ZIPLINE
LOGISTICS

Using Data to Drive OTIF and Retail Compliance Success

Enabling Increased Delivery Performance Through
Advanced Retail Logistics Analytics

The Complete Guide to Data-Driven Transportation Management

INTRODUCTION

Data is everywhere. Its explosion in relevance and importance as a primary business driver is undeniable. Data is shaping organizational strategy and decision-making across all industries.

It is especially impactful in transportation, as it serves logistics professionals along every facet of the supply chain.

Data is particularly influential when dealing with trends and new demands as they emerge in retail delivery and supply chain management.

Organizations have been forced to evolve their inventory practices at a rapid pace to compete with growing e-commerce fulfillment solutions. As Amazon and online purveyors continue to grow in relevance, big-box stores have upped their ante to remain competitive in the fight for sales.

Retailers have resultantly tightened their supplier demands, increased stringency of delivery requirements, and added costly repercussions for noncompliance.

That leaves suppliers in the position to either adapt to retail delivery standards or lose consequential customer relationships.

To effectively manage retail requirements, shippers must do more than just be cognizant of their logistics data. They must capture, synthesize, and take actionable steps towards transportation improvements based on their findings.

Making the most of data requires total organizational investment in the philosophical, cultural, and capital sense. With an effective data strategy, shippers can improve their logistics function to simultaneously improve organizational performance, decrease spend, and effectively manage customer expectations.

Leveraging data can help you to identify optimal shipping scenarios and the best carriers; rearrange pickup and delivery schedules; and ultimately hit on-time, in-full demands set by retailers. It can also free up valuable time, allowing shippers to work on an exception management basis.

In this paper we share insights on what to look for in your data, and elaborate on how to put it to use, helping you achieve optimal freight outcomes.

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The New Age of Transportation Management and Retail Compliance

THE REALITY OF RETAIL STANDARDS

Retailers have found themselves pitted in strong competition for foot traffic as the number of shoppers using online options continues to grow.

In direct response to increased competition, retailers have dialed up their demands for vendors to prevent out-of-stocks and subsequent e-commerce replacement transactions.

To adapt to changing consumer expectations of constant purchase capabilities, stores have tightened their delivery requirements for vendors, building in fees for under-performance.

These programs exist to encourage on-time delivery of goods to prevent against out of stocks and loss of revenue to online competitors.
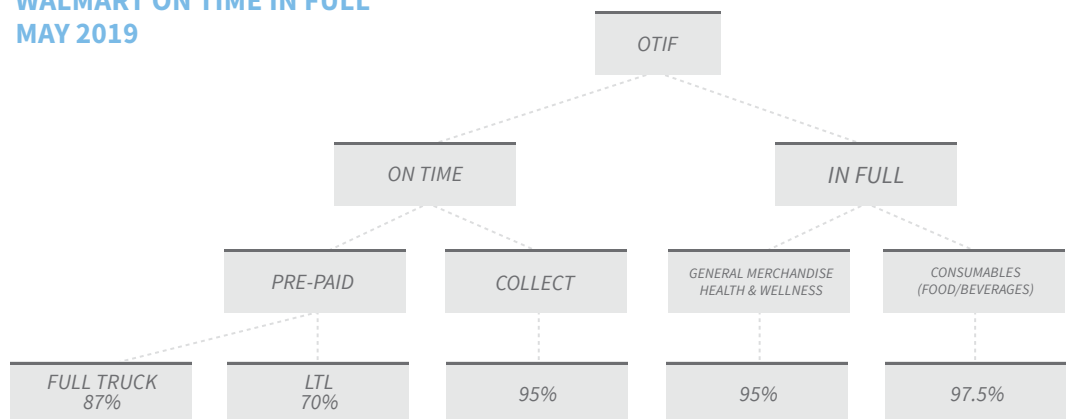
According to an article published in Retail Dive, "Today's shoppers experience out-of-stocks during one of three store visits, costing retailers nearly $1 trillion in annual sales as consumers shift to online alternatives."[1]

Reports estimate that 24 percent of Amazon's online revenue comes from this issue alone.

Many retailers have compliance programs in place, each of which are uniquely defined. But the most recognized is Walmart's On-Time, In-Full (OTIF) program.

Walmart's program measures on-time standards and in-full standards separately. On-time performance refers to the number of cases received within the delivery window, and in-full performance refers to the number of cases Walmart gets compared to what it ordered. Penalties can be incurred for one or both scores, and thresholds differ for truckload and less-than-truckload.

**WALMART ON TIME IN FULL
MAY 2019**

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                                    OTIF
                    ┌────────────────┴────────────────┐
                 ON TIME                            IN FULL
           ┌────────┴────────┐              ┌─────────┴─────────┐
        PRE-PAID          COLLECT    GENERAL MERCHANDISE   CONSUMABLES
                                      HEALTH & WELLNESS   (FOOD/BEVERAGES)
      ┌─────┴─────┐
  FULL TRUCK    LTL          95%              95%              97.5%
    87%         70%
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[1] https://www.retaildive.com/news/out-of-stocks-could-be-costing-retailers-1t/526327/
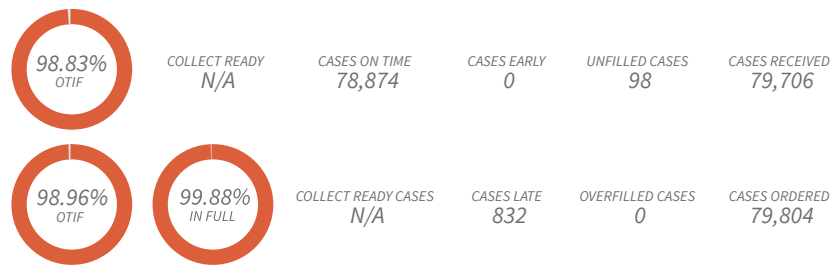
Let's look at a real-world example for Walmart.

Say Walmart orders 79,804 cases of your product. 79,706 of those are shipped via LTL and received with 78,874 on time and 832 late, leaving 98 unfilled cases.

Your on-time score is 98.96% and your in-full score is 99.88%, making your total OTIF score 98.83%.

For on-time, you incur zero penalties since Walmart sets a goal of 70% for suppliers.

For in-full, you are closer to the performance threshold of 97.5% but still free from the penalty range. While you lose out on sales for those 98 un-filled cases, you do not incur additional fees from Walmart.

	COLLECT READY	CASES ON TIME	CASES EARLY	UNFILLED CASES	CASES RECEIVED
98.83% OTIF	N/A	78,874	0	98	79,706
	COLLECT READY CASES	CASES LATE	OVERFILLED CASES	CASES ORDERED	
98.96% OTIF **99.88%** IN FULL	N/A	832	0	79,804	

IMPACT OF NOT MEETING COMPLIANCE STANDARDS

Not meeting compliance standards is not an option for brands looking to compete in the ever-expanding consumer goods space. Fines act as an immediate incentive for vendors to hit their specified delivery appointments.

These costly penalties can cut into a vendor's bottom line. Walmart extends monthly fees against vendors who fall out of compliance. The charges are worth 3% of the value of each early, late, or incomplete shipment. Kroger, too, institutes a similar fine structure for its vendors, charging 3% of the invoiced amount for any late purchase orders (POs).

This 3% fine when applied to several orders or large shipments, can add up to substantial costs for vendors partnering with a retailer. If the value of goods sold for non-compliant cases is $13,585, your penalty is $407.85. If a repeated offense, these fees can be highly damaging to any company.

Furthermore, when examined from a long-term perspective, late deliveries can cost your organization its space on a store's shelf as well as the revenue that comes with it.

In a survey of 300+ retail buyers, Zipline Logistics found that an overwhelming majority decline to work with vendors who can't master their organization's delivery standards. Of the surveyed buyers:

- 100% said that a vendor's ability to deliver product on-time impacted their willingness to work with them

- 73% said they have ended vendor relationships over delivery issues[2]

Unfortunately, for brands that can't master retail delivery, it can take years to rebuild relationships with buyers, which can set your organization back substantially. The time it takes to get another shot at working with a retailer is highly dependent on your prior working relationship with a buyer and the prospects of your brand. It is difficult to say for sure how long it will take to begin working with a retailer again. The chance may never come, or it might after an abbreviated probationary period.

On top of all the fines, fees, and lost revenue, your company can miss out on reaching your growth goals if your logistics function isn't optimized to meet compliance standards.

MORE TO MEETING RETAIL STANDARDS

If your organization can't execute consistent, compliant delivery, you may be left with few affordable choices.

Some of the largest freight service providers offer expedited freight services, like FedEx's Custom Critical, that will get your order to its destination in-tact and on-time. But this level of service comes attached to a hefty price tag and is not sustainable for scalable growth. Paying up for every shipment isn't an option for most.

To build an operation that is optimized to facilitate growth, smart logistics professionals are using data to meet on-time delivery standards while simultaneously keeping costs down.

There is more to the logistics story than the day-to-day execution of shipments. Constructing a successful logistics operation takes strategic management, planning, and implementation.

Compliance requires collaboration far beyond a company's transportation department, including sales, production, and external parties. Coordinating a flawless retail supply chain in today's environment is vastly improved with the use of data intelligence.

The patterns behind the numbers allow adept logistics professionals to develop a playbook for optimally delivering orders.

Information like cost per case metrics, receiving hours, on-time delivery percentage, optimal routing, and many other pieces create a holistic puzzle that is a transportation function.

If your organization isn't utilizing this information to the fullest, you are missing out on critical components driving your supply chain. If you picture logistics as a car, data should be the engine - the unseen force making everything go.

"

Smart logistics professionals are using data to meet on-time delivery standards while simultaneously keeping costs down.

NEW AGE OF TRANSPORTATION MANAGEMENT

But data doesn't function on its own.

To effectively play in today's retail landscape, transportation management must include a human touch adequately supported by technology.

A 3PL's role now includes enabling customers to understand data in ways they never could before. They should help with data capture, interpretation, and action to benefit the shipper.

With full access to a shipper's network, 3PLs can act as data interpreters, presenting new solutions as trends emerge. Data can guide capacity decisions and take the guesswork out of transportation.

When done right, a shipper can rely on a 3PL to effectively manage all elements of retail delivery. Brands can be less involved in day-to-day decisions, jumping in only for occasional exception management.

Use of Data Today and Broadened Potential

THERE'S PLENTY OF DATA, BUT PLENTY NOT MAKING SENSE OF IT

Most shippers today are at least aware of the data points that exist in their operation; however, those that are using data to its fullest is a far smaller sample size. It takes a sophisticated organization to harness data and make critical decisions based on findings.

The logistics world is rife with new information. IBM reports that 90% of supply chain data emerged in just the past two years.[3]

And as automation and machine learning advance, we will continue to see more data generated. It is up to digitally geared logistics professionals to make the most of it for the benefit of their transportation operations.

Technological advancement has given the modern supply chain the ability to monitor changes in supply and demand and pass on dynamic pricing changes in real-time. Advanced cost models integrate algorithms to predict pricing changes and to quote customers as accurately as possible based on current supply and demand.

According to a Deloitte study, "A Digital Supply Network can overcome the delayed action-reaction process of the linear supply chain by employing real-time data to better inform decisions, provide greater transparency, and enable enhanced collaboration across the entire supply network."[4]

[3]https://www.mediapost.com/publications/article/291358/90-of-todays-data-created-in-two-years.html

[4]https://www2.deloitte.com/content/dam/insights/us/articles/3465_Digital-supply-network/DUP_Digital-supply-network.pdf

Building and maintaining a digitally enabled supply chain is a significant undertaking for many shippers. And as its necessity has increased, many have begun looking to outsource that function to logistics and data specialists.

According to Infosys Consulting's 2020 Third-Party Logistics Study, "Shippers are increasingly aware that if they do not have the technological capabilities to accomplish their goals, they should partner with those that do."[5]

The study continues, "As the amount of available data increases, shippers and their logistics partners will need to be able to take the information and make it relevant as many 3PLs are already making significant investments in technology that allow them to analyze shippers' operations. The majority of shippers—94%—agree that IT capabilities are a necessary element of 3PL expertise, and 56% of shippers agree they are satisfied with 3PL IT capabilities."

Those IT capabilities have useful, practical applications to customers' needs.

"Data and analytics can help to solve a far greater range of common shipper problems," adds John Langley, professor of Supply Chain Management at Penn State University.[6]

Whether that is on-time order percentages or per case cost metrics, data can help illustrate just precisely what is going on in your transportation operation.

The 2020 Third-Party Logistics Study by Infosys Consulting, Penn State University, and Penske Logistics surveyed 3PL customers to see what shippers thought would be the best use of analytics to solve their common problems. On-time and complete order fulfillment was at the top of the list, with 69 percent.[7]

TYPE OF PROBLEM	% OF SHIPPERS WHO SAID ANALYTICS WOULD BE HELPFUL
On-time and complete order fulfillment	69%
Shipment visibility	63%
Freight costs per shipment	60%
Transit time	59%
Cost to serve	58%
Order-to-delivery cycle time	58%

Source: 2020 Third-Party Logistics Study by Infosys Consulting, Penn State University, and Penske Logistics

Even though most shippers know what analytics means, it is a broad term that can refer to several different disciplines and reporting methods.

Typically, data science practitioners divide analytics into five different categories: diagnostic, descriptive, prescriptive, predictive, and cognitive. Each of these builds upon one another to achieve advanced cognitive analytics like machine learning and artificial intelligence.

[5]https://www.infosysconsultinginsights.com/insights/3pl/

[6]https://www.supplychaindive.com/news/advanced-analytics-shipper-challenges-otif-3pl-study-cscmp/562959/

TYPE OF ANALYTICS	DESCRIPTION
Descriptive	Identifying past events to determine the success or failure of an aspect of a business. Can be thought of as, "What is happening with my supply chain?"
Diagnostic	Looks to explain the root cause behind the success or failure identified in the descriptive analytics. Raises the question, "Why is it happening in my supply chain?"
Predictive	Utilizes various statistical and machine learning algorithms to find recommendations and provide solutions to what will happen in future operations. Can be viewed as, "What is likely to happen in the future based on past supply chain trends and patterns."
Prescriptive	Builds upon predictive analytics data to advise users on the best possible outcomes and what can be done to maximize their key business metrics. Should be viewed as, "Helping you determine the best course of action for your supply chain."
Cognitive	This level of analytics combines various reporting disciplines such as artificial intelligence, machine-learning algorithms, deep learning. It is the furthest form of forward-looking analytics.

Despite the potential, only 16% of shippers report using cognitive analytics or artificial intelligence/machine learning for planning or operations; however, 78% reported using descriptive analytics, and 69% use diagnostic analytics.[7]

While using descriptive and diagnostic analytics is useful for discovering how your supply chain is functioning, they are primarily a reactive reporting method that examines past performance.

It is critical to incorporate predictive, prescriptive, and cognitive analytics into your operation to achieve scalable growth and continue advancing with the ever-evolving technological business landscape.

[7]https://www.supplychaindive.com/news/advanced-analytics-shipper-challenges-otif-3pl-study-cscmp/562959/

Establishing a Data Culture & Sharing Relationship

ORGANIZATIONAL BUY-IN AND C-SUITE SUPPORT

For data to truly drive change at your organization, you need to adopt a "data culture" and facilitate its widespread use. Making data a priority in your business requires complete organizational buy-in as well as both a monetary and a philosophical investment.

According to a published study from McKinsey, to build a strong foundation for a data culture, "Commitment from the CEO and the board is essential. But that commitment must be manifested by more than occasional high-level pronouncements; there must be an ongoing, informed conversation with top decision-makers and those who lead data initiatives throughout the organization."[8]

Organizations with an influential data culture have built an environment primed for progressive digital business strategies. They use a consistent decision-making approach backed by data and supported evidence, not just intuition.

This approach to decision making is crucial for solving the challenges of the modern logistics industry.

Once you have the cultural component in place, it's time to assess your organization's ability to execute your goals.

Competencies to evaluate to determine your organization's analytics capacity:

1. Culture – Does your company's culture support a data-driven approach to problem-solving?

2. C-Suite - Is your analytics initiative backed by your leadership?

3. Analytics – How advanced are your current data capture capabilities?

4. Talent – Do we have the people needed to execute an analytics plan?

5. Process – Do we have the collection, analysis, and interpretation processes in place?

6. Infrastructure – Do we have the technology and capital in place for analytics strategies?

If you can adequately answer and account for all the necessary components of putting a strategy in place, then you can conclude that your organization can complete its analytics analysis.

However, if you are deficient in these areas or your resources are devoted to other business units, it might be best to look to a logistics partner that is equipped to more effectively enact a refined and useful data strategy.

ANALYTICS STRATEGY—OUTSOURCE OR IN-HOUSE?

Once you have the support necessary for pushing ahead with data initiatives, you must decide whether you should conduct internal data analysis or outsource.

Whether it is through the construction of an in-house team or outsourcing to an intermediary, your organization must find a way to wield the massive amount of available logistics data.

If you aren't already using transportation data to its fullest potential, a data-enabled logistics partner can help you get there. The costs will vary depending on data sophistication goals, and more importantly, your organization's ability to capture information.

When managing in-house, you'll need to coordinate a myriad of sources. Each carrier, warehouse, and customer will have a separate system for data capture and reporting. Some are more sophisticated than others, and their willingness or ability to share data will vary.

Disparate data sources often lead to inconsistent reporting, which makes it tough to track key performance indicators and identify opportunities.

However, that is not to say it is impossible to track the performance of shipments with an in-house team. It just takes substantial internal infrastructure to sift through various data sources. You will need to hire data experts who can interpret and leverage the information correctly. This route is often the costlier alternative.

According to the job database and hiring software Indeed, the average data scientist's salary is $123,716 per year. Most Fortune 500 companies can absorb this cost, but for emerging brands, this might not be the case, particularly when you require more than one data professional to make the most of your information.[10]

If someone doesn't want to, or can't, hire data experts on their payroll, they can outsource the function and still achieve maximum results. By working with a trusted logistics partner, you can store the data from various carriers, warehouses, and customers in a single system. A partner can also evaluate data and find insights on your behalf, making continual improvement suggestions.

In the new age of transportation management, 3PLs should include data services with all freight moves, and **there should be no extra fees for data capture, reporting, and interpretation.** Today's freight market is conducive to a service-first approach to transportation, and data capture and analysis should be at the forefront of all vendor agreements.

Don't settle for a partner that doesn't offer this extra level of insight.

[9]https://www.indeed.com/career/data-scientist/salaries

SETTING UP A PROPER DATA SHARING RELATIONSHIP

At a recent keynote address during FourKites' Visibility Conference, Land O' Lakes Chief Supply Chain Officer, Yone Deweberry stated that managing a modern supply chain isn't all that different from managing the past supply chain in its overarching theme. It still requires you to move product from point a to point b.[10]

However, he continued that aspects of it make it very different than it once was.

"What changed?" he said. "Visibility, variability, and velocity. With more variability, you need to move faster. To do that, you need more visibility."

How do you achieve that visibility? With data.

The more data available, the more proactive an organization can be with their freight moves. And the better they can manage the mix of variability and velocity that is demanded by retail customers. It is essential to share as much information as possible with your logistics partners so they can achieve that level of visibility.

Providing enough notice is also essential. Build in the time required for critical thinking and don't just send orders when they are ready. With advanced notice, your 3PL can identify the best solution for getting orders delivered on time for the most cost effective price.

When a transportation provider has full visibility into a client's network, they can provide maximum value. Evaluating the information behind sporadic shipments doesn't allow for trend identification or delivery optimization. But full access does.

ESTABLISHING EDI CONNECTIVITY

Electronic Data Interchange (EDI) is the computer-to-computer exchange of information using a standard electronic format. It speeds up the movement of business documents and shipping information, such as purchase orders, load tenders, and invoices.

EDI technology is leveraged by 3PLs to communicate with carriers, warehouses, customers, and retailers. It removes manual processes like email and phone communication, which allows for instantaneous information exchange between networks. It saves time and eliminates instances of human error with data entry.

The ideal scenario is to establish EDI communication with your logistics partners. EDI connection allows for information to be automatically shared as soon as you receive a purchase order from a customer.

Real-time access to current and upcoming shipment information enables logistics professionals to identify operational improvements, be proactive with data interpretation, and make shipment optimization suggestions. Full network visibility opens the door to consolidation solutions, appointment reconfiguration, and substantial cost savings.

When transferring customers from manual order entry to EDI tendering, Zipline Logistics reduces average processing time by **66%**

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[10]https://www.forbes.com/sites/stevebanker/2019/11/01/land-olakes-uses-visibility-and-velocity-to-combat-supply-chain-variability/#2488f1413f1c

Are You EDI Ready?

Formatting:

Information sent via EDI must meet specific compliance standards. For computers to understand the content, users must follow a universal format. Using this standard format ensures all documents sent via the interchange speak the same language and are interpreted correctly. The American National Standards Institute (ANSI X12) is the North American standard.

All data communicated between carriers, shippers, and consignees fit into Transaction Sets. This coding gives clear direction on how to use the information provided. For example, EDI 204 is for load tenders, EDI 214 is for shipment status, and EDI 210 is for load invoices.

Systems:
Many enterprise resource planning (ERP) software systems can share information via EDI. Those that don't require a value-added network (VAN) to make the connection and send EDI compliant data back and forth.

Timing:
The amount of time this process takes varies depending on your level of current compliance and IT sophistication. Typically, businesses can set up EDI communication in 2-4 weeks after specifications are installed, tested, and deployed to production.

If you are unable to facilitate EDI connectivity, consider working in collaborative online documents. The real-time visibility to order information and updates will enable your transportation partner to more quickly identify opportunities as well as help them more fully understand your network.

With full visibility and advanced notice, they can provide progressive solutions to get your product to customers on time and on budget.

Key data sources:
- Freight billing paperwork
- EDI
- Load tenders
- Historical performance
- Bills of lading
- Proof of deliveries
- Commercial invoices
- Invoices
- Packing lists
- Web portals (including scheduling)
- Bid sheets
- Etc.

Key information to share with your transportation partner:
- Freight specifications
    - Case count, pallet count, weight, dimensions, product, etc.
    - Ready dates/due dates
    - Shipping/delivery location
- Warehouse contact information
- Production schedules
- Purchase orders/any other relevant reference numbers
- Carrier rate confirmations
- Lumper fees
- Logistics emails
- Etc.

When fully armed with information about your transportation network, your logistics partner becomes more precise. They can make accurate predictions and more significant improvements to your supply chain.

Katie McGovern
Sr. Operations Director
Zipline Logistics

"When a customer gives me total visibility into their transportation network, I can evaluate big-picture issues and identify opportunities for enhancement. With the customer's trust, I use the abundant resources at my disposal to develop the most beneficial action plan to leverage positive change in their supply chain network. By having forethought and probing for flexibility in standard operating procedures, we have been able to see dramatic efficiency improvements, affecting everyone from the top down. "

USING LOGISTICS DATA TO IMPROVE COST PER CASE METRICS, FIND CONSOLIDATION OPPORTUNITIES, CUT COSTS AND IMPROVE PERFORMANCE

Shipper Profile:

Rhythm Superfoods—a nationwide purveyor of natural snack superfoods based out of Austin, TX. Distributes to all major grocers and big box stores. The majority of orders range from 2 to 16 pallets.

Like all fast-growing food brands, Rhythm Superfoods was looking for a way to simultaneously cut its logistics spend and increase transportation efficiencies.

They established a secure data sharing relationship with Zipline Logistics, sending order information and status updates in real-time. With full visibility into order data, Zipline Logistics' transportation experts were able to analyze information and quickly enact solutions.

Seeing all of Rhythm's shipments, not just a fragment of their supply chain, Zipline uncovered order consolidation opportunities that helped drastically reduce their cost per case metrics.

Zipline was able to deliver geographically similar orders together throughout Rhythm's supply chain and cut its delivery cost per case by 1.12%. This reduction, applied to their larger logistics picture, translated into a cost decrease of 11.89% per load and a cost decrease of 18.07% per 1000 lbs.

By further analyzing historical location and volume data behind shipments, Zipline identified the best possible days for pick up and delivery that were conducive to successful retail shipments. With this data, Zipline spoke directly with Rhythm's retail buyers to change appointment times and lock in more optimal delivery dates to achieve better outcomes.

They presented in-depth, data-backed rationale to retailers that explained the benefits of shifting delivery dates and times. With data to support these requests, Rhythm was able to alter their MABDs and delivery windows to fit their network better. With full visibility and in-depth data analysis, Zipline was able to help Rhythm optimize its supply chain, improve on-time performance, and cut costs.

"Zipline has saved Rhythm money on freight, and even more, our customer satisfaction on delivery timing and communication is now the best it's been since our founding."
- Scott Jensen, CEO and Founder at Rhythm Super Foods

Using Data to Optimize Schedules for On-Time Delivery

USING DATA TO OPTIMIZE SHIPPING SCHEDULES

With data analysis, you can make improvements at every point of your supply chain.

"Data can help determine cause and effect relationships to find the root of a service failure, distinguishing causation from correlation or coincidence," said John Langley, professor of supply chain management at Penn State. "If you can measure it, capture it, analyze it, you can use it to your advantage in terms of knowing more about your own processes."[11]

Advanced analysis of logistics data can highlight otherwise unseen elements of your operation and areas for shipping improvements.

Begin with existing data. Look back at past performance through the lenses of descriptive and diagnostic analytics. Through analysis of historical data, your organization can identify trends and cost impacts of certain shipping behaviors.

Advanced analysis means going deeper than just evaluating key performance indicators like average cost per pallet or on-time delivery percentage. Looking at correlations and trends within your performance data can help you uncover the drivers behind your critical KPIs.

It can help answer questions like, does shipping on Fridays cost you more than shipping on Tuesdays? Are afternoon pickups subject to extended detention? Is one warehouse location costing you more than another?

You can find real savings when you look at the impacts of behaviors.

Here are data points we recommend evaluating:

- Cheapest and most expensive days to ship
- Heaviest volume days
- Time of day with most dock congestion
- Total transit time to delivery
- Costs per location
- Receiver acceptance rate
- Driver detention times at facilities

Knowing details like your heaviest volume and most expensive days arms you with the knowledge necessary to drive change. Data can help you determine the most optimal day and times to coordinate pickup to deliver your product to customers on time, securely.

By analyzing these points, you can proactively set the most beneficial schedules and make capacity decisions that would otherwise be unknown. Data takes the guesswork out of operations and provides you a clear blueprint for optimization.

> " Data takes the guesswork out of operations and provides you with a clear blueprint for optimization

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[11] https://www.supplychaindive.com/news/advanced-analytics-shipper-challenges-otif-3pl-study-cscmp/562959/

With practical data analysis, you can determine:

- Whether you should be completing long-hauls on the weekend
- If it benefits your operation to make shorter hauls during the middle of the week
- How to best rearrange appointments and due dates
- How to adjust production schedules to accommodate optimal transportation times
- How to adjust pickup times for less congestion
- Where to best seat production/warehouse locations
- If specific customers are unprofitable

Identifying these key data points can be the next step in making impactful changes to your supply chain. When properly leveraging your data, this information can be monumental in making downstream changes.

Correctly identifying and subsequently rearranging your logistics operation based on those findings can be the difference between continually meeting retail compliance requirements and consistently racking up late fees, which jeopardizes your long-term success.

With a well-performing, data-driven logistics operation, your organization can benefit from:

- Easier fulfillment and ability to reach OTIF standards
- Lower costs from consolidation and shorter hauls
- Happier warehouse and production teams
- Lower overall transportation spend

These are logistics goals that every organization should strive for. To achieve them, you must have a data analysis component to your logistics operation.

Retail Data - Pro Tip

In a 2019 study, retail buyers said they are "always willing" or "very willing" to discuss adjusting minimum order quantities and due dates for their suppliers "whenever minimums, sales, and shelf life do not work out." **Buyers want to keep product on the shelf at all costs and are open to change when they see it will positively impact performance.**[12]

"If a consumer reaches for an item on the shelf and it's empty, that's the worst possible failure for a retailer," said VP of Transportation at Walmart Ken Braunbach in an interview with Business Insider. [13]

[12]https://ziplinelogistics.com/blog/research-retail-buyers/

[13]https://www.businessinsider.com/walmart-trucking-transportation-self-driving-rail-2019-11

That mindset extends to all corners of the retail world. And as such, buyers are very willing to discuss changing delivery appointments and minimum order quantities. If a vendor can present proof, through data, that adjusting will impact higher performance, they are willing to make alterations.

Present your case with clear benefits, in-depth explanations of impacts, and data-backed rationale. Proper use of data can go a long way in convincing buyers to make changes to benefit your arrangement.

Data can also be helpful when buyers aren't flexible. If buyers are unwilling to adjust schedules and you have data to prove that deliveries are too costly under their requirements, you can choose to pull business and avoid the headaches confidently. With data, you can identify which opportunities are worth your focus and which are costing you too much attention and spend.

Using Data to Identify the Best Carrier for the Job
DATA PROVIDES THE BEST BLUEPRINT FOR DELIVERY SUCCESS

You have your schedules and appointments optimized. Now it's time to lock in the best service provider to deliver your product. Luckily, data can help with this, too.

To improve your delivery performance and cut spend, you must move beyond the mindset that always booking the lowest-cost option in the immediacy amounts to a long-term win.

Dustin Verdin
Director of Business Innovation
Zipline Logistics

"Success is no longer about finding the cheapest truck. Success is now all about finding the right carrier the right driver, taking the right route, on the right days and times with all the right understanding of all the facilities for the right value and all the while providing the right information to all parties involved at the right time."

This altered mindset is especially impactful in retail logistics, where time and visibility matter. The cheapest truck does not always equate to savings, as it often comes with service failures and added fees.

As retail compliance has increased in prevalence and stringency, it has become of the utmost importance to secure quality carriers that meet the needs of your customers. Repeated infractions can lead to major long-term repercussions and consequences.

Budget carriers usually do not have the nuanced understanding necessary for retail delivery success. If you're lucky, a budget carrier can service a handful of your retail deliveries, but they will not be able to do so nationwide effectively.

Knowing which carrier is best for the job must take far more into consideration than just price.

So how do you pick the best carrier option? Through data gathered from internal sources, your TMS, and third-party sources, you can evaluate carriers based on several factors to determine their likelihood of success. Evaluate metrics such as:

- Modes provided
- Lanes run
- On-time percentage
- Safety history
- Retail experience
- Retail routing guides, preferred carriers
- Etc.

A carrier's success or failure at these aspects of delivery can provide a solid indication of future performance. By measuring and leveraging these data points, you can make the best carrier choice every time, taking variability out of the equation.

If using the wrong carrier for a particular region, route, or customer, your organization can end up dealing with delivery issues, upcharges, and unnecessary frustrations.

It is a common misconception that if a carrier provides a quote for an order, they can deliver on shipment needs.

Unfortunately, shipping into retail or grocery distribution centers isn't as easy as calling any carrier and booking an appointment. There is no one-size-fits-all solution to retail shipping. Some carriers are more well-suited than others for certain orders and locations.

But without understanding every carrier's network capabilities and looking at historical performance data, there's no sure way to know which carrier is right for your order.

Fortunately, your internal data analysis team or your outsourced logistics partner can evaluate this information and match your order to the most well-suited carrier, giving you the best chance for optimal outcomes.

A lot can happen during delivery. It is highly important that you work with a carrier that gives you the best shot at on-time success.

MAKING DATA-DRIVEN DECISIONS TO IMPROVE ON-TIME PERCENTAGES

Shipper Profile: Evans Foods — A private-label provider for the world's largest snack food brands. A manufacturer of pork rinds, pellets, cracklins, and sancochos.

Evans worked with Zipline Logistics to conduct a network overhaul. The organization wanted to leverage data analysis to reduce landed costs, improve efficiencies, and raise on-time delivery performance.

Armed with the entirety of Evans' logistics data and set-up with EDI order tendering, Zipline had full visibility into Evans' orders. This transparency allowed Zipline to isolate key metrics in Evans' supply chain and identify consequential opportunities for change.

They looked at everything from customer skid counts, product ready dates, costs, hours of operation, delivery deadlines, and total distances for hundreds of locations.

Zipline used this information to determine optimal routing and appointment times, moving specific customer orders to alternate production facilities along with remapping outbound routes and timelines for multi-drop orders.

Remapped orders could then flow into pre-existing truck routes and reduce overall LTL usage. These data-derived moves helped ease the existing strain on production and docks, as well as increase overall capacity and lower costs.

Optimization efforts saved Evans over $10,000 per month in transportation spend and vastly improved the company's on-time performance, enabling them to hit a 100 OTIF score at Walmart for the first time.

With vastly expanded visibility into its supply chain, Evans Food Group is now able to be more strategic with transportation decisions, rather than reacting to order volumes. Optimization tools and business intelligence reports continue to help the two partner organizations identify ongoing opportunities for new efficiencies and increased profitability.

> **"Zipline's support has been outstanding. They have helped us achieve excellent results with Walmart, enabling us to achieve substantial organizational growth."**
> **VP of Global Transformation, R&D and QA, Evans Food Group**

Using Data to Manage Exceptions

ANALYTICS TO ALERT YOU WHEN RETAIL DELIVERY GOES AWRY

There are many variables in logistics, and a lot can (and does) go wrong, no matter how much you plan.

Trucks can get flat tires, drivers can oversleep, traffic jams happen, and delays at other facilities add up. All of which lead to delivery difficulties.

However, with real-time data, you can proactively get in front of issues and intervene before the consequences of a missed delivery reverberate throughout your organization.

By partnering with a logistics provider that values communication and utilizes data, you can get proactive alerts about your orders. Modern, technologically-enabled 3PLs allow for customers to get preemptive alerts that let them know when an order is both moving along smoothly or when it is at risk for late delivery.

An effective "must-arrive-by-date (MABD) risk report" can inform a customer that one of their time-sensitive shipments may not be delivered as expected. This notice allows for a collaborative approach between the shipper and transportation partner to solve the issue at hand.

It also allows for shippers to operate with peace of mind, knowing that if a shipment is delayed, they will have an automatic update. You can intervene just on an exception basis, trusting that all other orders are operating smoothly.

When alerted, your logistics partner can step in before missing an appointment to reschedule a delivery, find another carrier, or communicate directly with receivers to identify possible options and solutions.

Weather overlays can also be valuable within tracking software. Radar readouts can inform you of any weather events that could cause issues for your shipments.

Just like vehicle issues or driver problems, weather can derail what would otherwise be an on-time order delivery.

With access to cutting-edge weather technology, your logistics partner can inform you of any inclement conditions that could arise before they impact your freight. They can find alternate routing or receiving locations to circumvent any weather disruptions before they cause delivery issues or recommend any special equipment that may be needed to complete the order.

Without an effective logistics partnership, your organization must find solutions, on its own, for all the issues that can complicate transit. This a significant undertaking and requires staff dedicated to solving logistics issues as they arise.

With a logistics partnership and access to technology, you can receive preemptive warnings about potential freight pitfalls and react accordingly to solve any delivery issues that can hinder your retail partnerships.

Using Data to Better Understand Network Spend

ANALYTICS MORE CLEARLY ILLUSTRATE TRANSPORTATION COSTS

One of the more pragmatic and universally beneficial applications of data is its use in identifying and analyzing logistics spend.

Analytics can provide insight into how you are allocating your logistics budget and identify any trouble areas where you are leaving money on the table.

According to the previously cited 2020 Third Party Logistics Study, 60% of shippers believe that analytics could be helpful for understanding freight costs per shipment.[14]

While that is a great start, we believe that 100% of shippers can find value in logistics data. It can enable shippers of all sizes to better understand their freight spend, identify savings opportunities, and increase performance in critical areas.

Donna Haeger, a Cornell professor of economics and management, elaborates, saying that businesses are "swimming in answers to questions they haven't even begun to ask – and that's a pretty amazing place to be."[15]

Through a rigorous data program, you can track key logistics metrics like:

- Total Loads
- Total Spend
- Average Cost Per Load
- Average Cost Per Case
- Average Cost Per Skid
- Average Cost Per Mile
- Average Cost Per Case Per Mile
- Top Pick-Up Locations (by spend)
- Top Delivery Locations (by spend)
- Total Spend by Mode
- Total Orders by Mode
- Accessorial Breakdown (ex. lumpers, layovers, etc.)
- Distance vs. Average Cost Per Mile
- Total Loads Per Day of Week
- Total Skids Per Day of Week
- Ship Day of Week vs. Average Cost Per Mile
- Etc.

Not only do these lend insight into current performance, but they provide opportunities to make prescriptive network adjustments like warehouse placement, pickup locations, and carrier partnerships.

[14]http://www.3plstudy.com/3pl2020download.php

[15]https://blog.ecornell.com/why-the-ability-to-read-data-is-just-as-important-as-the-ability-to-read/

A true logistics partner should be able to locate any areas where these numbers are beyond what you should be spending and make the necessary network adjustments to bring down inflated costs.

Data is an excellent tool for locating inefficiencies in complex logistics networks.

FEVER-TREE

WAREHOUSE NETWORK ANALYSIS CUTS MAJOR COSTS

Shipper Profile: Fever Tree – An International Beverage Manufacturer

As Fever Tree's footprint grew in the United States, the organization knew it needed to be strategic about warehouse location and the long-term impacts those facilities would have on transportation costs and performance.

Before committing to any new warehouse agreements, the organization worked with Zipline Logistics to map out order volumes and transportation costs from potential locations.

At no cost, Zipline calculated future logistics spend based on past order volumes, order projections, and consolidation potential for three possible new warehouse locations.

When armed with this data, Fever Tree was able to make the most strategic choice possible for its unique network and US presence. This data-derived network structure allowed for a more simplistic approach to domestic logistics that also cut costs.

"Zipline has provided us with figures of where we should be shipping to and from. They've helped us manage the opening of a new warehouse. And they provided all this data without us even asking. Really, they are a true partner."

- Bryan Wilhelm, Supply Chain Operations Manager, Fever Tree

Magic Mix of Human Touch and Technology

WHAT IS THE RIGHT RATIO?

Automation is making great strides in becoming more useful for business processes, but it is far from replacing human interaction entirely.

When firms find the right combination, they can create a seamless customer experience for their clientele. One that both effectively addresses their operational issues with data-driven conclusions and one that addresses their concerns with an empathetic, insightful human approach.

Gartner predicts that by 2020, "Customers will manage 85% of their relationship with the enterprise without interacting with a human."[16]

If that is the case, the remaining 15% that is human is crucial to get right.

But is that the right combination for the logistics industry? Many think they can solve their transportation needs with an app, like Uber Freight. Unfortunately, shipping freight – particularly retail orders – is not that simple.

Supply chain management includes decisions that are more complex than what artificial intelligence can accomplish. Emotional intelligence is necessary for problem-solving, decision making, and order intervention.

RETAIL DELIVERY BEYOND AUTOMATION CAPABILITIES

Delivering to retail customers is a nuanced and often stressful undertaking. Receivers often have varying shipping specifications, and retail stores require added equipment and coordination.

Because of realities like varying preferred carrier arrangements, fully handing the controls over to an automated process isn't feasible for orders subject to late fees and larger repercussions.

Automated freight matching services can pair your shipment with a truck but can't optimize your shipment or interpret your data. While in theory, you can eliminate the need for an intermediary, and go directly to the market yourself, in application, it is too good to be true. The complicated issues that arise during retail transit require human critical thinking skills backed by data-driven findings.

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[16]https://www.gartner.com/smarterwithgartner/gartner-predicts-a-virtual-world-of-exponential-change/

THE RIGHT MIX

At Zipline, we believe that the right mix exists in a merging of man and machine. A human touch and decision making enabled by technological processes is the sweet spot that allows us to make optimal recommendations and improvise when problems arise. We believe in being technologically enabled but not exclusively dependent.

We are continually working to improve our technological applications to make both our customers and our staff more intelligent.

By leveraging technology and advanced algorithms, we can make more informed, accurate, and quicker decisions about capacity, delivery, and freight pricing. Then, by layering in human understanding and interpretation, we bring our customers the best truck, at the right price, going to the right location at the right time.

Andrew Lynch
President at Zipline Logistics

"With the seemingly endless variables that can go awry during service-critical transportation, it is crucial to have a human's problem-solving abilities on hand to sort things out with carriers and customers. While data enables your organization to work smarter and more efficiently, it cannot entirely augment the need for interaction between partners. Shippers should not look to technology as a one-stop solution. They should instead see technology's potential to enable employees and 3PL partners to make better, smarter and faster decisions. Having a technologically-enabled team will allow your organization to serve customers best by making the data-driven choices necessary for succeeding in today's logistics environment."

Partner with Zipline for Data Analysis and Retail Compliance Improvement

If your goal is to make better freight decisions and improve retail compliance, how do you get there?

Zipline Logistics has created a proprietary data platform – KanoPI – that gives customers maximum insight into their transportation spend and performance. Paired with our niche expertise in retail and grocery transportation, we continuously help brands reach their supply chain goals.

KanoPI consolidates diverse data sources, isolates fundamental freight metrics, and offers enhanced visibility into your transportation operation. It includes a track-and-trace platform for real-time order visibility, a document cloud for housing all freight paperwork, and a robust look into key performance indicators (KPIs).

We leverage KanoPI to partner with customers and not only execute on optimal freight outcomes, but to continuously identify improvement opportunities. Data analysis and retail expertise enable Zipline to optimize your logistics network to the fullest extent.

Looking to harness your logistics data? Contact Zipline Logistics.

www.ziplinelogistics.com | 614-458-1144

ZIPLINE LOGISTICS