



SHIPPERGUIDETMS



PLAN SMARTER, SHIP FASTER:  
**THE ULTIMATE GUIDE  
TO FREIGHT PLANNING  
AND OPTIMIZATION**



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# THE ULTIMATE GUIDE TO FREIGHT PLANNING AND OPTIMIZATION

## INTRODUCTION

Freight planning and optimization sit at the heart of every high-performing supply chain. When plans break down—whether due to inaccurate forecasts, limited visibility, or poor alignment between teams—the impact is felt everywhere. Costs rise, networks become inefficient, and service levels suffer. But when planning is done well, companies unlock smoother operations, stronger carrier performance, and a more resilient logistics strategy that holds up even in volatile markets.

For many organizations, planning is still a patchwork of spreadsheets, tribal knowledge, and reactive decision-making. As freight becomes increasingly dynamic—driven by fluctuating demand, tighter capacity, and rising customer expectations—these manual approaches simply can't keep pace. Modern supply chains require planning tools and processes that are connected, data-driven, and adaptable enough to handle uncertainty.

This eBook was created to help supply chain leaders, planners, and logistics teams understand the full landscape of freight planning and optimization—and how to apply it to build a more efficient, predictable operation. Whether you're establishing a planning process from the ground up or looking to enhance the sophistication of your current workflows, this guide provides a practical, approachable framework for success.

### HERE'S WHAT YOU'LL FIND INSIDE:

- A foundational overview of freight planning, including the principles that guide effective decision-making.
- A breakdown of the operational details—capacity, routing, constraints, lead times, and more—that determine how well planning actually works.
- Insights into how relationships, market conditions, and strategic alignment support stronger planning outcomes.
- A clear explanation of how to turn real-time data into actionable decisions that reduce cost and risk.
- A step-by-step roadmap that outlines what effective planning and optimization look like in practice.
- A forward-looking view of the technology, trends, and innovations shaping the future of freight planning.

By the end, you'll have a complete understanding of freight planning and optimization—what it is, why it matters, and the strategies, tools, and processes you can use to make it a true competitive advantage for your organization.

## // CHAPTER 01

# THE FOUNDATIONS OF FREIGHT PLANNING AND OPTIMIZATION

Freight planning and optimization are the backbone of a successful supply chain, turning complex logistics into streamlined, cost-effective operations. By scheduling shipments, selecting the right carriers, optimizing routes, and leveraging data-driven tools, companies can reduce delays, control costs, and improve service reliability.

In this chapter, we'll explore how thoughtful planning and continuous optimization empower logistics teams to adapt to changing markets, anticipate challenges, and unlock measurable business value—laying the foundation for a more agile and competitive freight operation.

### DEFINING PLANNING AND OPTIMIZATION

Freight planning starts with organizing and scheduling shipments efficiently—before day-to-day operations even begin. Early planning decisions determine how efficient and compliant your carrier network will be. Strong planning and optimization help teams navigate challenges like seasonality, fluctuating demand, and inconsistent data quality.

Dynamically adjusting prices, routes, and loads is essential for industries riding out shifts, developments, and the unexpected in transport operations. Balancing structure with flexibility supports consistent performance across cost, service, and efficiency, creating a more resilient freight procurement strategy.





# KEY COMPONENTS OF PLANNING

Freight planning forms the foundation of effective procurement success and competitive operations. Align the following core elements of human- and AI-optimized freight planning to schedule shipments, select carriers, and balance cost, service, and quality effectively.



## ORDER AND SHIPMENT PLANNING

Retail supply chain managers often struggle to schedule deliveries around store needs and inventory levels. When planning falls short, higher costs and delays follow quickly.

For such teams, the Council of Supply Chain Management Professionals estimates transport costs are inflated by 15% when shipment schedules are poorly scheduled, compared to effective planning, which can reduce product delays by 30% or more.



## CARRIER SELECTION AND BENCHMARKING

When selecting carriers, management should evaluate performance metrics compared to cost structure, reliability rates, and aggregate reviews.

This step protects service quality, controls costs, and enhances reliability. The immediate effect of benchmarking metrics, such as on-time delivery (OTD), acceptance rates, lead time, or cost-per-mile, is improved on-time delivery and stronger carrier performance.



## ROUTING AND MODE OPTIMIZATION

Freight planning and optimization involve analyzing the full spectrum of transportation modes and routes—seeking options to lower costs, increase speed, and maximize capacity. For example, shifting from LTL to partial truckload (PTL) can reduce both costs and dwell time.

Improvement for each of these elements does more than lower transit delays and save on expenses. It supports various business objectives, especially resource utilization and ever-more important metrics for sustainability.



## FREIGHT CLASSIFICATION AND REQUIREMENTS

The classification of freight defines shipment handling, reduces inefficiency, and describes potential for risks and delays. In planning, requirements and classification ensure equipment, resources, and labor are always allocated appropriately. By contrast, miscategorizing NMFC classes, which affects pricing predictability, or taking a single approach, tends to disrupt operators, exaggerate costs, and hurt relationships.



# KEY COMPONENTS OF PLANNING



## LOAD CONSOLIDATION AND EQUIPMENT PLANNING

Load consolidation combines shipments according to truck capacity and transportation costs. Load consolidation means tracking the type, size, and cost of each shipment to avoid neglected equipment and wasted expenses.



## COMPLIANCE AND DOCUMENTATION

Keeping precise and complete documentation may sound like finer points. But for cross-border shipping and unexpected delays, detailed entries avoid penalties and build trust.



## PERFORMANCE MONITORING

Monitor your shipment status against each carrier's KPIs and individual benchmarks. This will sustain delivery improvement through ongoing awareness and strengthen your ability to adapt with new demands.





# KEY COMPONENTS OF OPTIMIZATION

Scoring engines, rate comparisons, and dynamic lead times are key features of freight management. Continuous optimization relies on historical data, performance trends, and business goals.



## ROUTE, LOAD, AND CARRIER OPTIMIZATION

Increase on-time delivery rates and adapt quickly to capacity shifts or demand disruptions. Selecting optimal routes, load maximums, and shipment carriers are the surest way to cut transit time and operating costs.



## DYNAMIC ROUTING AND PRICING

Use real-time data to adjust routes and pricing in response to weather, traffic, and capacity shifts. By doing so, pricing can remain adaptive and yet aligned with the modern market. Dynamic pricing helps teams manage budgets, make informed capacity decisions, and stay agile during volatility.



## BALANCING COST VS. SERVICE

Cost and service must be balanced carefully—too much focus on either can lead to blown budgets or poor reliability. This empowers teams to negotiate better rates, improve visibility, and make smarter, data-backed procurement choices.



**PRO TIP:** Try automated and analytical tools to test scenarios and empower your gut feelings about which decisions will scale delivery while saving business costs.



## THE ROLE OF SHIPPERGUIDE AND DIGITAL TOOLS

ShipperGuide uses transportation-specific analytics and automation to simplify complex freight decisions. Transport councils, studies, and groups have proven the positive effect of such tools on transparency, negotiation outcomes, delivery speeds, and strategic procurement.

## NOW, LET'S UNDERSTAND WHY PLANNING AND OPTIMIZATION MATTER

Freight planning is only valuable if it drives results. Meticulous planning and ongoing optimization help control costs, prevent delays, and keep supply chains agile and reliable. This next section explores why these practices are essential for efficient and resilient procurement.



## THE BENEFITS OF PLANNING AND OPTIMIZING FREIGHT PROCUREMENT

Successful shipments rely on aligning planning with execution. Smart strategies help supply chains operate smoothly and efficiently:

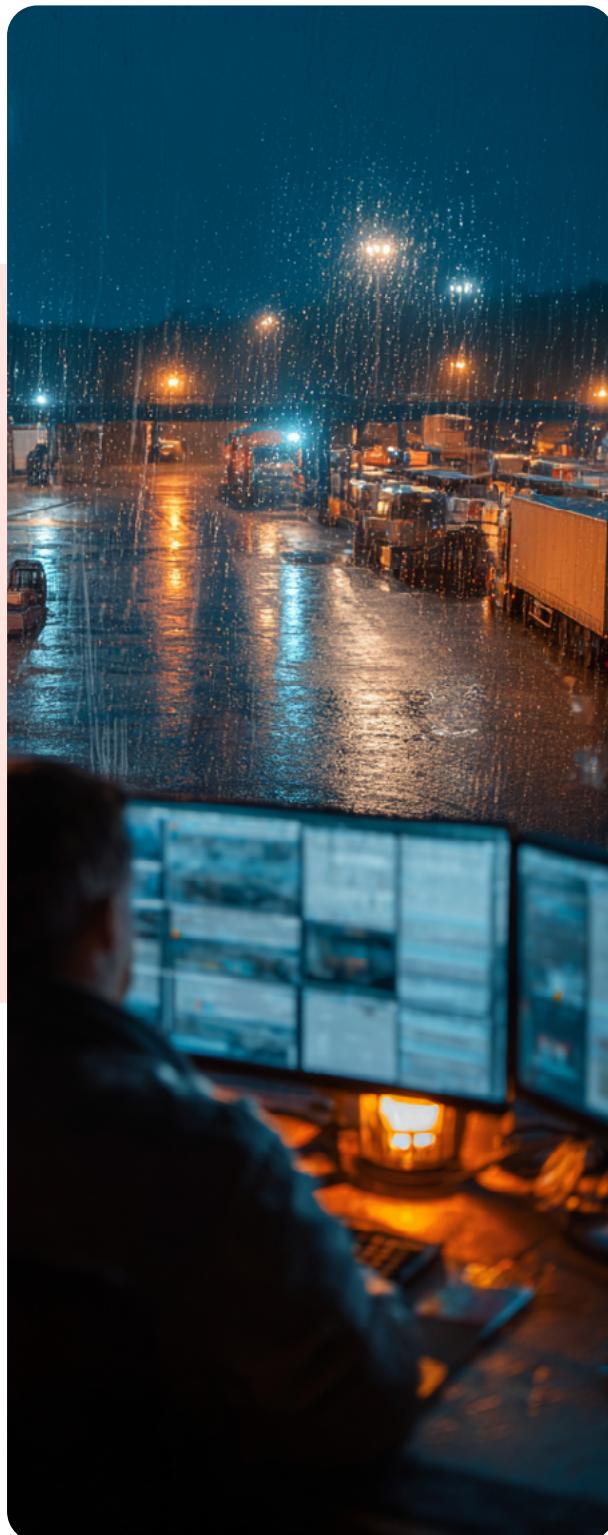
- ✓ Careful scheduling ensures inventory is available when needed and avoids overstock.
- ✓ Tracking carrier performance helps maintain high service quality while keeping costs in check.
- ✓ Choosing the best routes and transportation modes saves time, reduces expenses, and lowers environmental impact.
- ✓ Properly classifying freight ensures resources are used correctly and minimizes damage or compliance risks.
- ✓ Monitoring performance supports accurate documentation and strengthens overall supply chain reliability.

By focusing on these practices, logistics teams can stay ahead of changing conditions and make smarter, more flexible decisions. For example, a food shipper might switch from LTL to FTL to consolidate orders and prevent spoilage—showing how planning and optimization guide daily operations and strategic choices.





# THE RISKS OF INADEQUATE FREIGHT PLANNING AND OPTIMIZATION



The risks of freight procurement multiply as planning weakens and optimization slows.

Here's what teams risk when planning and optimization are inconsistent or ineffective:

- ✖ The risk of turning routine shipments into unexpected costs and higher expenses.
- ✖ A multitude of errors, such as delays, client stockouts, and customer dissatisfactions.
- ✖ Poor allocation of resources, which can strain operating expenses and reduce productivity for all teams and fleets.
- ✖ More compliance risks that lead to higher penalties, lower industry recognition, and weaker resilience to supply chain stress.

The challenges of precise freight planning and supply chain optimization carry immense weight. Strategic processes, closely analyzed KPIs, and a reliable degree of flexibility are critical for logistic teams expected to balance agility with control.



# THE LONG-TERM COSTS OF POOR PLANNING AND OPTIMIZATION

Poor planning in logistics quickly leads to inefficiencies, wasted resources, and service issues that diminish customer satisfaction. Rising costs, unused capacity, and preventable mistakes all show how damaging a lack of coordination can be. Ultimately, the bottom line suffers most when operations stay reactive instead of strategic.

By understanding where these costs come from and building clearer processes, teams can ease pressure on the supply chain and turn day-to-day challenges into opportunities to work smarter and stay competitive.



Here are the six major costs of inefficient planning:



## 1. PAYING HIGHER SPOT MARKET RATES

When planning breaks down, teams often end up buying capacity at the last minute on the spot market. These rates swing wildly with seasons, fuel costs, and capacity shortages, making budgets unpredictable and shrinking margins. Because spot rates are often significantly higher than contracted rates, this reactive approach creates financial uncertainty and makes long-term planning more difficult.



## 2. INCREASED DETENTION AND ACCESSORIAL CHARGES

Poor scheduling and disorganized dock operations frequently lead to longer wait times, delayed check-ins, and a range of extra charges. These small fees add up quickly and cut directly into profitability. Avoidable detention is one of the clearest signs that better coordination and clearer communication are needed.



## 3. WASTED TRUCK CAPACITY (HALF-EMPTY LOADS)

Running trucks at partial capacity is expensive. It increases fuel use, raises the cost per shipment, and wastes valuable trailer and warehouse space. Missed consolidation opportunities compound the issue, leading to higher transportation spend and less efficient use of fleets and facilities.



# THE LONG-TERM COSTS OF POOR PLANNING AND OPTIMIZATION



## 4. DELAYS AND MISSED CUSTOMER COMMITMENTS

Without solid planning, delays become routine and commitments are harder to keep. Missed appointments and late deliveries ripple through a customer's operations, sometimes causing production disruptions or stockouts. Over time, repeated inconsistency damages trust and puts pressure on service relationships.



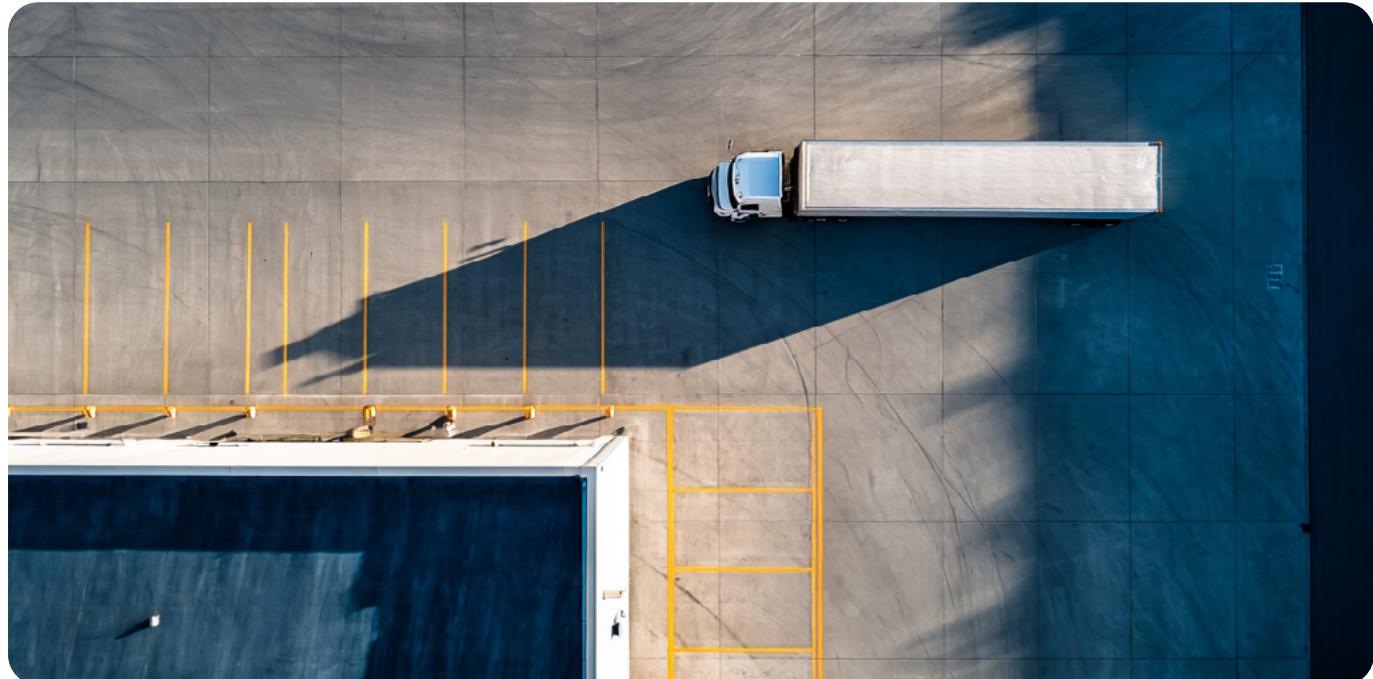
## 5. STRAINED CARRIER RELATIONSHIPS

Last-minute changes, incomplete information, and poor communication make life harder for carriers. This often leads to higher rejection rates, reduced willingness to take certain loads, and increased pricing. Strong carrier partnerships depend on predictability and respect for their time—something that only stable planning can provide.



## 6. LIMITED VISIBILITY INTO SPEND AND PERFORMANCE

When information is scattered and processes are inconsistent, it becomes difficult to understand true costs or track performance. Teams spend more time reacting to problems and less time preventing them. Without clear, real-time visibility, it's nearly impossible to manage budgets, identify issues early, or keep operations running smoothly.





# THERE ARE RISKS IN MANUAL FREIGHT PLANNING, TOO

Issues don't just arise when freight planning processes are poor. They also take place when you rely on manual labor.

Human-led processes make it harder to validate rates, align capacity, and respond to disruptions in real time. As a result, even well-designed procurement strategies can unravel when the execution layer depends on spreadsheets, emails, and undocumented information.

Consider the following risks of manual freight planning if you're uncertain about using automated tools:



## HUMAN ERROR

Manual planning leaves room for mistakes—rushed decisions, incomplete information, and simple data-entry slips. Miscommunication or duplicated work can easily send a shipment to the wrong place or create avoidable backlogs. These small errors add up quickly in both cost and disruption.



## HIGHER OPERATING COSTS

When every step depends on manual checks, costs rise. Teams may overpay for freight, miss better capacity options, or lean too heavily on last-minute spot rates. Inconsistent carrier performance is harder to catch, and opportunities for consolidation or proper classification often slip by. The result is a supply chain that's more expensive to run—and harder to predict.



## LIMITED VISIBILITY AND SLOW RESPONSES

Manual tools don't offer real-time insight into lanes, rates, or shipment status. Teams end up chasing updates by phone or email, which delays problem-solving and hides patterns that could improve planning. Without timely data, it becomes harder to reduce dwell time, anticipate service issues, or adjust to disruptions before they escalate.



## LONGER PROCUREMENT CYCLES

Traditional coordination—digging through PDFs, emailing carriers, and updating spreadsheets—slows decisions and restricts flexibility. These delays affect everything from dock flow to loading schedules. A digital approach shortens the cycle by automating bids, comparing rates instantly, and recommending options in real time, which helps keep freight moving and operations on track.



# THERE ARE RISKS IN MANUAL FREIGHT PLANNING, TOO



## SHALLOW PLANNING DATA

When planners rely on scattered spreadsheets or outdated files, they end up working with only a fraction of the information they need. Weak data limits their ability to schedule accurately, allocate resources well, or improve yard coordination. Decisions become reactive instead of strategic.



## STRAINED CARRIER MANAGEMENT

Poor visibility makes it harder to evaluate carriers fairly or consistently. Without accurate performance data, teams struggle to enforce routing guides, monitor service, or make informed choices about who should handle specific lanes. This weakens relationships and increases exposure to delays and unexpected costs.



## DIFFICULTY SCALING

As volumes grow, manual processes can't keep up. More quotes, more carriers, and more planning cycles place increasing pressure on teams already stretched thin. Without automation and dependable data, operations slow down just when the business needs to move faster, limiting the ability to scale effectively.

## MAKING THE SWITCH FROM MANUAL TO AUTOMATED FREIGHT PLANNING

To transform the manual freight planning process with automated software solutions, logistics professionals must recognize that the strategic key to reducing risks, anticipating needs, and staying flexible is better data and broader visibility.

Automated systems can consolidate orders from multiple sources, provide automated routing suggestions, and deliver dynamic rate benchmarking. They also offer load consolidation insights, carrier filtering and prioritization, and automated fallback logic, ensuring shipments are assigned efficiently even when primary options are unavailable.

Digital enablement dramatically minimizes human error, optimizes carrier collaboration, and accelerates dock turnaround times. By providing full visibility from gates to yards, carriers, and loads, platforms like ShipperGuide create measurable improvements in dwell time, reduced detention fees, and increased overall throughput.



## **NEXT UP: THE DETAILS THAT MATTER IN FREIGHT PLANNING AND OPTIMIZATION**

Freight planning and optimization succeed not just through strategy, but through attention to the small yet critical details that drive efficiency and reliability. Accurate details like freight weight, density, and dimensions are key factors in streamlined operations.

In the next chapter, we'll dive deeper into these details, showing how focusing on the right elements can turn planning and optimization from a process into a competitive advantage—helping logistics teams make smarter decisions, reduce costs, and keep supply chains running smoothly.



## // CHAPTER 02

# WHAT MAKES PLANNING WORK: THE DETAILS THAT DRIVE EFFICIENCY

Efficient shipping isn't just about moving goods from point A to point B—it relies on clear communication, precise measurements, and coordinated processes between shippers, carriers, and facilities. Small details, like accurate weight, dimensions, and special handling instructions, can make a big difference in avoiding delays, reducing costs, and maintaining compliance.

In this chapter, we'll explore the essential requirements carriers rely on for smooth freight operations, from accessoriials and pickup windows to compliance documentation. We'll also dive into why getting freight density, weight, and dimensions right is critical for cost control, efficient routing, and load optimization. By understanding these details and using the right tools, logistics teams can build trust with carriers, streamline operations, and prevent small mistakes from turning into costly disruptions.





# THE 5 CARRIER REQUIREMENTS FOR SMOOTH FREIGHT OPERATIONS

While carriers must consider many requirements, these five are essential for smooth operations. Following them can help prevent delays, reduce costs, and improve customer satisfaction.

## **WEIGHTS, DIMENSIONS, AND PALLET CONFIGURATIONS**

**01**

Additional services—like liftgate, inside delivery, residential delivery, after-hours delivery, and special handling—should be communicated before shipment. Sharing accurate information about dimensions and weight helps carriers and facilities plan equipment and labor needs. Using standard pallet sizes and capturing weight and dimensions automatically is the simplest way to ensure shipments are handled efficiently.

## **ACCESSORIALS (LIFTGATE, INSIDE DELIVERY, RESIDENTIAL, ETC.)**

**02**

Extra services, such as inside delivery or liftgate use, need to be shared in advance so all parties can prepare for loading and unloading. Failing to communicate these needs can lead to delays, extra fees, or missed deliveries. Other common accessorials include after-hours delivery, special handling, and shipments to locations with limited access. Listing all required services upfront ensures smooth operations and avoids common issues like failed deliveries, carrier refusals, or overtime charges.

## **SPECIAL HANDLING INSTRUCTIONS (HAZMAT, TEMPERATURE-CONTROLLED)**

**03**

Many shipments require special handling, whether for temperature-sensitive goods or hazardous materials. Miscommunication or mishandling can result in spoilage, compliance violations, or accidents. Clear instructions and procedures are essential. Recent technologies, such as sensors and telematics, allow real-time monitoring, making it easier to follow requirements, choose appropriate equipment, adjust lead times, and select the right carrier.

## **4. PICKUP AND DELIVERY WINDOWS**

**04**

Following scheduled pickup and delivery windows is essential for keeping supply chains on track. Missing a window can cause delays that ripple through the entire operation. Tools like dynamic slot recommendations, dock scheduling, and capacity alignment help shippers and carriers coordinate appointments, manage labor effectively, and maintain smooth warehouse operations.

## **5. COMPLIANCE DOCUMENTATION (LICENSES, PERMITS)**

**05**

Regulations vary depending on cargo, route, and transport method, including requirements like hazmat permits, oversize or overweight permits, and cross-border documentation. Keeping licenses, permits, and other documents up to date is critical. Centralized document management connected to your TMS can automate checks and reduce errors, preventing delays, fines, or rejected shipments.



## LET'S START BY GETTING YOUR FREIGHT DENSITY RIGHT

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Continuous improvement is the backbone of logistics, and even small gains can create meaningful advantages. Freight density is often treated as a minor technical detail, but it has a much larger impact than most teams realize. When density is accurate, carriers can price shipments correctly, space isn't wasted, and unnecessary costs are avoided.

Getting this right reduces unused trailer capacity, cuts down on billing disputes, and lowers the risk of surprise charges. It's a simple step that strengthens both efficiency and partnership. Let's take a closer look at why density matters and how to improve it.

### HOW ACCURATE FREIGHT DENSITY IMPROVES PRICING AND EFFICIENCY

When freight density is measured correctly, carriers get the information they need to plan space, balance freight types, and build loads without guesswork. That leads to more efficient trailers and more accurate pricing for everyone involved. Carriers can move freight with fewer delays and better route planning, and shippers get consistent, predictable costs.

Carriers naturally prefer working with companies that provide reliable shipment data. Accurate weight and density support modern LTL pricing models, reduce billing issues, and feed the performance metrics carriers use to evaluate partnerships. In a supply chain where every decision is increasingly data-driven, that accuracy plays a big role.

Trust and transparency make the entire network run smoother. Small gaps in data can compound quickly, so getting density right isn't just a technical detail—it's a foundational step for better efficiency and fairer pricing on both sides of the relationship.

### HOW DENSITY AFFECTS FREIGHT CLASS AND RATE

Freight density plays a big role in small and medium-sized shipments. This is the so-called less-than-truckload (LTL) shipping. Freight classes are primarily determined by density and weight in these shipments. Compact and dense shipments receive a lower rate and a lower class compared to bulky items (even lightweight ones).

That's because carriers are primarily concerned with space rather than weight. As such, efficient packaging and optimal density are very important. Shippers need to streamline their packaging operations and work towards minimizing the size of their packages.



# LET'S START BY GETTING YOUR FREIGHT DENSITY RIGHT

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## COST IMPLICATIONS OF MISCALCULATED DENSITY

Miscalculations can result in unexpected fees and other consequences. Most carriers have a reweighting procedure implemented to reduce the risk of density miscalculation. This can lead to discrepancies if shippers have submitted incorrect data. In addition to changing the freight class and rate, carriers can charge reclassification fees. Delivery delays are also possible, which can cause a financial burden for both carriers and shippers.

Today's supply chains rely on data to make sound decisions. Repeated miscalculations can not only lead to higher rates and additional fees but also damage credibility. As miscalculated freight density can disrupt planning, waste space, and lead to delays, carriers prefer to partner with shippers that are trustworthy and reliable.

## STRATEGIES FOR MEASURING DENSITY ACCURATELY

There are several practical ways to gather accurate freight density data, and modern tools make the process far easier than it used to be. A dependable transportation management system can automate much of the work, reduce manual entry mistakes, and track density at the commodity level—removing a lot of guesswork from the process.

Here are a few approaches that help teams measure density with confidence:

- **LEVERAGE YOUR TMS:** A good TMS can handle density calculations automatically, saving time and ensuring consistency.
- **STANDARDIZE PACKAGING:** Consistent pallet sizes and uniform packaging simplify measurement and reduce variability.
- **RECHECK DIMENSIONS AND WEIGHT:** Verify these details more than once before submitting shipment information. Carriers will do their own checks, and catching discrepancies early helps prevent billing adjustments and delays.
- **USE DIGITAL MEASURING TOOLS:** Dimensioners and similar devices take fast, accurate measurements and remove many of the errors that come with manual methods.
- **REVIEW AND ADJUST:** When density is off, look for the root cause. Understanding where mistakes happen makes it easier to refine processes and avoid repeat issues.

These practices give shippers more reliable data, fewer surprises, and stronger alignment with carrier expectations—an essential foundation for smoother operations.



## WHY FREIGHT WEIGHT DESERVES JUST AS MUCH ATTENTION



There's one more detail that can make or break the accuracy of a shipment: weight.

Just like density, getting weight wrong—whether by a little or a lot—can lead to unnecessary charges, reweighs, and delays. Both over- and under-reporting come with consequences, and carriers rely on this information to plan capacity and keep operations moving smoothly.

### THE NEED FOR ACCURATE FREIGHT WEIGHT MEASUREMENTS

Trust sits at the center of every shipper-carrier relationship. Carriers depend on the weight, dimensions, and other shipment details provided to them so they can plan equipment and build loads safely. When those numbers are off, the consequences show up quickly—trailers may be underfilled, overloaded, or out of compliance, and those missteps often lead to added charges or operational delays.

Getting weight right also makes downstream processes smoother. Auditing invoices, resolving discrepancies, and selecting the most appropriate carrier or mode all depend on having reliable numbers from the start. When both sides can count on the accuracy of the information being exchanged, the working relationship improves and surprises become rare.



In short, precise weight measurements matter because they:

- Reduce the risk of safety issues, inefficiencies, and improper loading.
- Strengthen trust between shippers and carriers.
- Help avoid unexpected charges, reweighs, and other preventable costs.



# WHY FREIGHT WEIGHT DESERVES JUST AS MUCH ATTENTION

## COMMON WEIGHT ESTIMATION ERRORS AND THEIR COST IMPACT

A common mistake is guessing shipment weight instead of measuring it accurately. Instead of guessing and giving approximate numbers, shippers need to measure weight, density, and size accurately. That gives carriers precise information about loads.

Estimating freight weight can lead to overestimating or underestimating loads. Overestimation increases transportation costs, while underestimation can trigger reweigh fees, reclassification, and surcharges.

Another impact of improperly estimating freight weight is related to the disruption of dock scheduling and carrier planning. This leads to delivery delays, breaches in regulatory limits, route reconfiguration, and fines. Even slight underestimation can disrupt carrier planning, causing delays, inflated costs, and extra fees.

## TOOLS FOR WEIGHING SHIPMENTS ACCURATELY

Technological advancements have made the process of measuring freight weight quick and easy. Here are a few reliable tools to measure shipment weight precisely:

- **FLOOR SCALES:** These industrial scales are primarily used for large shipments and pallets. Their accuracy with high-weight loads is excellent.
- **FORKLIFT SCALES:** Combining the loading and weighing processes saves time. The easiest way to do so is by using forklift scales.
- **TRUCK SCALES:** Verifying vehicle weight before and after loading is also an option in some cases. That's primarily used by carriers, but it can also be used by shippers with large volumes and those who need FTL transportation.
- **SAAS TOOLS:** Modern systems allow businesses to calculate dimensions, weight, and density. That automates the process and makes it more convenient for companies to get precise technical details of their shipments.

TMS platforms like ShipperGuide take this further by integrating these measurements into automated workflows. By reducing manual entry errors, improving density calculations, and enabling accurate rating, our platform helps ensure shipping costs are precise and shipments are billed correctly, while saving time and reducing disputes.



# WHY FREIGHT WEIGHT DESERVES JUST AS MUCH ATTENTION

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## ROLE OF WEIGHT IN MODE AND CARRIER SELECTION

Weight plays a crucial role in calculating transportation costs. For example, shipments over 15,000–20,000 pounds often achieve better value as full truckload (FTL), while smaller, variable loads typically use less-than-truckload (LTL) or parcel services. Weight also influences equipment selection—heavier loads may require spread-axle trailers instead of tandem-axle trucks to comply with safety regulations.

Accurate weight data allows shippers to get predictable pricing and avoid unexpected fees. With transportation services often using dynamic pricing, TMS platforms can compare real-time carrier rates across modes, helping businesses make cost-efficient decisions.

Knowing the exact freight weight, dimensions, and density enables companies to select the most efficient transportation option, both by mode and carrier, while supporting safety compliance and fostering strong shipper-carrier relationships.



## HOW FREIGHT DIMENSIONS AFFECT ROUTING, EQUIPMENT, AND COSTS

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Precision in planning is essential for keeping supply chains efficient and competitive. Carriers rely on accurate shipment measurements—dimensions, weight, and density—to plan routes, load vehicles effectively, and minimize costs.

Even small mistakes in measuring dimensions can ripple through operations, creating delays, extra fees, and disruptions that grow over time. The next section explores why careful measurement of shipment dimensions matters, offers strategies for handling oddly shaped loads, and looks at how modern tools can simplify dimension-based planning.

# HOW FREIGHT DIMENSIONS AFFECT ROUTING, EQUIPMENT, AND COSTS

## MAKING THE MOST OF SHIPMENT DIMENSIONS

Shipment dimensions affect many aspects of the shipping process. When measured accurately, they help shippers optimize packaging, consolidate freight, select the right transportation mode, and choose the appropriate carrier. Accurate dimensions also make it easier for logistics teams further along the supply chain to plan loads and use space efficiently.

Getting dimensions right—along with weight and density—allows carriers to make the best use of trailer space and improve overall efficiency. For example, a pallet measured at 48x40x50 instead of 48x40x60 can change the dimensional weight enough to increase costs by 15–30%. Accurate measurements reduce the risk of unexpected surcharges, support fair pricing, and strengthen the working relationship between shippers and carriers.



## DIMENSION LIMITS FOR TRUCKS AND CONTAINERS

Each mode of transportation has specific size limits that need to be followed:



### TRUCKING:

Standard trailers are typically 53 feet long, 8.5 feet wide, and 13.5 feet high. Loads exceeding these dimensions may require oversize permits or special equipment.



### CONTAINERS:

Standard international sizes are most commonly 20-foot and 40-foot containers.



# HOW FREIGHT DIMENSIONS AFFECT ROUTING, EQUIPMENT, AND COSTS

## EFFECTS ON ROUTING AND LOAD OPTIMIZATION

The size of a shipment directly affects how it can be loaded and routed. Oversized items may need alternate routes because of bridge clearances or other restrictions. Having accurate dimensions helps carriers arrange loads more efficiently, reducing unused space, making better use of trailer capacity, and improving the order of stops. This not only saves travel time and lowers transportation costs but also ensures weight is balanced and space is used effectively, keeping operations running smoothly.

## COST IMPACTS OF INACCURATE DIMENSIONS

Incorrectly measured shipment dimensions can drive up logistics costs. Carriers often use dimensional weight to set pricing, and when the provided dimensions don't match the actual shipment, extra fees can result, such as re-measurement charges or added costs for services like liftgate or limited-access delivery.

Even small errors can lead to unexpected surcharges and put strain on relationships with carriers. Oversized or mismeasured loads may require rerouting, extra handling, or temporary storage, all of which increase costs and complicate operations. Providing accurate dimensions helps control expenses, avoid delays and penalties, and maintain strong partnerships.





# HOW FREIGHT DIMENSIONS AFFECT ROUTING, EQUIPMENT, AND COSTS

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## STRATEGIES FOR CONSOLIDATING ODDLY SHAPED SHIPMENTS

Not all freight comes in standard sizes, and irregularly shaped shipments can present unique challenges. With careful planning and the right tools, these shipments can be managed efficiently.

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Some strategies include:

- **USE DUNNAGE AND FILLERS.** Materials like foam or air cushions stabilize loads and make them easier to stack.
- **GROUP COMPATIBLE SHAPES.** Triangular or cylindrical items, for example, can sometimes be arranged together to maximize space.
- **CUSTOM PALLETS AND CRATES.** Specially designed pallets and crates protect irregular items and prevent damage during transport.
- **LEVERAGE LOAD-PLANNING SOFTWARE.** Modern systems can calculate optimal placement, maximize space usage, and reduce wasted capacity, even for oddly shaped loads.
- **PARTNER WITH SPECIALIZED CARRIERS.** Some carriers specialize in oversized or irregular freight, and working with them can ensure safer and more efficient transport.

Combining these strategies with smart planning tools helps shippers manage complex loads more effectively, reduce costs, and minimize errors.

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## SOFTWARE SOLUTIONS FOR DIMENSION-BASED PLANNING

Advancements in logistics software have greatly improved supply chain efficiency. Modern transportation management systems (TMS) and warehouse management systems (WMS) let shippers and carriers include freight dimension and weight data directly into their planning workflows. Using tools like 3D modeling and cube utilization, these systems can show how shipments fit within trailers or containers, highlight consolidation opportunities, and help build loads more efficiently, saving time and costs.

Software also applies dimension data to route planning, equipment selection, and load assignments, ensuring shipments are sent on the right trailers and with the right carriers while avoiding unnecessary fees or reclassifications. Some platforms can even automate these calculations and provide real-time recommendations for carriers and loads, helping businesses scale operations while reducing errors and keeping transportation costs under control.



## LOOKING AHEAD: BUILDING STRONGER PARTNERSHIPS AND STRATEGIC AWARENESS

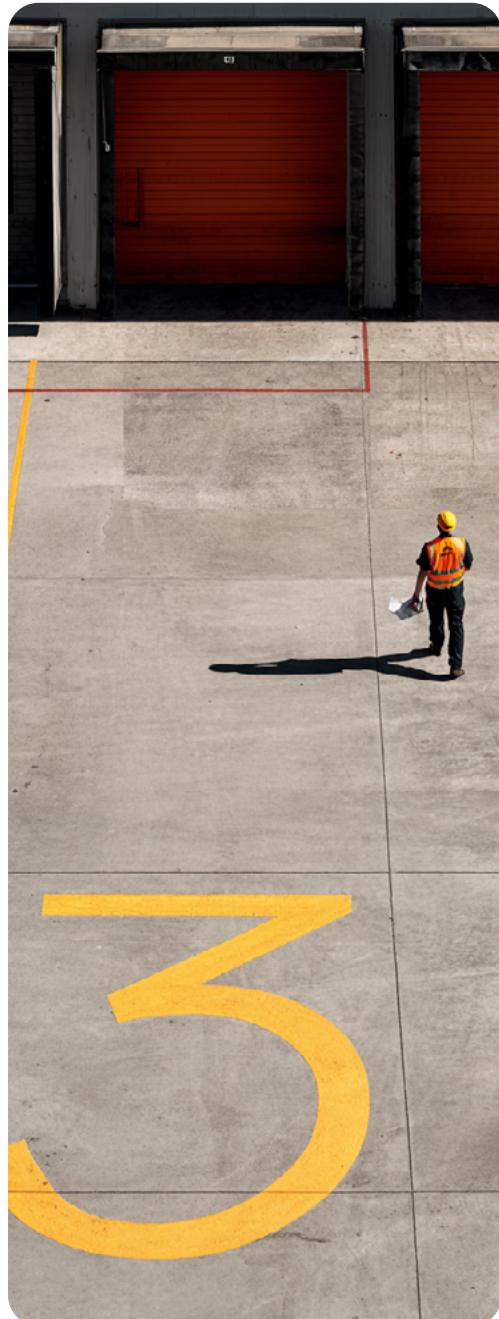
Freight planning and optimization rely on attention to detail—from accurate weights, dimensions, and density to clear communication with carriers and proper documentation. These small but critical factors shape efficiency, cost, and service reliability across your supply chain. Getting them right helps prevent delays, avoid unexpected fees, and make operations smoother for everyone involved.

In the next chapter, we'll shift focus from these operational details to the bigger picture: how building strong relationships with carriers and understanding market context can give your freight strategy a competitive edge.



## // CHAPTER 03

# CONNECTING STRATEGY, RELATIONSHIPS, AND MARKET INSIGHT



Optimization isn't just about running tighter operations. Instead, it's about creating the foundation for stronger, more reliable partnerships and making better decisions in a shifting market. As planning tools grow more sophisticated and supply chains become more interconnected, the relationship between shippers, carriers, and the technology they rely on is changing.

This chapter looks at how better planning strengthens trust, improves communication, and builds healthier long-term partnerships. It also explores the broader market forces shaping planning and optimization today, giving you the context you need to efficiently manage freight procurement.

## THE SIGNIFICANCE OF STRONG RELATIONSHIPS IN FREIGHT PROCUREMENT

When shippers and carriers collaborate as true partners, they can enhance performance by reducing dwell time and improving tender acceptance. Strong carrier relationships secure capacity, prevent costly delays, and keep coordination smooth during unexpected events.

In procurement, those relationships mean predictability. Carriers who know a shipper's business can plan efficiently, reducing rejections and rate fluctuations. That reliability builds a loop of improvement where data drives smarter bids, and smarter bids strengthen performance.



# 5 WAYS BETTER PLANNING STRENGTHENS PARTNERSHIPS

Good planning does more than streamline operations—it creates stronger, more dependable relationships between shippers and carriers. Here are five ways strategic optimization supports healthier, long-term partnerships.

## 1. MORE CONSISTENT ON-TIME PERFORMANCE

When both sides have a clear picture of what's coming—routes, schedules, dock timing—it's easier to stay aligned. Fewer surprises mean fewer delays, and both shippers and carriers can prepare with more confidence.

## 2. PREDICTABILITY THAT KEEPS OPERATIONS STEADY

Reliable information helps everyone stay ahead of changes. By turning scattered data into something usable, planning tools make it easier to anticipate shifts in demand, capacity, or timing before they cause issues. That kind of steadiness goes a long way in keeping relationships strong.

## 3. FAIRER LOAD DISTRIBUTION BUILDS TRUST

Carriers want to know they're being treated fairly. When load decisions stem from clear criteria—performance, capacity, consistency—it removes uncertainty. Transparent allocation builds trust and keeps carriers engaged for the long haul.

## 4. MORE PRODUCTIVE RATE CONVERSATIONS

When planning and procurement are grounded in real data, negotiations become far easier. Shared visibility into lane patterns, performance improvements, and historical consistency takes guesswork out of pricing discussions. Shippers manage their budgets more effectively, and carriers protect their margins without friction.

## 5. A STRONGER BASE FOR LONG-TERM COLLABORATION

Clear metrics and shared visibility create room for more meaningful conversations. This includes quarterly business reviews, long-term commitments, and joint planning. With both sides looking at the same information, it's easier to solve problems together and build relationships defined by reliability and mutual growth.

## FROM OPTIMIZATION TO INSIGHT: ANALYZING THE SUPPLY CHAIN MARKET'S IMPACT

With planning and execution on solid footing, the next step is understanding the world your carriers operate in. Markets shift, capacity fluctuates, and external pressures continually reshape what good performance looks like.



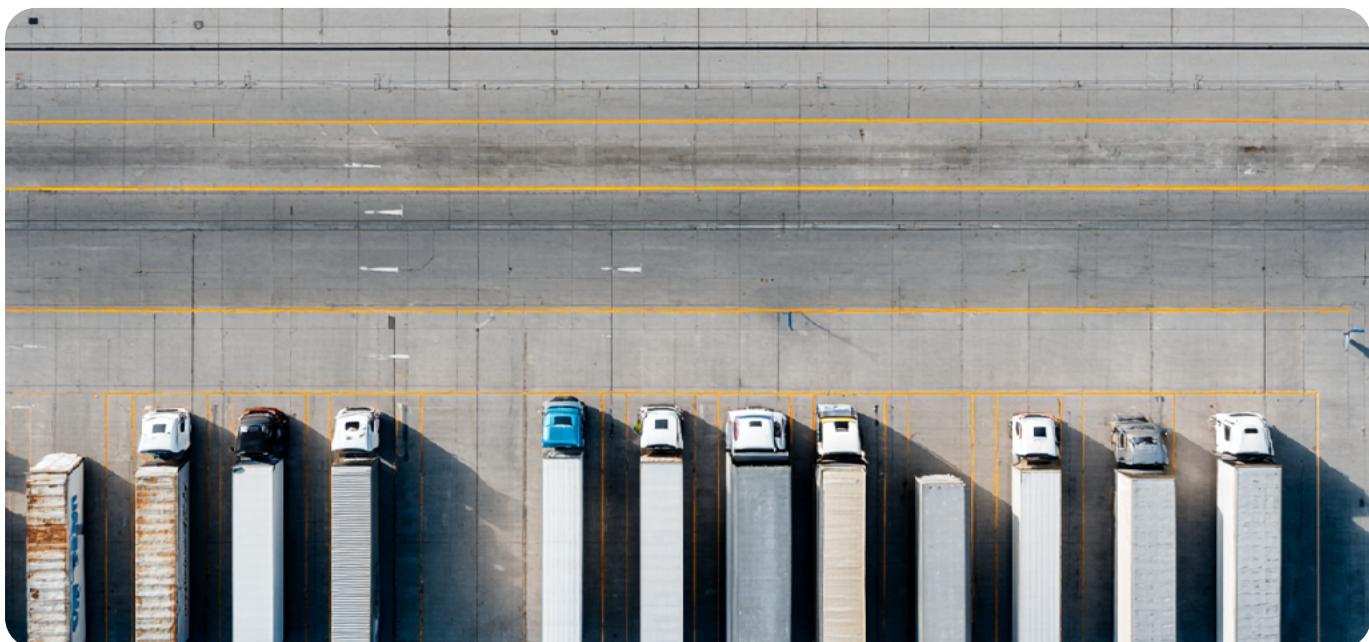
## FROM OPTIMIZATION TO INSIGHT: ANALYZING THE SUPPLY CHAIN MARKET'S IMPACT

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### KEY DRIVERS OF DEMAND IN PLANNING AND OPTIMIZATION

The pressure on supply chains continues to rise. Companies are expected to move goods quickly and keep costs under control, even as fuel prices fluctuate, delivery expectations tighten, and labor remains difficult to secure. These realities make accurate, thoughtful planning more important than ever.

At the same time, better visibility and higher-quality data are closing the gap between planning and day-to-day execution. Shippers are shifting how they plan—shortening procurement cycles, updating routing guides more frequently, and re-bidding lanes when the market changes. As consistency becomes just as valuable as speed, many are turning to systems that automate routine decisions, reduce waste, and provide a clearer picture of what’s happening across their networks.





# PLANNING AND OPTIMIZATION MARKET SEGMENTS AND PLAYERS

As supply chains grow more complex, the planning and optimization space has expanded with them. What used to be a specialized corner of the industry is now a full ecosystem of software tools and service partners helping shippers plan, route, and manage freight with more clarity and control.



## TMS PROVIDERS WITH INTEGRATED OPTIMIZATION

Transportation Management Systems have moved far beyond comparing rates and booking loads. Many now connect planning, execution, and optimization within a single workflow, giving teams a clear view of what's happening across their network. Built-in optimization tools can weigh cost, capacity, and carrier performance in real time, helping teams make smarter routing decisions without juggling multiple spreadsheets or disconnected systems.

The payoff is speed and visibility—scenario testing, automated carrier selection, and cost-saving opportunities all happen in one place.



## AI-DRIVEN LOAD PLANNING PLATFORMS

AI-driven planning platforms represent the next step in optimization. Instead of relying solely on fixed rules, these tools learn from live data. They can anticipate the best options for multi-stop truckload moves, LTL consolidation, unexpected volume swings, or last-minute changes on the inbound side.

The advantage is adaptability. Predictive routing, for example, can reroute shipments around weather delays, tight capacity, or port congestion before disruptions snowball. By handling these adjustments automatically, shippers reduce manual work, cut empty miles, and maintain performance even during volatile periods.



## 3PLS WITH MANAGED OPTIMIZATION SERVICES

Many third-party logistics providers now offer managed services that blend automation, analytics, and industry expertise. They support everything from routing and carrier selection to full load-planning oversight.

This approach is especially valuable for mid-market shippers with \$5–100M in annual freight spend—teams that often manage complex freight networks but don't always have the internal resources to scale optimization on their own. By leaning on a 3PL's experience and real-time performance insight, these shippers stay agile, operate more efficiently, and grow without immediately adding staff.



# HOW PLANNING AND OPTIMIZATION SOLUTIONS CREATE VALUE

Modern planning and optimization tools make a tangible difference. Their impact stretches across cost control, operational efficiency, reliability, and long-term strategy, touching nearly every aspect of freight management.



## COST SAVINGS AND EFFICIENCY GAINS

These systems help teams see clearly what's happening across their network, automate routing, carrier selection, and load planning, and provide immediate access to key performance information. For example, empty miles can be cut by 15-20%, manual planning time reduced by a few hours each day, and reliance on ad-hoc freight minimized.

When inefficiencies occur—like sending a low-priority shipment with a high-cost carrier or unevenly loading trailers—these platforms flag the issues and help correct them before costs escalate. The result is lower overall freight spend, better on-time performance, and more productive use of labor, time, and vehicle capacity.



## IMPROVED SERVICE AND RELIABILITY

Better planning leads to better service. With real-time visibility and predictive insights, these tools anticipate potential disruptions before they impact deliveries. Aligning carrier performance, capacity, and scheduling commitments helps maintain consistent operations, even under pressure, and strengthens trust with partners and customers alike.



## STRATEGIC BENEFITS FOR SHIPPERS

The strategic advantage comes from clearer insight and control. Connected planning tools provide data that inform smarter decisions around procurement, capacity, and long-term network design. This foresight allows teams to anticipate changes, negotiate from a stronger position, and align daily operations with broader business objectives.



## EMERGING TRENDS IN PLANNING AND OPTIMIZATION

The way freight is planned and managed is changing rapidly. Technology is becoming more connected and smarter, shaping how companies plan, execute, and adapt in their operations.



### AI AND PREDICTIVE INSIGHTS

Artificial intelligence and predictive analytics are changing how teams anticipate challenges. By turning past and current data into actionable forecasts, companies can spot potential disruptions, shifts in demand, and capacity issues before they occur.

Instead of reacting to problems as they arise—like delays, congestion, or cost spikes—teams can plan ahead, adjust routes, and optimize loads. Predictive tools also allow for “what-if” scenario planning, helping operations stay stable even in unpredictable conditions.



### CONNECTING WITH DIGITAL FREIGHT PLATFORMS

Linking planning tools with digital freight platforms gives teams real-time visibility into rates, capacity, and carrier options. This integration closes the gap between planning and execution, making it easier to act on insights immediately. It streamlines decision-making, allowing shipments to be booked, routed, and monitored efficiently in one connected system.





## FROM MARKET INSIGHTS TO ACTIONABLE DECISIONS

Understanding the forces shaping the freight market and building strong carrier relationships sets the stage for smarter planning. But knowledge alone isn't enough—real impact comes when that information is translated into actionable decisions.

In the next chapter, we'll explore how to turn data into insights that guide every choice in freight planning and optimization. You'll discover practical strategies for leveraging shipment, carrier, and market data to make decisions that reduce costs, improve service, and strengthen your supply chain.



## // CHAPTER 04

# TURNING DATA INTO DECISIONS WHEN FREIGHT PLANNING

Relying on gut instincts and historical averages is no longer enough to manage freight effectively. The key to consistent, reliable performance lies in leveraging data.

Real-time, accurate insights that reveal patterns, predict challenges, and guide smarter decisions are crucial. From understanding market shifts to monitoring carrier performance, data is what separates reactive freight planning from proactive, optimized strategies.

With access to structured data, transportation teams can forecast volumes, model “what-if” scenarios, consolidate shipments, and evaluate carriers with precision. This chapter explores how shippers can turn information into action, using data to optimize decisions, strengthen partnerships, and maintain control in a dynamic market.

### THE ROLE OF DATA IN FREIGHT PLANNING

Freight planning has always involved balancing cost, timing, and capacity, often with limited visibility. Today, data brings clarity to that process, connecting past performance, route patterns, dock activity, and capacity timelines with what’s coming next. The result is smarter operational planning, faster evaluations, and planning cycles that match real-world conditions.

Choosing the lowest-priced carrier doesn’t always lead to smoother operations. A shipment that saves a few dollars might face delays at congested docks or miss key capacity windows, increasing labor and additional handling costs. By using data to understand when to ship, which carriers reliably meet commitments, and how to plan routes and loads ahead, teams can turn reactive decision-making into proactive strategies that improve both cost management and operational flow.





# 5 WAYS DATA IMPROVES FREIGHT PLANNING

Once data is part of your planning process, the next step is using it to make smarter decisions. Here's how it can guide more effective planning across shipments.

## 1. FORECAST VOLUMES WITH PRECISION



Getting shipment volume right gives teams a clear view of capacity needs and allows them to plan ahead. Instead of relying on outdated averages, modern data uses current order trends, seasonal patterns, and mode performance to anticipate what's coming. This foresight helps secure carrier commitments early and reduces last-minute adjustments, creating a smoother, more predictable network.

## 2. IDENTIFY RELIABLE CARRIER PATTERNS



Every partnership is only as strong as the performance behind it. By tracking metrics like on-time delivery, tender acceptance, transit times, and claims, teams can see beyond pricing and identify longer-term trends. These insights highlight which carriers consistently perform well and which may cause delays or extra costs, guiding future decisions and strengthening overall reliability.

## 3. MODEL “WHAT-IF” SCENARIOS



Freight rarely moves in a straight line. Market shifts, sudden demand spikes, or carrier changes can create challenges. Scenario modeling allows teams to explore how different factors—routes, rates, or modes—might affect cost and timing. This helps remove uncertainty, letting planners adapt quickly, reduce risk, and make confident decisions.

## 4. STABILIZE COSTS



Freight budgets can fluctuate due to rate changes, timing, or uneven carrier allocation. Data brings clarity, making costs more predictable and transparent. By tracking historical rates, seasonal trends, and carrier performance, teams can spot issues early, prevent unexpected expenses, and maintain steady pricing across their network.

## 5. ANALYZE PAST ROUTE PERFORMANCE



Looking at past data reveals which routes and lanes perform consistently and which encounter delays or extra costs. For example, one lane might have 15% more detention than another with the same routing, prompting adjustments to scheduling or carrier choices. Continuous review helps teams optimize routing, adjust lane assignments, and keep freight moving efficiently while minimizing surprises.



## FROM DATA INSIGHTS TO ACTIONABLE FREIGHT PLANNING

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Having the right data is only the first step. Insights into volume, carrier performance, and historical lane efficiency are valuable, but they must be applied strategically to make freight planning effective. The next challenge for logistics teams is balancing costs, service expectations, and operational risk.

In the following section, we'll explore practical strategies for turning data into decisions that keep shipments on time, budgets under control, and operations resilient—even in volatile or unpredictable conditions.

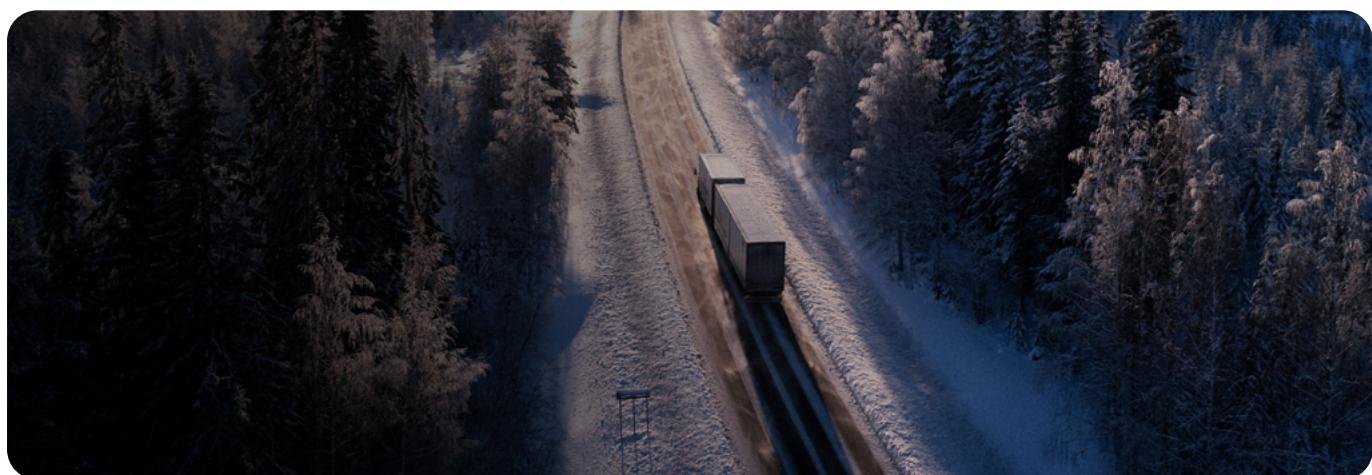
## THE SHIPPER'S CHALLENGE: MANAGING COMPETING PRIORITIES

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Freight planning is a balancing act. Shippers must weigh fuel costs, distance, and shipment weight against service levels and transportation options, all while keeping potential risks in mind.

For instance, some shipments carry higher rates due to added risk factors, such as insurance for damage, theft, or supply chain disruptions. Logistics teams must decide whether to accept the higher cost for added protection or choose a cheaper option and assume some risk.

These trade-offs happen constantly, and the need for quicker, well-informed decisions—covering costs, dwell time, and carrier performance—is only increasing. Recent industry surveys indicate that demand for freight services has risen sharply over the past year, putting additional pressure on companies to stay efficient and responsive.





## 8 WAYS TO BALANCE FREIGHT PROCUREMENT TRADE-OFFS

With the challenges of freight planning in mind, here are eight practical ways shippers can manage trade-offs and make smarter decisions:

### **CONSOLIDATE SHIPMENTS**

1 Freight consolidation combines multiple orders into a single shipment, whether by pallet, container, or destination. This approach can save on shipping costs, improve delivery efficiency, and even reduce environmental impact. The key challenge is communication—coordination across shipments and carriers is essential. Digital tools with real-time tracking and rate information can make this process much smoother.

### **MODEL MULTIPLE SOURCING SCENARIOS**

2 Being able to simulate different sourcing scenarios for various transportation modes helps shippers calculate risk and cost. It also prepares teams to adjust routes quickly if service disruptions occur. and rate information can make this process much smoother.

### **DESIGN HYBRID ROUTING GUIDES**

3 Hybrid routing blends static, reliable routes with dynamic, constantly updated routes. Static routes handle critical deliveries consistently, while dynamic routing adjusts for lower-priority shipments based on changing conditions. Combining these strategies allows for flexibility without sacrificing reliability.

### **PRIORITIZE TIME-SENSITIVE FREIGHT**

4 Expedited or time-sensitive shipments can strain carriers, modes, and dock schedules, but delivering them reliably builds strong business relationships. Prioritizing these shipments also supports profitability and reinforces your organization's reputation for dependable logistics.



## 8 WAYS TO BALANCE FREIGHT PROCUREMENT TRADE-OFFS

### INCORPORATE CARRIER PERFORMANCE DATA INTO FORECASTS

5 Tracking historical carrier performance—on-time delivery, costs, dwell time, tender acceptance, and lead times—enables better forecasting. This insight helps teams allocate volumes to reliable carriers and plan procurement with confidence. Platforms like ShipperGuide consolidate this data for actionable, easy-to-use insights and rate information can make this process much smoother.

### BUILD RISK-ADJUSTED PLANS

6 Contingency planning is essential for handling disruptions such as weather, labor strikes, or market shifts. This includes identifying backup carriers, noting alternative routes and modes, and keeping flexible contracts in place.

### LEVERAGE DIGITAL PLATFORMS FOR VISIBILITY

7 Freight platforms go beyond basic shipment tracking, offering real-time monitoring, alerts, and integration with carrier systems. This visibility helps teams address delays proactively, maintain service levels, and make timely, informed decisions.

### MONITOR REAL-TIME PERFORMANCE METRICS

8 Access to live data allows daily decisions to be based on accuracy rather than estimates. Digital tools track spending, shipment status, and overall performance, reducing errors and supporting more effective operational planning.



## TURNING INSIGHTS INTO ACTION

Using data effectively is the key to smarter, more confident freight planning. By analyzing volumes, monitoring carrier performance, running scenario models, and tracking real-time metrics, shippers can move from guesswork to strategy—balancing costs, managing risk, and improving service. Data doesn't just inform decisions—it transforms freight procurement into a proactive, predictable, and highly efficient operation.

In the next chapter, we'll shift from understanding to implementation. By the end, you'll have a practical guide for translating these insights into action, helping you create processes that turn informed decisions into measurable improvements across your supply chain.



## // CHAPTER 05

# YOUR ROADMAP: STEP-BY-STEP PLANNING AND OPTIMIZATION



Digital technology is simplifying freight planning, making it more accessible for supply chain managers and logistics teams. Today, a variety of solutions help streamline planning at every stage, from managing shipments to coordinating carriers and optimizing loads. These tools are designed to be intuitive and practical, supporting decision-making without requiring specialized technical expertise.

In this chapter, we'll walk through a clear, step-by-step guide for using a transportation management system like ShipperGuide to simplify freight planning. The goal is to show how these tools can help teams work more efficiently, reduce errors, and make better decisions, turning complex freight planning into a manageable, strategic process.



## FREIGHT DATA CHECKLIST: WHAT YOU NEED BEFORE YOU QUOTE

ShipperGuide is designed to take out all the guesswork, double-checking, and frenzied comparisons required in manual quoting—preventing issues like unexpected re-weigh charges, misclassified freight, or missed accessorial requirements that can drive up costs and delay service.

This software compiles all the data on your behalf, as long as you come prepared to fill out a simple checklist for your freight data:

- TRANSPORTATION MODES (FTL, LTL/PTL, IMDL, OR DRAYAGE)**
- REQUIRED EQUIPMENT (DRY VAN, REEFER, FLATBED, OR TANKER)**
- PICKUP DATE**
- PICKUP LOCATION**
- DELIVERY LOCATION**

In addition to these required inputs, you have optional information you can include, such as specifying your commodity, designating shipment weight, or filling out accessorial requirements, such as a requirement to protect the shipment from freezing or requesting Saturday service.

Once this information is provided, ShipperGuide will generate a quote that includes a market benchmark. This automatically calculated information pulls from historical data and includes an average rate, lower bound, and upper bound rate.

Once the rate is created, you can either use ShipperGuide's instant bookable rate or invite your own carrier network to bid.





# COMPLETE THE PLANNING AND OPTIMIZATION CYCLE IN 7 STEPS

ShipperGuide's usefulness doesn't start and end with its streamlined quote creation process. You can use this TMS to overhaul your entire planning and optimization cycle.

Here's how:

1

## COLLECT SHIPMENT DATA AND FORECAST NEEDS

ShipperGuide brings all shipping information together in one easy-to-follow interface, giving you a clear overview of your shipments. For shipments that occurred outside the system, you can import them to keep all your data in one place.

Once a shipment is recorded, you can review details such as freight information, supporting documentation, and tracking progress. Using historical data from past shipments, you can forecast future expectations for delivery times, routes, available facilities, and other operational factors.

2

## DEFINE SERVICE REQUIREMENTS

When planning new shipments, ShipperGuide helps ensure the right level of service through two features. First, optional forms included with every quote allow you to define parameters like after-hours service, holiday delivery, and invoice preferences.

Second, the notes option lets you capture any requirements not included in the standard checklist. Clearly documenting service requirements upfront reduces miscommunications, helps avoid delays or extra charges, and keeps shipments on schedule.

3

## RUN SCENARIO ANALYSES

ShipperGuide allows you to test different shipment scenarios using real data such as commodities, weight, and number of pallets. You can plan routes on an interactive map and view estimated delivery times based on current tracking data.

This feature has been particularly valuable for shippers like Red Gold. As Supply Chain Manager James Posipanka explained:



*“When someone from our team asks a ‘What-If’ scenario, we can use real data to make informed decisions. In a highly volatile world, it helps us predict costs, and it builds trust in our department and others.”*



# COMPLETE THE PLANNING AND OPTIMIZATION CYCLE IN 7 STEPS

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**4**

## COMPARE CARRIERS AND ROUTES SIDE BY SIDE

The platform stores and organizes data from different carriers and routes, making side-by-side comparisons easy. You can assess metrics like tender acceptance rates, dwell time, and facility performance to see which carriers perform best on each lane.

You can also monitor lanes to plan the most efficient routes and review rates, delivery performance, and transportation modes to choose the best option for each shipment. Carriers can even suggest alternative transportation methods, giving you additional flexibility in planning.

**5**

## SELECT THE OPTIMAL MIX OF CARRIERS

After gathering quotes and reviewing your carrier network, you can decide which carriers to use. You might invite all carriers to bid, select only those best suited for a lane, or use a hybrid routing approach that blends primary and backup carriers for reliable coverage.

Dynamic decisioning rules allow allocations to adjust based on factors like price, capacity, or past performance. Historical data on bidding patterns, tender acceptance, and compliance records is always available to guide decisions, giving you a clear view of your network before awarding a shipment.

**6**

## SCHEDULE SHIPMENTS AND LOCK RATES

Once carrier selections and shipment details are finalized, you can schedule shipments directly through ShipperGuide. The system automatically sends confirmation emails to carriers, reducing manual coordination. Each confirmation includes verified shipment details such as transportation mode, equipment, and other requirements, with all documentation organized for easy access.

You can also lock in rates and create reusable templates, ensuring consistent service expectations and making repeat shipping faster and more accurate.

**7**

## TRACK OUTCOMES AND OPTIMIZE FOR NEXT CYCLE

ShipperGuide allows you to monitor shipments at every stage—from planning to in-transit tracking to delivery. You can also review a shipment's full lifecycle, including delivery addresses, handling unit type, temporary stops, and more.

This visibility allows logistics teams to make informed, data-backed decisions and continually refine processes, improving efficiency and reliability for future shipments.



## PREPARING FOR THE FUTURE OF FREIGHT PLANNING

With these step-by-step strategies in place, you now have a clear framework for using data and digital tools to plan smarter, optimize shipments, and make informed decisions with confidence. Each stage, from collecting shipment data to tracking outcomes, builds a foundation for more efficient, reliable, and cost-effective freight management.

The next chapter takes a broader view, exploring the trends, innovations, and forward-looking strategies shaping the future of planning and optimization. By understanding where the industry is headed, you'll be better prepared to stay ahead of market shifts, adopt new technology, and continue refining your approach. Let's dive into what's next and see how freight planning is evolving for the years ahead.



## // CHAPTER 06

# LOOKING AHEAD AT THE FUTURE OF PLANNING AND OPTIMIZATION



Freight planning can seem more complicated than ever, but the right tools make it manageable—and more effective. Today, supply chain professionals rely on a combination of automated systems and hands-on processes to keep operations running smoothly.

In this final chapter, we'll explore how freight planning and procurement have changed in recent years, highlighting the innovations that are helping supply chains operate more efficiently and adapt to shifting conditions. From shorter planning cycles to tools that help manage rate fluctuations and routing challenges, these advancements are shaping the future of freight management—and showing how businesses can stay ahead in a rapidly evolving sector.

## HOW DIGITAL PROCUREMENT IS CHANGING

AI is transforming many industries, and freight procurement is no exception. It automates manual tasks such as sourcing carriers and tracking rates while encouraging warehouse managers and supply chain leaders to rethink processes and explore how technology—both new and previously underutilized—can improve daily operations.

The market for freight procurement technology has grown significantly in recent years, creating opportunities for companies to adopt automated solutions. Among these, planning and optimization tools offer the clearest benefits for streamlining operations and improving decision-making.



# 6 REASONS PLANNING AND OPTIMIZATION MATTERS

Here are six ways planning and optimization can make freight management more effective and manageable:



## 1. PROVIDES PREDICTABILITY IN A CHANGING MARKET

Modern tools analyze complex data to identify patterns and anticipate challenges. Beyond basic visibility, they forecast facility dwell times, suggest alternate routes during weather disruptions, and signal when market changes may impact capacity or costs. This guidance gives supply chain teams confidence in daily decision-making.



## 2. STRENGTHENS CARRIER RELATIONSHIPS

Strong relationships with carriers rely on clear communication and reliable data. Tracking shipment progress, sharing accurate routing information, and streamlining loading and unloading helps reduce delays and fees, while enabling carriers to move freight efficiently. Digital platforms can support these efforts by providing clear instructions and complete shipment details, making collaboration smoother for both shippers and carriers.



## 3. REDUCES WASTE AND HIDDEN COSTS

Manual processes often come with hidden expenses, whether through time spent comparing rates or correcting errors. Mistakes in calculations or missed deadlines can lead to delays, extra fees, or even shipment damage. Using digital tools to handle these tasks automatically helps save time, reduce errors, and avoid unnecessary costs.



## 4. TURNS DATA INTO CONTINUOUS IMPROVEMENT

Access to real-time and historical data enables better decisions. Real-time insights guide immediate actions, while historical trends reveal performance patterns. Analytics tools, dashboards, and benchmarking capabilities help managers refine routes, evaluate carriers, and improve processes over time.



## 5. SUPPORTS GROWTH WITHOUT ADDED COMPLEXITY

Planning and optimization systems are designed to scale. As operations expand, adding carriers, routes, or metrics is seamless, and intuitive interfaces maintain a clear overview of the network.



## 6. PREPARES TEAMS FOR FUTURE CHALLENGES

Modern supply chains are complex, and preparation requires transparency, communication, and automated alerts. Features like flexible tendering, multi-mode routing, appointment visibility, and real-time re-routing help teams anticipate and address issues before they escalate.



## **NOW YOU CAN STAY AHEAD IN FREIGHT PLANNING**

As this chapter—and the ebook—demonstrates, freight planning has become both more complex and more manageable thanks to modern tools and data-driven approaches. Planning and optimization systems, AI-assisted procurement, and real-time analytics are giving supply chain teams the ability to anticipate challenges, strengthen carrier relationships, reduce waste, and make smarter decisions.

The future of freight management isn't about eliminating complexity—it's about equipping teams to handle it confidently. By embracing technology, continuously refining processes, and maintaining visibility across shipments and carriers, businesses can stay agile, efficient, and resilient in an ever-changing environment. This forward-looking mindset ensures that freight operations not only keep pace with industry shifts but also set the stage for continuous improvement and long-term success.





## START STREAMLINING THE PLANNING AND OPTIMIZATION PROCESS

Discover how ShipperGuide can transform the way you plan, optimize, and manage freight. Simplify carrier selection, control costs, and gain real-time visibility—all in one intuitive platform.

### WITH SHIPPERGUIDE, YOU CAN:

- Compare rates and modes instantly
- Automate RFPs, bids, and tenders
- Optimize FTL, PTL, LTL, and intermodal shipments
- Reduce manual work and improve decision-making

*Trusted by shippers and logistics teams nationwide to simplify freight procurement and boost supply chain efficiency.*

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