo documentation system. This document describes the benefits of effective photo documentation that helps in avoiding freight claims and damages.

This leading plumbing and kitchen company was founded in the second half of the 19th century and is best known for its plumbing products, but the company also manufactures furniture, cabinetry, tile, engines, and generators.

Their products are available in all the retail hardware and home improvement stores. This leading plumbing manufacturing company still makes traditional cast iron bathtubs, one of the few United States manufacturers to do so. Besides residential products, it also manufactures commercial line of bathroom fixtures.

2. Leading Plumbing Manufacturing Supply Chain – Macro Picture

As a manufacturing company of plumbing products, they have their distribution centre with all the sophisticated material handling equipments. The products are distributed to various retailers like Lowes, Home Depot, Amazon, Bed Bath & Beyond, Walmart, and



more. Plumbing products are mostly used for construction works. In order to provide the best fit and finish for customers, the builders always look for the quality products available in the market. This leading plumbing manufacturing company never failed to provide those best products.

The supply chain network of this plumbing manufacturing company is complex as they distribute the goods to retailers. In six continents, it operates with more than 50 production facilities and offices. Most of the manufactured products are fragile so they have to ship these products with all the damage control measures. They always make sure that they did their job right by shipping goods without any damages from their warehouse to retailers.

3. Leading Plumbing Manufacturing Supply Chain - Micro Picture

The goal of this project is to avoid damage claims during the transportation of these fragile shipments. Even though the damages were caused by the carrier, this leading plumbing manufacturing company is getting blamed for the mistakes not theirs and hence losing dollars. They were looking for a single tool to document and manage all the captured photos during shipment. If the photos are organized then they don't need to spend much time in retrieval of photos from the storage.

Processing of these photo documents should be made simple without any waste of time and labour. In case of any claims, these photo documents will be considered as evidence to prove they did their job right.

4. What is the Problem?

This Leading Plumbing manufacturing company manufactures kitchen faucets, bath suits, faucets, vessels etc. All these are fragile products which needed careful handling from manufacturing to shipping. They always ensure that products are shipped to retailers without damages. They ship through a 3PL transportation company and before shipping they capture photos of the loads to be shipped. They ship

from four warehouses located in Texas, Pennsylvania, and the California states.

After Implementation of LoadProof, they took photos of the trailer number, packing slip, addition of load bars, dunnage bags to ensure that goods leaving their facility are in good condition. Finding the right photo at the right time was made a lot easier now. There was an improvement in the quality of shipments that are delivered. Claims are reduced, and hours spent in searching for photos are reduced which resulted in savings of thousands of dollars

5. What is the Solution?

They started to use LoadProof - The Centralized Photo Documentation System. They implemented LoadProof to capture outbound loads along with meta-contextual data. Photos taken through LoadProof are immediately stored in a single cloud. Retrieving them is very simple too. Thanks to these features, LoadProof reduced the hours spent on searching for photos when they got claim requests from their retailers.

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6. What are the capabilities this leading Plumbing Manufacturing Company obtained with LoadProof?

LoadProof is a Centralized Enterprise Photo Documentation System for the leading manufacturing company. It improved their supply chain visibility and creates trust with their customers.

6.1 Super-fast Photo Capture

After downloading the LoadProof app from the



app store, the personnel of this leading plumbing manufacturing company were able to take photos using their mobile devices in just a few seconds and then upload those photos to the LoadProof cloud, tagging them in the meantime with the appropriate contextual data elements. While uploading photos, they were able to add notes, and to tag photos with the following meta-data

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

Photos are captured in multiple resolutions based on the plan - Low Resolution, Medium Resolution, and High Resolution. This leading plumbing manufacturing company uses high resolution photos to capture photos of documents such as Packing Slip, Bill of Lading, and Trailer Inspection Form.

6.2 Super-Fast Photo Retrieval

So now the photos are uploaded to the LoadProof system, users can easily log on to the LoadProof portal through the browser and look up photos from wherever they need to. Users logon to the portal 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.

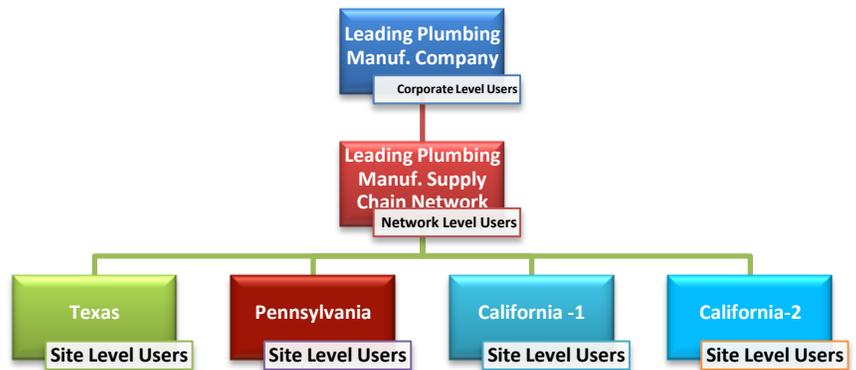
6.3 Super-Fast Photo Sharing

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.

6.4 Supports Enterprise Supply Chain Network Architecture



1. This leading plumbing manufacturing company has corporate level users set up that have visibility to look at photos across all the sites
 - a) These users could be picture taker users or picture viewer users or both
 - b) These users could also be Admin users or Non admin users
2. They also has Network level users that have visibility to look at the photos at the Supply Chain Network level
 - a) These users could be picture taker users or picture viewer users or both
 - b) These users could also be Admin users or Non admin users
3. They has site level users that have visibility to look at the photos at the site level
 - a) These users could be picture taker users or picture viewer users or both.
 - b) These users could also be Admin users or Non admin users.

Paulo Lubag - Manager Logistics Solutions



"With LoadProof we can take different sample audits out there and use that as a training tool or a process improvement tool to really stabilize the shipping processes"

6.5 Integrations with other Systems

1. LoadProof supports integration with other systems.
2. LoadProof is already integrated with Mercury Gate, MyEzClaims System. MyEzClaims is a Freight Claims Processing system that helps shippers processes 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.

7. What are the Benefits?

The results were fantastic, and the vice president mentions in his testimonial, he was able to reduce the number of freight claims and damage claims. Now they are not spending a lot of time just looking for photos. Now they are saving anywhere from 23 hours per week per facility on the time that is spent on organizing the photos and retrieving them when a retailer comes back for damage and freight claims.

7.1 Measurable Hard Benefits

1. Now there is one centralized place to get the photos from, retrieval of photos is super easy, their personnel retrieve the photos in seconds instead of spending hours and hours looking for those photos. All the time related to this activity is saved now.
2. With the centralized sharing of photos is super easy, all the personnel of this leading plumbing manufacturing company have to do is put in the email address and push a button, the person on the other end gets the picture within minutes and there are no more back and forth conversations wasting time. All the time related to this activity is saved now.
3. Their operators started doing a much better job, when everyone knows the quality of the work we are doing is documented. They were able to better serve their customers.
4. They were setting up their both internal DCs as users within LoadProof, basically it is a self-service model, which helps tremendously because now, instead of calling their other DC personnel they can look and download the photos whenever they need, life is so much better, everything related to the photos is super easy. All the time related to this activity is saved now.
5. Before their retailers would come back for a damage claim. Their DC units wouldn't have anything to show that they did their job right. So all they can do is pay for the damages.
But now with LoadProof, they can show the photos and say, hey we did send this item along with the picture of the PO and trailer inspection form. By this way they were able to prove that it is not their fault.
6. With photo documentation they were able to capture their shipping conditions such as addition of load bar, air bags between the pallets and also the condition of the seals they fix in the outside door of the trailer. With these additions they were able to prove that they did their job right. It also made them much easier to have that conversation in a rejected load scenario and as they can push back on the customer as we they have proof.

7.2 Intangible Soft Benefits

1. Now there is one centralized place to get the photos from, retrieval of photos is super easy, their personnel retrieve the photos in seconds instead of spending hours and hours looking for those photos. All the time related to this activity is saved now.
2. Everybody in the distribution center feels good about the centralized picture documentation system. There is no more uneasy feeling in the stomach when a retail customer reports damage and submits a damage claim. Nobody is losing sleep over damage claims and rejected loads.
3. The visibility to the steps they do to ensure the product is shipped in excellent condition to all parties, customers, Carriers, internal stake holders such as the Salespeople, Customer Support people, Support Technicians, etc... makes them feel much
Better, if there is any complaint, and they can immediately pull the photos and show them. The visibility has enhanced transparency, so the trust with their partners has improved significantly, their reputation in the industrial products supply has improved as well.
4. Inbound Quality Process – They have also started to take photos in their inbound loads for Quality Audits, with photos now we are able to push back

on the vendors, and also they understand the issues faster and better as photos are worth thousand words, these results in getting the quality issues addressed faster and better.

5. 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 inspect loads.
6. It made everyone in their supply chain to be accountable for whatever actions they do. This resulted in better discipline and work culture in their supply chain as a whole.

8. Calculation on How Dollars Lost on Freight claims and what are the Cost Savings from LoadProof Implementation?

The savings are summarized below under different sections as appropriate.

8.1 2. Losing Dollars on Freight Claims

Load details	Cost (in \$\$\$)
Average cost of 1 box in a shipment	\$400
Cost of boxes in 1 Tier (6 boxes in Tier)	\$2,400
Cost of all boxes in a Pallet (4 tiers in the Pallet)	\$9,600
Value per Load (10 Pallets in a load)	\$96,000
Value of all Loads shipped in 1 Month	\$5,760,000
Estimated Dollars lost on Freight Claims (0.5% of the total Value)	\$17,280,000

The Dollars lost on Freight claims is estimated to be \$28,800/month for 1 distribution center. The estimated annual loss on freight claims for this leading plumbing manufacturing company throughout the entire Supply Chain network is \$17,280,000.

Industry Practice: 0.5% of the value of the shipment results in freights claims

Assuming that this leading plumbing manufacturing distribution center of 697,000 square feet in San Bernardino, California faces \$50,400/month loss in freight claims.

8.2 4. Losing Dollars due to multiple people working on the same Issue for Invoice Deductions Management

S.no	Sequence of operation	Time spent
1.	Accounts Receivable personnel are getting invoices with automatic deductions and it is forwarded to the Vendor Compliance Specialist (VCS)	3 hours
2.	The VCS under the AR Manager, reviews the automatic deduction which is a chargeback	4 hours
3.	The VCS calls the Distribution Center asking about the compliance issue	3 hours
4.	The DC Manager does his side of the research, assigns one or more people to identify the root cause of the issue	4 hours
5.	The VCS submits relevant information back and discusses about the chargeback	6 hours
6.	Sometimes chargebacks are cancelled, sometimes they are not	2 hours

An estimated time of 22 hours is spent working on one chargeback issued, that results in loss of \$1650/month for 1 distribution center approximately

Industry Practice: The workers are paid at the rate \$15/hr and 5 chargebacks are issued per month in 1 distribution center.

Total dollars lost by this leading plumbing manufacturing company within the entire Supply Chain network due to lack of clear ownership and multiple people managing Invoice deductions is \$990,000 annually.

8.3 4. Saving Dollars on clear ownership for Invoice deduction management

S.no	Sequence of Operation	Time spent
1.	Accounts Receivable personnel gets invoices with automatic deductions and it is forwarded to the Vendor Compliance Specialist	3 hours
2.	The VCS reviews the photos of the load in LoadProof and submits the relevant information to discuss the chargeback	1 hours
3.	The chargeback issued are cancelled because solid evidence with date and time stamp is submitted with photos stored in LoadProof	1 hours

The savings made with clear ownership and efficient management with chargebacks is estimated to be \$1,275/month for one distribution center.

The Annual savings with clear ownership across leading Plumbing Manufacturing Supply Chain Network is \$765,000.

The Annual savings for leading Plumbing Manufacturing Company after implementing LoadProof is approximately \$57.3 Million.

About Smart Gladiator - LoadProof

LoadProof was created as a photo documentation repository to allow operators to take images of any damaged, fragile merchandise. The Smart Gladiator - LoadProof software is designed to allow companies to have an index-able database in the cloud for all of their photos.

