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Abstract

The pandemic has forced the transportation industry to reinvent their own processes when servicing their customers. The old ways of doing things are no longer an option in this new economic landscape. To remain successful, it is imperative for less-than-truckload carriers to remain relevant and fluid. By placing the proper contingencies in their on-time and OS&D strategy plans cannot only increase their chances of being a transportation provider of choice, but they can provide better service for their customers. The paper will also use secondary data from industry analyst that have identified trends and pain points that have led to an increase in performance metrics that resulted in improved carrier-shipper partnerships. Understanding the various datapoints in which a carrier and shipper relationship will flourish in the post pandemic world. Its sole purpose is to improve relations between shippers and receivers and to develop new methods of operations and technological offerings which were introduced from the pandemic.

Implementing an Effective LTL Strategy

Contents

| | |
|---|----|
| Section 1: Introduction | 5 |
| Section 2: Literature Review | 7 |
| Section 3: Research Methodology | 14 |
| Section 4: Conclusions, Recommendations, and Future Work..... | 17 |
| Section 5: References..... | 19 |

Section 1: Introduction

The pandemic has undoubtedly upended numerous business sectors causing delays in production and transit time. These challenges have the transportation industry scrambling to provide best-in-class service to its business partners. Which is why it is critical for transportation carriers to implement an effective OS&D strategy as well as improve service levels for on-time pickups and deliveries. By doing so carriers will have an effective playbook to become a carrier of choice in the post-pandemic landscape. This paper will further examine the role of less-than-truckload (LTL) carriers as they navigate their way through uncharted territory to restore full faith back into their customers.

The primary purpose of this study is to identify how less-than-truckload companies will evolve after the pandemic and work to improve relations with their customers. It will also identify the economic factors that have hindered performance and what is being done to work around those issues. Through thorough examination of how shippers and receivers are also impacting truckload operations we can then understand how to properly address and fix the constraints that is causing damaged and lost freight as well as affecting on-time performance metrics. New innovations in technology and improvements in processes will provide the edge LTL carriers will need to propel themselves into the upper echelons of preferred transportation providers.

Statement of Purpose

LTL is the primary mode of choice for shippers who ship six pallets or less with freight totaling no more than 4,000 pounds. Because of this setup multiple shippers' freight can be hauled on a single trailer and travels to regional service center where it is broken down to ship to its next region or locale. Multiple touchpoints can and will increase the risk of damaged freight due to the increased number of times the shipment is handled. Another issue that stems from

Implementing an Effective LTL Strategy

LTL is when you have multiple shippers' freight on trailers is the propensity for freight being incorrectly routed due to improper labeling, pinwheeling, incorrect packaging, or careless working processes. These factors also contribute to OS&D claims from the consignee because it results in lost freight which in turn affects the receiver's operation. Service level agreements or SLA also creates an impact in that on-time pick up and timely deliveries impact the carrier-shipper relationship. Factors that impact service level agreements range from trailers being held by shippers or receivers for the purpose of temporary storage units, driver delays at previous shippers, extended transit times, pickup and delivery dates being pushed out due to capacity and situations where a customer will try to ship more than what was agreed to causing additional delays.

With all these factors that were daily struggles prior to the pandemic we saw an increase in these issues during the pandemic and even more so now that businesses began to open back up and people began to go back to the workforce. It is important for shippers to evaluate and implement a solid policy for the OS&D strategy and define ways to reduce or even eliminate network congestion that will improve transit times.

Definition of Key terms

OS&D – is the acronym for overage, shortages, and damages. It can simply be described as the process in which discussions between the shipper and the LTL service provider determine the whereabouts or extent of damage to a shipment and who is at fault.

LTL – is less-than-truckload is the shipping method in which multiple shippers can share space on a trailer resulting in a much more cost-efficient option.

SLA – outlines the level of service a customer can expect from the LTL carrier by laying out the metrics in which service is measured. There are also guidelines in which penalties are assessed should service levels are not achieved.

Section 2: Literature Review

The significance of the research will highlight case studies in which impact freight claims and service performance that has been successfully used as a model for other less-than-truckload companies to follow to better service their customers. It will also evaluate the impacts of poor planning within the customers supply chain and how that negatively impacts shipping operations, thus resulting in delays in the customers production through damaged and unaccounted for freight and overall carrier network congestion.

In William B. Cassidy's article (2020) he states how COVID-19 has severely impacted capacity issues throughout the supply chains and is not seeing any sign of stopping. 68.1 percent of problems stemmed directly from shippers and receivers indicated they were experiencing staffing issues due to the pandemic. Not having the proper resources onsite for unloading and loading freight was only part of the issue because shippers were also put in a situation where they would secure an additional capacity surplus to ensure they had sufficient levels of carriers to meet the already overwhelming demand. Throughout my research and experience in the industry I have seen that this is a systemic issue that has not improved over the past year and is likely to remain well into 2022. Cassidy (2020) goes on to discuss how available LTL capacity is diminishing due to an overwhelming presence of trailers dwelled at many retailer locations. Because of this it is causing multiple service failures for other customers because there are no available trailers to make pickups or deliveries. It is interesting to note within my own role that this is exactly what we are seeing however, many of the retailers who are in possession of trailers do not unload simply because of the convenience. Warehouse space in today's industry is at a premium and for a customer to not unload a trailer due to lack of space on their own dock they

Implementing an Effective LTL Strategy

use the trailer as a temporary storage solution until there is available space. This works because the daily holding fee assessed for keeping a trailer is much more cost effective than paying for warehouse space. A whitepaper written by the Journal of Commerce, which was also sponsored by LTL provider, Old Dominion added additional issues that shippers have been facing during the pandemic. Both articles agree that a lack of capacity is indeed a major factor in the decline in on-time pickups and deliveries in the LTL industry. However, several respondents were surveyed, and it was determined that a deterioration in overall response times, problem resolution, and proactive communication from their LTL service providers was the biggest enabling factor of concern (JOC, 2020). Communication breakdowns have always been issues even before the pandemic, but now that we are still in full swing it is more relevant than ever. As one LTL executive stated, “when a river is flowing it may be hard to see the rocks, as the water levels decrease, they become readily apparent.” (n.d., 2020) What this really means is the pandemic has truly exposed all the inefficiencies within the supply chain. Of all the things that shippers hold dear consistency reigns supreme. With all the LTL companies out there today technology breakthroughs have absolutely changed the landscape of the industry. However, as the whitepaper suggested all the technology in the world cannot and will not replace consistency. (JOC, 2020) Further research suggests that as capacity tightens shippers are more likely to remove carriers who are failing in service-related metrics over actual capacity failures. Where it was stated previously shippers are more prone to terminate carrier partnerships when the delay of service communications has been overly compromised. In another article from William B. Cassidy, he mentioned that the firing of relationships is a two-way street. Early in the summer of 2021 LTL giant, FedEx, issued a press released that they will be ending relationships with as many as 1,400 customers in order to alleviate constraints on capacity. Such a move was

Implementing an Effective LTL Strategy

implemented for the LTL provider to prevent additional disruptions and attempt to bring balance to their already exhausted network (Cassidy, 2021) A scenario just like this is what many consultants and industry experts have been telling shippers would happen. My thoughts on the matter come from actual experience in my current role. The whole capacity issue has been a perfect storm that has finally boiled over and created the situation we are in currently. Supply chains have been in disarray since early last year once COVID-19 forced business closures and reduction of staff in which some businesses were able to continue operations in a limited capacity. As government subsidies were handed out to businesses and individuals it created an unprecedented spike in consumer demand from the purchasing of services to the purchase of physical goods. All the while global production was already shutdown so basically you have an economy that went into hyperdrive and no one to fulfill the orders. Eventually, when the manufacturing sector came back online there was a large queue of orders to satisfy. (Fuller, 2021). As the news outlets have mentioned the severe backlog of container ships that are docked in the U.S. ports are only adding to the capacity issue. If shippers are going to play in this new arena, they are either going to have to add more LTL carriers to their network or pay higher rates. These points are the ones that I am currently communicating to our customers and it does not come without some level of pushback. This is where the customer is wanting actionable solutions because they are growing weary of shippers using the pandemic as an excuse for abysmal service levels. More and more shippers are responsive to building relationships and are in favor of any realistic plan to keep their shipment flow moving. Some of the actions that have been used to lessen the service failures include holding freight for an additional day to basically have enough freight to move via full truckload. The benefit of this is to minimize the multitude of touchpoints which would result in shorter transit times boosting customer confidence. This

Implementing an Effective LTL Strategy

method known as freight pooling is something that tech companies like Flock Freight has developed using algorithms for LTL companies who are looking to avoid the risks associated with LTL providers by partnering them with full-truckload carriers. Flock Freight will create partnerships between full-truckload carriers who have available space on their trailers that can accommodate a LTL shipper. Freight that is moving in the same direction can allow other LTL shippers pool their freight in one truckload resulting in fewer touchpoints and friendlier pricing. (Huff, 2020) Another plan to improve service levels has been the creation of internal customer solutions groups to help support at-risk customers. In a typical cadence a customer will have the luxury of reaching out to customer service teams of the LTL provider. Ultimately, these teams became overwhelmed with an influx of calls and many LTL providers added an extra measure of support to their customers. A customer solutions team is comprised of analyst who can deep dive into data to determine where issues are occurring and providing solutions to these problems. This has been a next level layer of support for these customers that has improved business relations throughout the pandemic.

The lack of available trailer capacity is not the only issue that befalls the LTL industry during the pandemic either. Another problem for shippers during this time is an increase in OS&D (overages, shortages, and damages). There is a wide array of issues that go into claims submitted by the consignee to which the shipper then files claim against the LTL carrier. Prior to the pandemic standard practice at the shipper would allow for the driver picking up the freight to perform a secondary count of the units contained in the shipment and compare that against the quantity the shipper is indicating. This is known as the load and count procedure and was effective because it allowed for a two-point verification of the shipment count. Now that the pandemic has changed the landscape, we now must follow social distancing orders to keep

Implementing an Effective LTL Strategy

everyone safe. Because of these new safety policies drivers are no longer allowed to be on the shipper's dock. (Cassidy, 2021) This is creating potential for miscounts and unsubstantiated claims filed by the consignee and a contentious back-and-forth between shipper and carrier. What should be happening is the inclusion of digital BOLs which will prevent the manual handling of paper as well as prevent any transmission of COVID-19. A few things are certain with OS&D issues, one they almost always occur at origin, and secondly, they average 3 different touchpoints whereas full truckload only no touchpoints during the life of the shipment. (LaGore, 2020) It is important to understand how LTL freight travels through the carrier's network. A hub and spoke model is the main point-to-point method used because LTL carriers depend on a specific amount of freight density as possible to move the freight as economically as possible (n.d., 2021)

Ideally, for shippers and carriers to help mitigate the amount of OS&D claims it would be beneficial for both parties to assess each other's freight and construct a freight profile. A freight profile would validate every piece of freight available that the shipper would move with a carrier. The shipper would then offer their own advice to the shipper in what would make the shipper's freight travel as ideal as possible. The checklist below would ensure all necessary measures would be taken to safeguard the shipper's freight.

- Proper packaging like straps that secure cargo to the pallet and a solid use of shrink wrap to keep individual units from becoming dislodged from the pallet.
- Corner boards would help prevent forklift or pallet jack damage to the sides of the freight.
- Proper labeling of the shipment would ensure that the shipper is using the correct tracking numbers and barcodes and affix them to the pallet. By having these

Implementing an Effective LTL Strategy

correctly displayed it will help identify the shipment throughout the freight cycle.

(Smith 2021)

A conversation had with a senior OS&D manager for XPO Logistics, Rob Houston, provided some additional insight into some challenges LTL companies face. Dealing with OS&D sounds like it would be a very cut and dry process however, there are many moving parts that come into play to ensure that a LTL provider must do in order to responsibly manage this process. Large LTL carriers often employ a team of OS&D clerks whose sole responsibility is to manage and process all overages, shortages, and damages. They work with a full array of people of the to ensure the process is clean and claims are processed appropriately and in a timely manner. Houston was able to define some basic issues that often arise that can and will dampen the carrier/shipper dynamic. The shipper has no OS&D strategy; a carrier must have a clear understanding of recovery value and return costs, be adaptable, timely dispositions as delays can cause the relationship to deteriorate over time and could lead them to use an alternative carrier in the future. And finally, every documentation must be accurate and provide a concise explanation for the process. I was also able to observe some of the processes that have been put in place upon my visit to one of the XPO service centers in Fort Worth. Driver sales representatives, or DSRs, use a handheld device when receiving a shipment from a shipper. Bills of lading (BOL) and other shipping documents are now stored transmitted electronically and there is no longer a need to physically handle paper documents. This improved process mitigates the loss of paperwork which can consequently lead to a potential claim being missed. The handheld also has the capability to take pictures. This is useful because a driver can take and upload a photo of questionable freight at the shipper which could possibly result in a future claim. By adding this extra layer of protection, a carrier can protect themselves against frivolous claims by placing the

Implementing an Effective LTL Strategy

onus back onto the shipper. Finally, before departing the service center, Rob Houston, was able to give a little insight into a project that they are working on which will help keep track of the loss of freight throughout the life of the shipment as it travels through the network. Piece-level-tracking, which is RFID technology in which a sensor is placed on the freight and its sole purpose is to provide real-time visibility to the customer. This gives them 24/7 tracking that adds a level of assurance and enhances the customer experience. The benefits to this will increase customer retention, reduce labor and processing costs, reduces the amount of customer calls that flow into the service center in which a customer is needing a shipment status and it will increase revenue through increased accuracy.

Lastly, one of the most important things that can be done would be for the carrier to incentivize the dockworkers to properly handle freight. The shipper would also need to implement continuous freight handling training, daily shift meetings to outline the days initiatives, and constant on-on-one coaching. Also, a mentorship program would ensure that dockworkers have the necessary support and resources available to them to instill confidence in overall freight handling. OS&D will always be around and will never truly be eliminated because accidents will happen anywhere. However, when shippers and carriers put forth a valiant effort to work together amidst the constraints of the pandemic can improve the business relationship and reduce the number of claims.

Section 3: Research Methodology

The research and data compiled for this seminar thesis is an applied study gathered by other industry scholars and journalist. This thesis is a representation of a qualitative research methodology in which various case studies and qualitative observations. The case studies and journal entries used in this thesis are aimed to understand the author's concepts and characteristics of the service metrics and over, shorts, and damages within the less-than-truckload industry. The research describes and expounds on the LTL industry's handling of on-time service metrics and the challenges and solutions used for OS&D. A mix of primary and secondary research were conducted for this thesis.

Research objectives

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| Who | The primary purpose is to identify who benefits from an effective OS&D strategy. |
| What | This determines what the transportation industry is doing to create efficiencies. |
| Where | Freight companies and shippers around the globe are experiencing the same issues and challenges brought forth by the pandemic. |
| Why | Explaining the need for an effective OS&D strategy as well as the importance of being on-time. |
| How | Define current processes and how they affect the end-to-end process map. |

The methods of collection (secondary) included entries, thoughts and ideas as expressed by researchers and authors who are experts in the field of logistics and more specifically the less-than-truckload industry. Primary data collection included a site visit to a service center in Fort Worth, Texas where additional insight was provided by OS&D manager, Rob Houston. This research collection was an examination into the world of an LTL dock where observation of

Implementing an Effective LTL Strategy

dock operations provided a clearer insight into OS&D operations. An interview style data collection with a senior manager was also relevant to this thesis as it applied real world examples of the issues and process constraints for LTL carriers.

Methods of analysis include narrative and content analysis. These two chosen methods were preferred because of their accessibility and relations to this thesis. Various alliances have been formed in this industry which has allowed the research to offer a visual representation and gain a deeper understanding of the challenges and solutions that have been problematic to the industry. Content analysis was an ideal choice for this seminar research paper due to the amount of readily available data already out there. Thankfully, this very specific question enabled adequate data by narrowing down to an exact recurring theme in LTL. The biggest issue that the research encountered with content analysis was the amount of information that required plenty of time-consuming readings. The pandemic has clearly changed the landscape of the industry and it created a very specific timeline in which data, theories, and issues would be addressed. Since nothing relevant to the thesis was applicable more than two years ago it was important to identify the correct qualitative aspects into the research. Narrative analysis was the second research method in which work relationships permitted the data to delve deeper into the world of OS&D challenges with valuable and insightful analysis from an expert in the industry. The research subject provided powerful imagery and perceptions and was able to put these into perspective by the way the subject was able to meaningfully paint a picture of the ideas that was only available through the readings. The main limitation encountered with the narrative analysis was the sample size was limited to this one company. Having several other experiences with other research subjects in the same role they could have provided a common trend or provided other constraints that other LTL shippers are facing. However, it is also important to note this time of the year is

Implementing an Effective LTL Strategy

the biggest focus for carriers as it is referred to as peak season and time is of the essence. The time spent visiting with Mr. Houston and the crew over at XPO Logistics in Fort Worth was invaluable.

Although, there are limitations to every research, all of them have their own place in every thesis. It was found that a mixture of fact-based secondary research and primary research created a better understanding of the challenges and the solutions that the industry is working on to improve the overall relationship balance between the shipper and the carrier.

Section 4: Conclusions, Recommendations for Future Work

Recommendations for Future Work

The weaknesses and limitations of the processes and techniques used in this research have indicated that the following areas should be recommended for further work.

Freight processes and touchpoints

- Evaluations by a certified freight consultant to examine proper packaging of freight to ensure it is prepared to travel throughout a freight network. The tried-and-true methods of freight packaging could use a revision to guarantee the best methods are being implemented. The purpose of the evaluation would be an extra step to minimize damages and shortages which would potentially reduce the number of claims.
- Reviewing the number of hub and spokes or service centers an LTL freight provider has in their network should also be reevaluated. The purpose of this review would be a way to confirm that the facilities are set in the most effective regional location. Probable options include gravity models and optimization planning. Further review of existing service centers to assess whether the amount of square footage is correct or inefficient.

Collecting additional quantitative and qualitative data to support the effects of whether a freight provider should focus more on world class service or the development and implementation technological enhancements to assist shippers and other customers. This can be done by further

Implementing an Effective LTL Strategy

research the most effective and efficient LTL freight company to understand how the organization and taxonomy creates world class service.

Conclusion

Although the world is not officially rid of COVID-19 there have been a lot of changes to how we interact with each other and with businesses. Because of this the world has had to adapt to all the weaknesses that were exposed in the supply chains and has created opportunities for LTL carriers to reexamine their operation as a whole and become more efficient. The pandemic has showed how unprepared organizations had become but has also created opportunities for them to do better and provide better service. With a renewed OS&D and on-time service strategy it would be interesting to see where the freight carriers measure up in the future against current service standards today. The world is moving fast and the need for competitive advantage is ever more critical and the time for shippers and carriers to act is now.

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