EBOOK

The ultimate TMS buyer's guide

Breaking the cycle of avoidance: identify key decision factors for a successful TMS selection

infios
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The selection and vetting process for any new technology investment can seem cumbersome. It may be tempting to push these kinds of strategic projects to the back burner while dealing with the day-to-day operational constraints of freight movement. But consumer expectations for delivery are accelerating, and logistics managers realize the pressing need to modernize their supply chains to keep pace with those expectations.

Global supply chains have never faced more severe headwinds: an ongoing driver shortage, challenging port operations, and constant shifting of shipment volumes have created a perfect storm of events that cause significant disruption. Supply chain success relies on many factors—a well-trained workforce, favorable market conditions, well-honed processes, and innovative technology—all working together.

When you find the right technology that supports your mission, it can be the catalyst to drive significant operational improvements across the shipment lifecycle and quell the storms that lie ahead. Increasingly, a Transportation Management System (TMS) is becoming a central piece of every company's supply chain execution strategy. With a good TMS, logistics leaders are well-positioned to achieve their key strategic business goals, including:

- Better operational management
- Improved efficiency
- Reduced freight spend
- Higher service levels
- Increased shipment-level visibility
- Competitive positioning in the market

The decision of what technology to purchase is never simple. It can take weeks, if not months, to navigate the selection and negotiation processes. The good news is that with a TMS, you are likely to achieve an ROI within a few months after implementation. Whether you are a first-time buyer or looking to upgrade an outdated system, now is the ideal time to invest in transportation technology. Leaders in the market continue to innovate as they race each other to meet the evolving needs of a diverse market, adding new functionality, such as business analytics, and more intuitive user experiences. This guide provides valuable insights and tips to help you narrow your search for a TMS that aligns with your strategic goals.

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ROI: Measuring what matters

Chances are that you are already using some form of technology to run your logistics operations today. Perhaps, it is a complex set of spreadsheets that reside on your computer or on a shared server. Or an Enterprise Resource Planning (ERP) solution that has limited transportation management capabilities. You might even have a TMS that you have just outgrown—or never fully implemented because of its complexity—and it is time to find a system that delivers greater value.

But value can be subjective. Most companies measure the value of any transportation software in terms of freight savings, which will lead to greater return on investment (ROI). In fact, according to Gartner[1] research on TMS implementation, the ROI on such a system is growing, with most companies achieving between eight and 17 percent savings.

A critical data point for any software decision is its total cost of ownership (TCO). It should not be the only metric, but calculating the TCO for each contending solution creates a benchmark. Simply defined, the TCO for software represents all costs (direct and indirect) for a particular software investment. TCO is essential when weighing the decision to build in-house versus buy.

Examples of direct costs can include:

- Hardware or cloud-computing costs
- Software subscription or licensing costs
- Hiring administrative or project management personnel
- Initial implementation costs
- Consulting costs, if using a third-party
- Software training and education

Indirect costs are the more hidden costs that your company might absorb, such as downtime, lost productivity, maintenance, as well as end-user operations, such as when a user becomes the support for the software as an unofficial part of their job. Opportunity lost also must be considered when personnel cannot achieve their full output potential because their time is consumed with tasks that could easily be automated.

TCO is one of the primary reasons for the dramatic market shift away from on-premises solutions to cloud-based, software-as-a-service (SaaS) solutions. In addition to the low TCO of cloud solutions, companies can leverage the speed of implementation that comes with cloud-based systems to their advantage and see even faster ROI.

SECTION 02

Getting started with TMS

For many first-time buyers, there is a good deal of confusion over what TMS is. Adding to the confusion is the number of new vendors entering the TMS market. Just as not all logistics operations are the same, tools labeled as TMS can vary greatly regarding their features and functionality.

To ensure a successful selection process, it is important to take a step back and define what a TMS really is. Some solutions are focused on just a specific mode or built primarily for a specific buyer type (shippers, 3PLs, freight forwarders, etc.). One simple definition of a TMS is any solution that supports the planning or management of transportation.

Where to begin? Navigating the TMS buyer's journey

1. Discovery: Identifying the issues

The catalyst for most software purchases is often friction or bottlenecks that are first experienced at an operational level. While solving these tactical issues may seem like a "quick fix," further investigation into the root cause could reveal more widespread, systemic problems. Identifying these root causes early is a critical first step in understanding exactly what use cases your freight technology needs to address and can range from lower-level procedural problems to more over-arching issues of business strategy.

If you are familiar with the TMS buying process already, then identifying the issues to be addressed may be clear cut. Some of the common challenges that users encounter with a less-capable incumbent TMS solution include:

- Using a "lite" single-tenant TMS that won't support business growth.
- Lack of integrations with other freight technologies or business systems.
- Inability to capture and analyze key metrics that are critical to success.
- Missing workflow automation that allows employees to prioritize the highest-level tasks.
- "Good enough" mindset that does not focus on achieving strategic business goals.

2. Exploration: Gathering requirements and comparing solutions

Requirements gathering can be especially challenging if your organization is large or complex, with multiple departments having a stake in the success of the selected platform. Requirements gathering could lead to building a business case for presentation to an executive team and, perhaps, to finance and purchasing as well.

A common mistake at this point is merely gathering a list of feature requirements for a new system. But this approach may not help in narrowing the selection to those vendors and systems that are most likely to deliver results.

If you have navigated the TMS buying journey or other enterprise-level software purchases in the past, then you may be familiar with organizational requirements gathering. However, this may be the ideal time to re-examine operational benchmarks for key metrics and performance indicators to determine if your current TMS is delivering the results you anticipated.

Here is where you may be expected to have the total cost of ownership calculated, how it integrates with the rest of your systems, how quickly the tool will yield a return, what the one-time costs and ongoing costs might include, how long implementation might take, and how the technology will fit the business strategy. Read our content on how to develop a business case for a TMS investment.

3. Elevation: Socializing requirements and beginning evaluations

Here is where you need to identify and clearly articulate the critical requirements (technical and non-technical) for the various use cases derived from the issues identified in step 1. In this phase, alignment among the different stakeholders is important. Ensure all voices are heard to help generate buy-in. Include everyone who may have a role to play, including IT, purchasing, finance, and manufacturing and distribution centers. Here is where you will document the current state versus the future state. An effective requirements phase ensures clear communication and means a better selection process and smoother implementation.

After developing your requirements list, an initial Request for Information (RFI) to potential vendors will help narrow the selection pool to a shortlist of three or four vendors.

You will then want to proceed with personalized demos. To keep the playing field level, and decision-making objective, structure the demonstrations to your benefit and stay within the scope of the demonstration.

As you complete each demo, make notes and rate the vendor on a pre-determined list of criteria. Do not rely too much on your memory to keep track. After a few days of watching demos, they will start blurring together. Keep a running scorecard with the key categories you want to compare.

Get started with TMS vendor comparisons using our Transportation Management capability scorecard**.**

4. Summit: Supplier selection

Once all demos are complete, the final selection will likely come down to two finalists. If there is little separation between vendors on the quantitative side of the equation, look closely at who you think will be a good fit for your business in terms of how well they respond and to requests or questions. You will probably have this TMS for five years or more, so you want the vendor to be a true partner. Moreover, evaluate whether the TMS will be able to scale and meet future needs, e.g., additional modes or business units that might need to be added to TMS utilization in the future.

SECTION 03

The must-have list

Whether you are selecting your first TMS or upgrading to a new TMS, certain core capabilities are non-negotiable that fall into a ‘must-have’ category. When a TMS you are evaluating lacks some of this key functionality, it might be one way to narrow your list. On the following pages, we’ll do a deep dive into each of these capabilities:

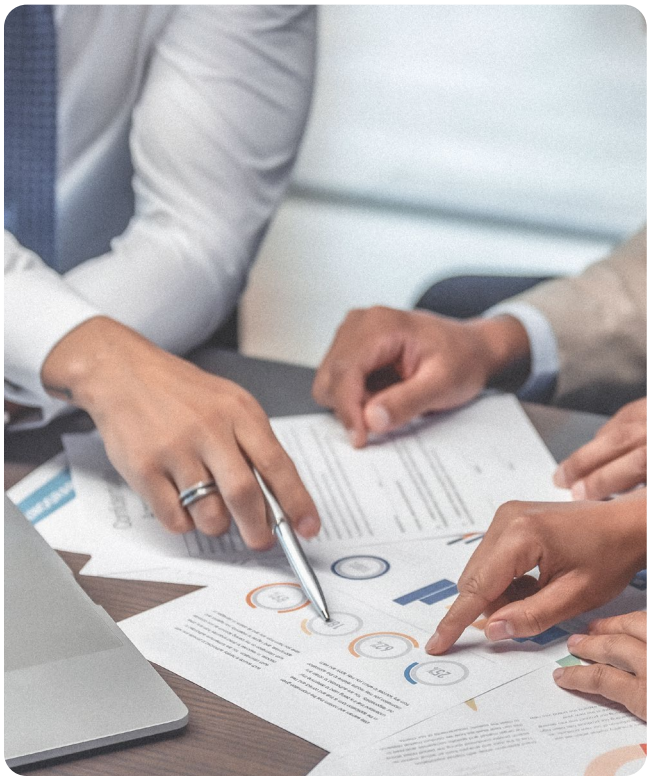
- Planning
- Execution
- Carrier and fleet management
- Settlement

Planning

The lifecycle of every shipment starts with a solid plan. So, it makes sense that planning capabilities should factor heavily into your evaluation of TMS providers. Since shipment planning activities can range from simple, straightforward routing in regularly used lanes to more complex, high-touch last-mile deliveries with dynamic pickup and delivery schedules, understanding specific goals and desired outcomes inside your organization is critical.

Some outcomes to consider:

- Support for real-time management of delivery and pickups and street-level optimization of routes using dynamic routing.
- Enhanced capacity utilization to consolidate and reduce the number of shipments when possible and improve overall sustainability efforts.
- Reduced impact of your carbon footprint through smart shipment planning across all modes.
- Increased LTL (Less Than Truckload) efficiency through tech-supported pooling and routing strategies.
- Improved shipment loading and unloading using tech-based dock scheduling systems.



Execution

The bread and butter of freight transportation is the shipment delivery itself. And while some use cases like OTR (over the road) deliveries from distribution centers to stores are relatively uncomplicated, ancillary services that create additional value for customers offer unique opportunities for revenue generation, improving relationships with customers and service levels. You will want to consider how your selected TMS platform integrates these service offerings in a way that reduces manual work for your internal team members, while still meeting the expectations of customers.

But the full truckload and last mile are not the only places inside your network to find areas of improvement. Goods often move across multiple modes before arriving at their destinations. This requires a TMS that can support all modes—and even drayage moves as shipments transition from one mode to another.

Some outcomes to consider:

- Support for last-mile delivery to create seamless and positive customer experiences.
- Securing adequate levels of capacity for parcel delivery by connecting shippers to parcel carriers.
- Tracking and automating the reverse flow of goods due to damage, returns and other issues.
- Expanding value-added services including white-glove delivery, installation and haul-away.
- Enhanced safety and reduced errors with digital proof of delivery, digital signatures and documentation.
- Minimize service failures by adapting to real-time conditions and ever-changing circumstances across all modes.
- Effortlessly move shipments between modes with expertly managed drayage.

Carrier and fleet management

In the current environment, the ability to secure adequate capacity comes with a high premium. Nothing impacts that ability more than having access to a wide network of high-performing, well-vetted carriers. As capacity has continued to tighten, shipper-carrier relationships have become a delicate balance of cost vs. service, with both parties aggressively pursuing collaborative strategies to increase output and productivity within the confines of hours of service (HOS) restrictions and budget constraints.

Some outcomes to consider:

- Automated routing guide and carrier tendering to quickly secure coverage from trusted, top-performing carriers.
- Instantly onboard new carriers using built-in integrations to a comprehensive network of regulatory databases and industry data sources.
- Ensure safety and service levels are met with compliance rules that maximize carrier performance.
- Capitalize on the flexibility of digital freight networks to reduce empty backhauls, increase shipment visibility, and get access to more capacity at rates that are in line with market norms.
- Leverage real-time APIs in the spot market to find the right carrier for your shipments in terms of both price and service.

Settlement

From transportation planning to settlement and analytics, there is constant pressure for employees involved throughout all stages of the shipment lifecycle to be more productive. Freight settlement activities represent some of the best opportunities for added automation and productivity gains, while reducing the number of errors and improving accuracy in billing and payment.

Some outcomes to consider:

- Having a single source of truth for financial performance by integrating transportation data into accounting processes.
- Finding cost savings and reducing errors with automated freight payments and auditing.
- Eliminate repetitive, labor-intensive accounting processes to speed payments and cash flow using automation rules.
- Centralize and automate claims documentation and communication across internal and external stakeholders.

SECTION 04

Extending the scope of a TMS

In addition to the core capabilities of a TMS, there may be other features and capabilities that you want to explore. These can significantly affect the overall value your organization derives by extending the scope of your TMS project. Such advanced capabilities represent an even greater potential for cost savings, efficiency and productivity gains. Let's take a closer look at each one:

Advanced capabilities

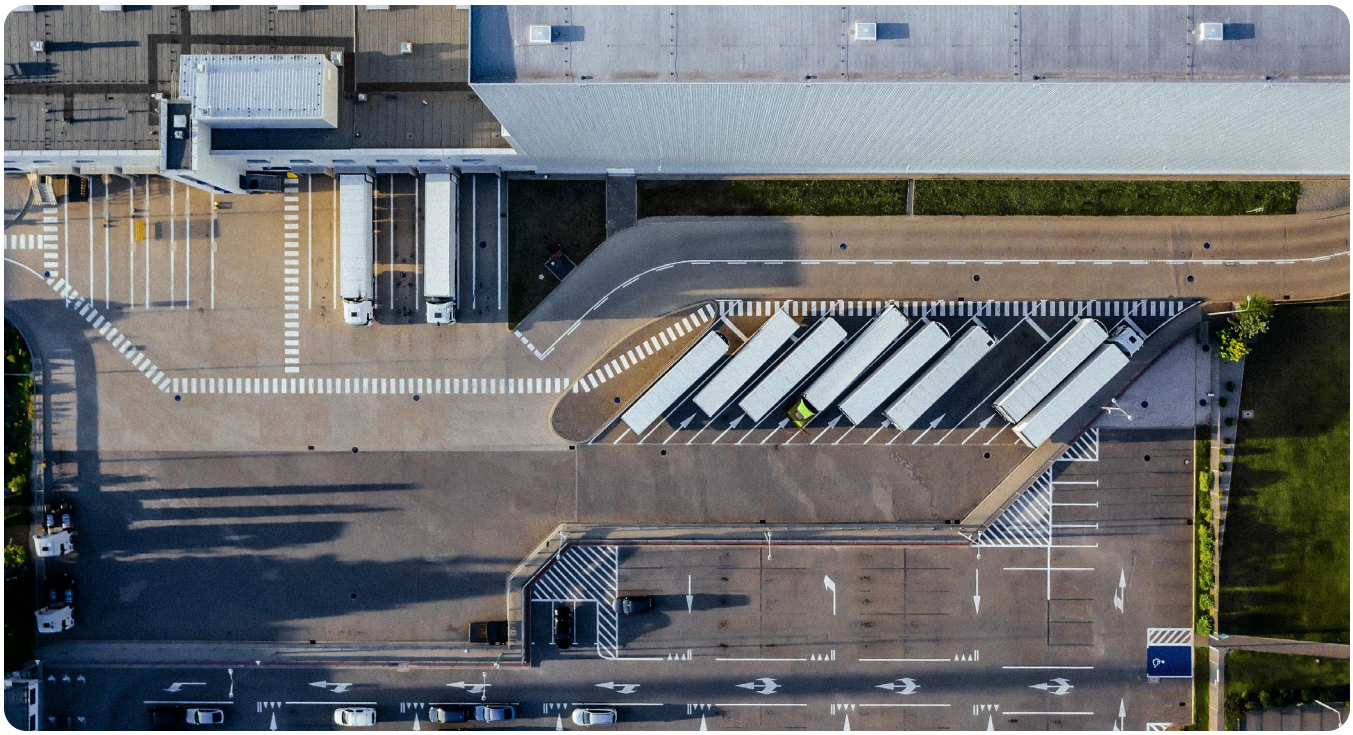
- Vehicle routing and scheduling
- Multimodal optimization
- Modeling and simulation
- Intelligence and analytics

Vehicle routing and scheduling (VRS)

The explosion of e-commerce created lofty consumer expectations for a delivery industry that—for the most part—had been slow to evolve in the face of changing purchasing habits. This disruption forced the industry to come to grips with its limitations. One result of this self-reflection was the growth of vehicle routing and scheduling (VRS) tools—sometimes marketed as a separate solution, but best utilized in conjunction with or embedded into a TMS. VRS capabilities can set up regular, repeated—or static—routes as well as dynamic routes that constantly change due to new orders, deliveries and pickups being added.

Outcomes to consider:

- Increased accountability and improved situational awareness with alerts triggered by real-time events.
- Better collaboration between employees, drivers and customers with information shared seamlessly in multiple formats.
- Autonomous re-routing built by machine learning and robotic process automation to streamline routes, reduce mileage and save money.
- Speed transaction processing and delivery by generating, collecting and sharing electronic documents such as POD (Proof Of Delivery) and BOL (bill of lading).



Multimodal optimization

If you ask many industry experts, most will tell you that any system without load and route optimization is not a true TMS. Without optimization, you might be able to execute shipments, but not with the efficiency that most logistics operations require to manage today's complex movements. Optimization can have a major impact on freight cost reductions and increase the ROI of your technology investment.

In capacity crunches, load optimization can help you fully load your trucks, which means fewer loads that need coverage. But more robust optimization capabilities go far beyond load optimization to seek out better execution tactics across a variety of modes: ocean, air, rail, road and final mile. By optimizing every aspect of your transportation network, you can reduce transportation costs and improve efficiency, keeping you ahead of the competition.

Outcomes to consider:

- Load plan optimization across inbound/outbound, private fleet/common carriers and consolidation across customers.
- The ability to optimize routes across all modes, including parcel.
- Load consolidation that allows for aggregation of multiple shipments across numerous users.
- Zone skipping to support the consolidation of individual packages to LTL or truckload and the ability to route them to a distribution or sorting facility that is closer to the destination.
- Pooling to ensure the best selection of warehouse/cross docks to leverage consolidation and deconsolidation.
- What-if scenario analysis to determine which shipments are better to transport by private fleet or an outside carrier.
- Ability to run analyses behind the scenes for near real-time decision making.

Modeling and simulation

There will always be plenty of "ifs" in freight transportation. Wouldn't it be nice to know the result of some of those unknowns before you make critical decisions? That is the true benefit of running models and simulations of your transportation network—knowing how your plans will work out on the front end. Advanced transportation modeling and simulation capabilities can combine all relevant internal and external data to identify which combinations of carriers and routes meet both service levels and price points, generate recommendations for lane and mode usage to save money and plan for impacts of volume increases, traffic, and weather disruptions before they happen.

Outcomes to consider:

- Use of historic data models to generate recommended areas for cost savings and efficiency.
- Modeling capabilities that reach across the entire transportation network to cover the shipment lifecycle from end-to-end.
- Using and saving the best models and simulations as templates that align with customer-specific needs and requirements.
- Re-running or automating models as often as needed to uncover up-to-the-minute optimization opportunities based on the latest information.
- Managing both service levels and cost by using models to assess carrier performance and value.

Intelligence and analytics

In the past, TMS systems relied strictly on the streamlining of operations to generate value. But as data collection and analysis capabilities have evolved for both TMS vendors and customers, value is increasingly being derived from data insights. Both groups are investing in strategic initiatives to address the growing sets of data generated by daily activities with a primary goal of tapping into the vast reservoir of data and finding hidden insights to drive operational improvements—through enhanced quality and performance. A modern TMS will offer powerful tools for decision-making and reporting, providing solid building blocks for true business intelligence.

Outcomes to consider:

- A complete view of your logistics data that can inform transportation decisions by breaking down siloes and integrating with other related systems (e.g., ERP and WMS).
- Prepackaged, out-of-the-box reports that provide insight into relationships and trends about different areas of your operation.
- Comprehensive business analytics functionality to mine data, translate it into insights and deliver information to drive operational improvements.
- Visual, at-a-glance dashboards that can provide the ability to explore further into the relationships in the data, providing quicker answers to the most complex questions.
- Ability to efficiently import and export data into and out of the TMS.

SECTION 05

Conclusion

Selecting a TMS can feel overwhelming, but it does not have to if you understand the steps needed to vet the best fit for your business. Focus on the problems you are trying to solve and where you will be able to see the benefits. The value will vary from one company to the next based on size, complexity, and other factors, such as flexibility or configurability. The truth is that the right TMS will allow you to gain greater control of your transportation network.

The other thing to keep in mind is to make sure you are planning ahead, and maintain the momentum through implementation, change management, training, and go-live. The process does not end with the selection of a TMS. In many ways, it is just the beginning of the transformation process for your company.

Reference

1. Gartner, How to Calculate and Measure the ROI for a Transportation Management System, Brock Johns and Oscar Sanchez Duran, 18 November 2021.

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