The Uses and Substantial Benefits of Transportation Management Systems
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The Uses and Substantial Benefits of Transportation Management Systems

Cerasis, in business since 1997, first released our web-based TMS, we call the Cerasis Rater in 1998. To most people, seeing a web-based anything was like seeing magic. A small footnote in history, if you will, is that the Cerasis Rater was all web-based before Google was a search engine. HA! Take that Google! We kid, of course, but as we have progressed as a company over the last 2 decades, a TMS is no longer magic, but quite commonplace.

Unfortunately, although we’ve been touting to shippers the amazing benefits from the adoption of a TMS, or Transportation Management System, to this day, even with affordable and easy to deploy systems, not all shippers are taking advantage of the vast benefits a TMS provides.

In this e-book we will explore the current state of and demands in the landscape of the TMS world, the uses and functions of a TMS, and then finally, if you are not convinced already about the benefits of a TMS from this first page alone, you’ll read in Chapter 3 a slew of TMS benefits. If after reading those benefits, you would like to take advantage of using a new TMS or using a system to help make transportation management more effective and reduce costs, you know where to go: Cerasis.

Yes, that was a bit salesy, but if you’ve followed our content throughout the years, you know our number one goal is to add value to anything you read from us. We hope this e-book will give you some pieces of information you did not know and will allow you to apply them to your shipping department.
Chapter One

SHIPPER DEMANDS & LANDSCAPE OF TMS
A Transportation Management System is a vital tool for shipping professionals. It helps to coordinate all of the available data points in a transport network, including rates, route options, warehouse supply, and distribution. Transportation management systems present this information in a clean, easy to understand format that then allows the shipping manager to make the best and most efficient decisions possible. In 2016, the state of transportation management systems is good, with the industry slated to see tremendous growth in the coming few years.

Traditionally Transportation Management Systems have been very expensive and complex, making them costly to implement and maintain over time. That made it impossible for most small and mid level shippers to employ them effectively. However, the cost savings and increases in efficiency have prompted most large companies to adopt these systems, giving them yet another edge over their niche competitors.

Today the state of transportation management systems is changing, as developments in technology are constantly making these products less expensive, easier to use, more functional, and less time-consuming to install. That is allowing smaller shippers to take advantage of the great benefits that these systems can provide, in cost, data acquisition, efficiency, and communication flow.
The Potential of Transportation Management Systems

Many people are claiming that the potential for Transportation Management Systems is enormous and that within ten years all serious shippers will be using them on a regular and sophisticated basis. That is because there are unquestionable advantages to making use of these systems to control and sort complex shipping networks. At the same time, as pricing drops it will make those companies that do not adopt these practices obsolete.

Another factor influencing the growth of TMS use is that vendors are starting to target untapped smaller companies. These businesses have not previously had the resources to implement these systems effectively. However now that pricing has dropped and there are now web-based transportation management systems which are easy to deploy the providers of this software are starting to increase their field of view to take in new prospective customers. That is fueling the market even more, causing these systems to permeate every corner of the industry.

At the same time the efficiency and function of these systems is making transportation management systems more desirable than ever to a wide variety of customers. Cloud-based products are cutting down on the time it takes to install and implement a Transportation management System in an effective way. This allows even smaller companies to leverage the power of high-end servers in order to achieve precise and insightful data analysis.

Reasons to Implement a Transportation Management System

One of the most important reasons to implement a Transportation Management System is to access the best rates from transport carriers possible. These systems take cost information from a variety of providers, on a number of different routes, and organize it all into a simple to read list that lets the shipping manager make a quick and effective decision on how to move their freight from one place to another.

By providing shippers with the ability to rate and choose the carrier they want based on price, limit of liability and transit time, transportation management systems turn the entire process into a buyers market. At that point, all that the shipping manager has to do is sit back and choose the best option for that specific shipment that gets the cargo to the destination they need in the time frame required. That can lead to big savings, which can in turn impact the bottom line.

Another important reason that more companies are adopting Transportation Management Systems in 2016 is that they can dramatically increase the efficiency of a business. Rather than having a single person keeping track of multiple products, shipments, and solutions, these systems organize everything into precise, easy to read lists that can then be used effectively to make the best decision possible. That eliminates human error while making the person in charge of shipping more effective at their job.
The ability to make shipping less expensive, and more efficient, is driving many businesses to invest in Transportation Management Systems in 2016. A 3PL can now provide a TMS at no charge to shippers as often a 3PL focused on transportation management will offer integrated services and make money off of margins. This ultimately means that the savings benefits for shippers are even more powerful at any size of the enterprise. At the same time, the ability to eliminate redundancies, human error, and increase the efficiency of the organization can result in realizing greater profits.

**Beyond a Transactional Tool, A TMS is Now a Strategic Continuous Improvement Tool**

However, Transportation Management Systems also have the ability to do much more than simply provide rate information. They are able to collect data points from multiple transport providers on various routes around the country. That wealth of information is incredibly valuable, but only when it is parsed down into a form that can be used effectively.

The challenge for Transportation Management System developers going forward will be to find effective ways to help shipping managers understand and interpret the wealth of data that these products can make available to them. They need to be able to understand what it means, and have it accessible to them when a decision point is reached. That will allow the shipper to make far more effective decisions about shipping across the entire organization.

Transportation Management Systems can also be beneficial to carriers who are willing to adapt to these products. While they do make the market more competitive, forcing prices down, they also allow more access to customers. That can increase the overall number of opportunities that become available, increasing the bottom line for them as well. At the same time, they can use these systems to make their own organizations more efficient and cost effective.

The state of Transportation Management Systems is solid, but there is still tremendous potential for this industry. It’s estimated that only 35% of shippers are currently using these solutions. However advances in technology, and decreasing prices are making these products accessible to a much larger audience, and today even small and mid level shippers are able to take advantage of the utility of these systems. At the same time, vendors are also starting to target these untapped markets as they become more accessible. This is leading to greater use across all logistical operations.
Transportation Management Systems: 5 Shipper Demands Shaping the TMS Landscape

Characterized as one of the fastest growing enterprise application markets by ARC Advisory Group, the transportation management systems (TMS) sector has been growing at a double-digit rate over the last couple of years—and isn’t showing signs of letting up anytime soon.

A technology solution that helps companies efficiently, reliably, and cost effectively move freight from origin to destination, most transportation management systems include both planning and execution solutions (systems for freight moves involving carriers). Shippers are embracing transportation management systems, according to ARC analysts, thanks mainly to the strong ROI offered up by such solutions.

“The simple, bottom line is that TMS can save companies money by lowering their freight spend,” says Steve Banker, ARC’s service director of supply chain management.

Banker points to an ARC survey as proof of that point, adding that over 40 percent of respondents felt that if they were forced to give up their TMS and go back to more manual processes for planning and execution, their total freight costs would increase by 5 percent to 10 percent. “In fact, 23 percent felt their total freight costs under the control of the TMS would increase by over 10 percent if they were to stop using it,” he adds.

For logistics professionals charged with the movement of freight, transportation management systems can also help create transportation efficiencies, provide real-time dashboards, enable better decision making, and handle myriad other tasks that can’t be adequately addressed with phones, faxes, and spreadsheets.
Here are the 5 shipper demands that supply chain software analysts say are shaping the TMS landscape—and pushing even more logistics professionals to put it to work.

1. The omni-channel retailer needs support

No longer able to compartmentalize their various business channels, today’s retailers and industrial suppliers need help running seamless, omni-channel systems that incorporate bricks-and-mortar, online, mobile, catalogue, and other sales channels under a single umbrella.

Transportation plays a key role in this streamlining, which means transportation management systems also play an important part in creating the omni-channel environment. For example, with the B2C sector gaining much maturity in the world of online/eCommerce fulfillment, more and more distributors and industrial suppliers are putting catalogues online and offering seamless eCommerce freight shipping calculations to their customers, because now the shipping quotes include real freight rates, such as LTL and small package, because the shopping cart integrates into transportation management systems.

2. Transportation Management Systems Mirroring Trends such as Near-Shoring and Reshoring

Undoubtedly you have heard of the biggest trend shaping US Manufacturing at present: Near-shoring and Reshoring. If you want to know more about this trend, make sure you read our reshoring series here. However, as companies are now moving manufacturing facilities back to the US, and as companies in the automotive industry are moving facilities near the US to places like Mexico, we are seeing an increase in volumes of freight. As in any economic force, when there is greater demand for capacity, the prices are going up. To combat rising prices due to economic forces, logistics managers are going to have a competitive edge if their transportation management systems can handle shipments in all of North America, with all American, Mexican, and Canadian facilities having visibility to all shipments under one user control. This visibility allows for good information flows, giving access to data, which allows for better business decisions when making future business decisions involving transportation.

3. Embedded analytics are in high demand

Bombarded daily by terabytes of digital information, shippers need a way to wade through the data, select its most useful components, and then use that information to make the best possible transportation decisions.
Transportation management systems that effectively embed analytics, help to discover rich and meaningful patterns within the data, will remain in high demand. A TMS that includes carrier score-carding, for example, should be able to cross-pollinate that rating information for application during the vendor-selection process. Embedded analytics allow shippers to come up with useful key performance indicators and actually consume and utilize the data as they go about their other activities.

4. Shippers Want Transportation Management Systems that help them utilize Backhauls and Support Services for Reverse Logistics

Retailers and those in the automotive aftermarket industry are particularly interested in not hauling empty trucks back to their DCs after the goods have been delivered, says Rishi Raina, principal of North American supply chain technologies at Capgemini. “They want to be able to utilize their networks more efficiently, and they’re looking to their transportation management systems for help in this area,” Raina adds.

And while some of the more established vendors have historically incorporated backhaul capabilities into their platforms, the challenge lies in setting up more of a robust reverse logistics program: tying carrier contracts, agreements, and negotiations into the equation. “If a shipper can get through those hurdles, there will be a lot of savings to be unlocked on the backend,” says Raina.

5. Planning, Execution (Read: Integration) could get a place at the TMS table

Right now, transportation management systems vendors are looking for ways to better tie planning and execution systems into their platforms. “Traditionally, those systems have operated within their own silos, and with no tie-in to transportation,” Raina points out.

Many transportation management systems providers are beginning to integrate those processes in a way that will allow shippers to more efficiently monitor manufacturing and production cycles as part of the distribution process. “There has to be a better way of managing the flow and synchronization among transportation, planning, and execution,” says Raina. “In fact, there’s a huge amount of interest in this from the shippers’ perspective right now, but none of the TMS platforms are fully there yet.”
TMS Software Study: 1/4 of Shippers Still Using Manual Methods, Want Route Optimization

Every year, Software Advice speaks with thousands of prospective buyers looking for the right transportation management software (TMS software) for their companies. Most are from small businesses (those with annual revenue of $100 million or less), which means these conversations give Software Advice unparalleled insight into these buyers’ reasons for purchasing new software.

They recently analyzed a random selection of 385 of these interactions to uncover small business TMS buyers’ most common pain points and their reasons for purchasing new software. This report outlines the trends they uncovered.

1. Nearly 80 percent of buyers seek basic functions, such as route optimization and shipment tracking, in a new TMS software solution (note the features or tactics focus).
2. Twenty-four percent of buyers are still using manual methods (e.g. pen and paper) to handle transportation management needs (these shippers are STUCK in tactical and not strategic mode).
3. Among buyers in our sample, a majority (68 percent) are looking to implement a new TMS within the next three months or less (this is a great first start!).
Majority Want to Optimize Routes and Track Shipments

When asked which features they were looking for in a TMS system, 77 percent of prospective buyers said they needed to either plan and track the routes for product shipments or track actual shipments themselves. (This number was a combination of 52 percent who stipulated a route optimization solution and 25 percent who wanted shipment tracking.)

Route tracking and optimization allows users to monitor the location of inbound and outbound transports and tweak their routes based on distance, weather and a number of other factors. Essentially, shippers want options, and options they should have. When you have options such as the cost of the shipment, the time it gets there, and what accessorials are available, then you can route your shipments to your specifications, giving you more control.

Shipment tracking, meanwhile, enables users to follow items that are shipped and provide accurate estimated times for arrival (ETAs) for those shipments. This is where the core benefit of increased customer service comes from. These two tactics (route optimization and shipment tracking) allow you to with control and knowledge better inform your customer and also make sure you choose the route that is optimal for all parties' needs.
Shippers Want Options from TMS Software, Especially In LTL Shipping

The study then quoted a logistics consulting firm who stated in their own studies that 24 percent of the prospective buyers they spoke to requested tools that would assist with price quoting and cost comparison, and 15 percent said they wanted TMS software that would assist with dispatch capabilities.

Quoting and Cost Comparison with Inbound/Dispatch Options: We find that too when we are talking to shippers. Our TMS software, the Cerasis Rater, brings up rates from several carriers once you input class and destination and our inbound freight management program (soon to come with a vendor login so they can route their own shipments inbound to our customers) allows for dispatch capabilities through our freight routing specialists using our TMS.

LTL Freight Shipping and Integration: Thirteen percent wanted a system that could focus specifically on less than truckload (LTL) shipping, which refers to relatively small freight, while another 13 percent said they needed TMS capabilities as part of a wider WMS or inventory management software (IMS). At Cerasis we have seen that when we integrate into an ERP or a warehouse management system to our TMS software, we drive out more inefficiencies for the shippers using our TMS.

Nearly One Fourth of Buyers Still Using Manual Methods

Although a breakdown of prospective buyers’ current methods revealed a variety of different techniques, the single largest group (24 percent) fell under “manual methods,” which often meant that buyers were still using pen and paper to manage their transportation operations.
[Customers using manual methods] need to make arrangements, shipment by shipment, based on the requirements of that shipment and not based on a mass distribution price-based process according to the logistics consulting firm. However, there are options for this. With an expert carrier relations team, rates for shipping can be secured via an RFP for specific lanes and then stored and called up for specific shipments, rated and processed. It is in the manual processing of freight shipments that is ripe for data entry error and unnecessary inflation of costs due to errors. The automation of process provided by a TMS can truly help drive value and bottom line savings.

Again, since we are using the "best of breed" functionality for transportation management each and every day, it really blew our minds to read this startling fact:

20% of buyers said they are currently using spreadsheet software to manage their transportation operations.

Another 17 percent, meanwhile, said they were using a TMS program that was either outdated or lacked the functionality they needed.

Final Thoughts on TMS Software Study

Of course, at Cerasis, we are fortunate to use a transportation management system or TMS software, every day. Our shippers have the advantage of continuous updates to the performance and functionality of the Cerasis Rater TMS due to our in house development and technology team. However, one thing is clear, not all are enjoying the benefits that can be realized from implementing the TMS because they are still stuck on tactics. In today's competitive business environment, when a business can stay strategic by eliminating inefficient process and waste in transportation management, they can focus back on their core and think of how they can make business decisions and new initiatives that continue to drive their business forward. A great TMS Software is truly a freer of resources, time, money, and effort so businesses can grow. That is why we have the little tagline when it comes to our freight technology: "Tools so powerful, they can build businesses."
5 Areas of Focus in a Long Term Logistics Strategy that a TMS Can Solve

Logistics and transportation managers are tasked with making the movement of freight between trade partners easier, cheaper, and more efficient. Often these managers turn to Transportation Management Systems (TMS) in the smooth and efficient operations of their supply chains for decades. Having evolved significantly over the last 30 years, such systems are typically available as standalone software packages, as part of a larger Enterprise Resource Planning (ERP) solution, or in Software-as-a-Service (SaaS) formats.

Calling TMS “one of the fastest growing enterprise application markets” in its most recent TMS Global Market Research Study, ARC Advisory group says that a whopping 63 percent of companies would see at least a 5 percent increase (23% stated a 10 percent or more increase) in total freight costs if they had to give up their TMS and revert to more manual transportation planning and execution processes. According to ARC, a TMS achieves these savings based on process enforcement, visibility, analytics, and optimization, “with virtually no other supply chain application offering so many different forms of optimization.”

Regardless of the technology delivery method, TMS tackles the freight movement puzzle by handling single parcels to bulk commodities and everything in between. In most cases, the solutions oversee the movement of all inbound and outbound freight modes (including intermodal), at the domestic and international level. A TMS’ fleet management capabilities are usually focused on the shipper’s own transportation assets while its planning and execution functions monitor and track movements involving both inside and outside service providers (such as third party logistics providers or “3PLs”).
Top 5 Areas of Focus on a Long Term Logistics Strategy

According to survey respondents in the “Transportation Management Systems” Study by the Peerless Research group and Logistics Management, the top five areas that are important when focusing on a long term logistics strategy are:

- Maintaining high levels of customer service (96%)
- Lowering costs (94%)
- Improving efficiencies and productivity in logistics operations (93%)
- Attaining the ability to target logistics initiatives that drive business growth (79%)
- Improving Asset Utilization (74%)

Furthermore, when asked what aspects of their transportation and logistics operations could use improvement, more than one-half cited understanding and controlling costs (55 percent), better shipment planning (55 percent), and greater in-transit visibility (52 percent). Also high on the list of areas in need of development were electronic communications with customers and carriers (45 percent), overall supply chain processes (45 percent), and carrier and partner collaboration (43 percent).
How Can a TMS help in Achieving the Desired Outcomes of Logistics and Transportation Strategies?

An effective TMS can achieve all of these top 5 desires of shippers looking to shape a long term solution for their business to remain sustainable and cost effective in their transportation spend.

**Maintaining high levels of customer service In Using Transportation Management Systems**

With a TMS you can have tools and features that notify customers of when their shipment is coming, or you yourself can login and see where the shipment is at any time. Furthermore, when you have a TMS that allows you to run various metrics and reports to analyze, you can see which carriers are getting your shipments in on time to your customer and which ones are not causing high levels of claims. When you weed out the bad, based on data, and focus on the good, you can then ensure with greater predictability that you will have a hassle free experience and confidence in getting your freight to your customer. You may also use that same data to better collaborate with carriers and those in the supply chain to sit down and address these facts and proactively improve so you continue to increase the customer service metrics.

**Lowering Costs with A TMS and Managed Transportation Services**

Remember, lowering costs isn’t simply about the freight rate. It’s about total costs. As more and more manufacturers look at the total costs of business decisions and the total costs of their operations long term, the hard costs you see that are invoiced are not the only costs considered. In logistics and transportation management, when it comes to costs, you must also include the “soft” costs.
These are things like the time it takes to process a freight shipment (calling various carriers, getting quotes, manual methods vs. using a TMS, etc.), the errors that come up due to not using automation features that are available in a TMS, or even the time dealing with such things like freight and transportation accounting or freight claims that a logistics service provider could handle as a value-add, such as managed transportation services to the TMS software offering, really do add up over time. Oh, and not to mention, if you aim to grow your business, which I am sure you do, the added costs of more resources and time to process more and more freight. A good TMS reduces time and allows you to scale cutting out many other unforeseen soft costs.

**Improving Efficiencies and Productivity in Logistics Operations with a TMS**

This improvement area in a long term logistics strategy by implementing a TMS is highly related to the second point of lowering costs, but let’s go with another angle. Have you ever noticed that when you have a very good process or system for doing something in your job, you have to think less about how you are going to get the job done effectively? The system is sound and allows you to rinse, repeat, and scale by not only following a sound process, but getting muscle/mental memory to get better and better as you use the system. Did you also notice that once you had sound processes you were more productive because you were then able to think strategically in such a way that it allows you to disrupt your other inefficiencies? As they say, it is hard to stay strategic or innovative if you are merely surviving in the land of tactics.

**Attaining the Ability to Target Logistics initiatives that Drive Business Growth**

Again, as with logistics costs dovetailing into improved efficiencies, this 4th area of long term strategy focus is really only possible if you are efficient in process and are cost effective. When you are confident in a repeatable and scalable system that scales and is cost effective to deploy and maintain, you then have the think and brain power to strategically identify other issues in the organization and apply either more tools, technology, or systems to continue to drive the business forward. As a manufacturer, using a TMS can free you up greatly to focus on the marketplace and new products to open up new markets.
Improving Asset Utilization with a TMS

This idea also plays into operational improvements that allow your business to grow. With a transportation management system and especially one integrated to your ERP or Warehouse Management System, you can start connecting the dots to what inventory you have on hand, which ones are in transit and more. When you have integrated systems that easily allow you to calculate asset utilization, it allows you to continue to have a strategic mindset and quickly make decisions on what products or assets you should have on hand or order more of to ship inbound to your warehouse from a vendor.

Conclusion

The key to all five of these points is truly that a transportation management system frees up any shipper who utilizes one to get out of the weeds of process and put the focus back on their business and not the worry of how are you going to stay effective in transportation management. At best, it is a tool that empowers you, but make sure it’s a tool that has the capability to meet your unique needs. If you are unsure of your needs, make sure you schedule a consultation with one of our logistics experts and talk about how you could use a transportation management system to make your life better.

When using a third party logistics company who both offers a transportation management system and integrated managed transportation services, it is possible for shippers to easily achieve the above desired outcomes in their logistics and transportation strategies.
Efficient management of transportation plays a major role in determining the success rate of an organization’s distribution system. Transportation incurs massive cost to the company thereby making the company strive hard towards achieving maximum returns on investment. Adoption of automated solutions by companies in such a scenario facilitates optimization of functional activities thereby expanding their line of operations and adding value to their supply chain. Often, the deployment of transportation management software systems or TMS systems is a great aid in reducing overall hard and soft transportation costs. There are many benefits to TMS systems, however, in today’s post we will cover the core features to expect to see as you are evaluating either implementing a TMS system for the first time for your company or if you are looking to replace your current TMS system.
Role of Technology in TMS Systems

Technology is a vital cog in the process of transportation optimization. It can be leveraged at three basic levels:

- Strategizing
- Planning
- Execution

Well designed TMS systems contribute in all these stages and helps to take a business global through effective management of freight flows and increased efficiency throughout the distribution network.

Evaluating TMS Systems

Demand for effective and easy to deploy TMS systems have gone up as organizations realize their cost-saving potential. But their historical lack of use means there’s no one truly dominant leader in the small and mid-size business markets.

Important considerations when selecting a TMS system include:

- Is your organization interested in an on-premise or SaaS deployment?
- Is your organization a small to mid-sized business? If so, does the vendor have an established reputation for serving the needs of business of this size?
- Does the system support all modes of shipping within your operation?
- Can the system offer specialized functionality to meet the unique delivery needs of your vertical market?
- Does your organization engage in global trade? Not all TMS systems include functionality for international logistics. This currently extends to our own TMS, the Cerasis Rater. We focus on North American over the road transportation. This is intentional. If your biggest pain point in transportation management is in LTL freight shipping, our TMS system is perfect. Cerasis is masterful at handling inbound, reverse, and traditional transportation moves, especially in the fast moving ever-changing LTL mode.
Key Features of TMS Systems

Features of an efficient transportation management system that contributes in making a supply chain lean and optimized can be broadly classified into three categories:

- Optimization
- Execution
- Performance management

**FEATURES OF TMS**

**OPTIMIZATION**
- Route optimization & consolidation
- Mode & carrier selection

**EXECUTION**
- Integrated WMS
- Integrated EDI
- Integrated audit & payment module

**PERFORMANCE MANAGEMENT**
- Track & trace
- Visibility
- Business intelligence & analytics
Optimization

Mode and Carrier Selection

This feature aids in suitable selection of the most favorable carrier and mode of transport based on service requirements in terms of cost, efficiency and distance. The system is designed to give the shipper choices of the best carrier to choose from based on previous performance, price and business requirements. This flexibility in feature allows a shipper to understand if one carrier over another is best suited. You may also find that you have multiple shipments that are more time sensitive and need to give those to various carriers best suited for specific lanes.

Route Optimization and Consolidation

The system is designed to provide the most optimal route for carriers. It can at once manage to plan and execute routing for hundreds of shipments either by consolidating, pooling, and even for multimodal transportation. Consolidating shipments not only saves cost but avoid needless unproductive multiple trips thereby preserving fuel and reducing carbon emission.

Execution

Integrated EDI

EDI enabled standard format of information exchange builds a benchmark for superiority. Organizations gain increased visibility in their functions and experience remarkable reduction in paper work. Integration of EDI within TMS Systems provide high end accuracy in data and speed up critical information exchange between the businesses and at the same time contributes greatly to create a green supply chain.

Auditing and payment systems allow a TMS to calculate the freight charges, evaluate the service options and identify the areas of improvement. This enables prompt acknowledgement and resolution of overcharge related issues with the carriers and customers alike. Also links to ERP or any financial system allow efficient handling of payment procedures.
Integrated warehouse management system

Integrated WMS module within existing a transportation management system provides real time information about warehouse facility such as in and out inventories movement, material tracking, dispatching the shipments and many such key performance indicators. Access to this real-time information improves the process decision making.

Performance management

Visibility

Visibility features within TMS systems, provide a detailed view of every step of the transportation process thereby making them easier to manage. Accurate and timely visibility of the critical information of the entire supply chain enables to keep a healthy balance between demand and supply through proactive management of the flow of goods. This helps to bring down the overall cost of transportation.

Track & Trace

This feature allows real-time exchange of shipment information between carrier, distributor, and customer. Regular and competent sharing of shipment information across the organization through web-based access, increases visibility, accuracy rate of tracking and monitoring, and efficient management & reporting.

Business Intelligence and Analytics

This feature involves proficient use of data warehousing, dashboard functionality and report generation in standard or custom formats. It aims at collecting, analyzing & summarizing supply chain and transportation metrics and data to utilize them resourcefully for effective decision making, identifying needs & key areas of functional enhancement, and evaluating the effectiveness of existing strategies.
Not all TMS Systems Have the "Soft" Features Needed to Go that Extra Mile

Other soft features you should expect within TMS Systems include a hybrid SaaS TMS approach (which we introduced in our post last week):

• You're able to contact representatives to get a clearer idea as to which options are best for you and to ask any questions you might have. They'll work with you to get you the best results from your shipment.
• Accounting services are also present. This allows you to reach out directly to your customer service representative at anytime for invoice questions but also each shipment is verified and audited to combat against any future issues.
• Detailed and custom shipping and transportation data reports are available, too. These allow you to review current and past shipping processes and find out where you could be saving money, helping you develop new plans and strategies for the future.
• A dedicated carrier relations manager who can not only negotiate and maintain rate contracts but also take care of any freight claims or issues as they occur. Carrier relations and collaboration allow shippers to sustain success and scale quickly. Further, when you have more shipments and a larger transportation spend, it is vital to continue the level of carrier intimacy as if you were a smaller shipper to combat tighter and tighter capacity issues.
• In general, using a 3PL who also created the TMS to better align expertise and technology to reach your overall goal of effective transportation management all while having the ability to focus on your business core.

All in all, it really comes down to how well your shipping needs are being handled. You'll know when you've found the right transportation management system because it provides you with results without forcing you to work too hard to get them.
Chapter Two

THE USE AND FUNCTIONS OF A TMS
The 4 Step Process to Integrate a New TMS into Existing Logistics Systems from a TMS Provider

Human civilization once viewed the supply chain as a simple, easy-to-understand process. One person provided a resource, such as steel, to another group of people, who then sent along the items to the final person in the chain. However, civilization took a drastic step forward, and billions of people today are involved in obtaining goods, which equates to millions of businesses of all sizes. Yet, shipping remained similar to archaic supply chain practices until the advent of the digital age and the TMS provider.

The greatest concern for businesses is their ability to obtain a high return on investment (ROI), especially in the last step of business—shipping. Third-party logistics providers, or a 3PL service provider, have worked to help encourage efficiency within the shipping process through the use of a Transportation Management System, or TMS.

NOTE: Not all 3PLs, like Cerasis, provide a TMS they have built themselves. Ask questions about the TMS that the 3PL offers such as:

- Did your company build it and can you update it to meet market needs?
- How flexible is the system to customize to my unique business logic?
- If you didn't build it, how can I ensure it will keep up with my demands if you too are reliant upon a different provider?

Unfortunately when it comes to TMS, the majority of businesses—taking into account the staggering volume of small to mid-sized businesses—continue to operate without the use of a TMS provider, which equates to losses in efficiency, time, and money. To understand how a TMS can benefit a business, you must begin integrating TMS into your current operations.
Becoming One With a TMS Provider for Full Integration

Recall that many 3PLs provide a TMS for business applications. Ultimately, 3PLs are typically responsible for the integration of a TMS into an existing or new business. However, business owners or operators have a duty to ensure optimal integration by opening the ethereal books of their business.

According to Forrest Burnson of Software Advice, an organization that matches supply chain software buyers with vendors, small businesses are willing to spend up to $30,000 with a TMS provider for the successful integration of TMS into the business. This represents a sampling of 200 business owner responses—100 of which were small to mid-size businesses and 100 were large businesses. Business owners must answer the following questions to determine if integration with a 3PL TMS provider is available:

- “How will TMS integration improve ROI for the business?”
- “Will my current OE, MRP, ERP, or other database systems allow for integration?”
- “What shipping locations or carriers will be involved in the integration?”
- “Will my current TMS be replaced or merely upgraded by new TMS integration?”
- “How much money will be required to obtain a new TMS?”
- “Can I easily access my company data without involving outside IT experts?”
- “How quickly do I need to complete integration?”

We have not answered your questions yet as you must consider these above-listed aspects of your business before considering TMS integration. Ultimately, TMS system integration is the process of combining your existing systems and business practices with an automatic—in most cases—TMS System provider to promote your continued growth and development of your business. The issues surrounding TMS system integration logistics are easily confounding, and too much time spent on how it works can result in turmoil, abandonment of the desire to integrate, and even lost customers due to rising customer expectations. For example, a package becomes lost due to a driver error, which results in an angry customer and lost money on your part, if you do already guarantee a refund. To help you navigate how integration works, we have organized it into the following four categories: Consultation, Evaluation, Implementation, and Performance Evaluation.
Consultation from the TMS Provider to Guide the Integration/Onboarding Process

When you begin planning for the integration of a TMS, you need to do some homework about the planned system integration. However, you are not left to your own devices of scouring the internet or calling “frenemy” business partners for advice. The consultation is the period in which you reach out to a TMS provider, such as Cerasis, who will then request all of your information regarding your current systems. In fact, you can download the brief pre-consultation questionnaire here. If you are unsure about an answer, provide any information that you feel is relevant to the question.

Evaluation of the TMS Provider

Once you have completed the questionnaire, you enter the Evaluation stage of TMS integration. Evaluation refers to the time period in which the TMS provider will review your current systems and determine how your current systems will fair when combined with the web-based TMS. By isolating potential problems in your current system, you can gain a comprehensive view into what must be done to fully integrate your systems.
Implementation of TMS and Integration Project

Once approved by the TMS provider and your team, if you are using a provider with a customer service-based approach, you will begin the process of integration. This could be as simple as installing TMS software to your business computer, accessing via a simple username and login on the web (like the Cerasis TMS), or it may be as complex and a system-wide reboot of your database. As more businesses make the decision to engage in such integration, the integration implementation efforts to complete the process will be less of a hassle and reflect a positive return on investment more quickly.

Performance Evaluation of the TMS Provider and Process

Performance Evaluation is the step in which you begin using the new TMS. This is simply to help you identify any key issues you would like to address, such as the use of bar codes or radio frequency identification (RFID), which is quickly becoming the most sought after aspect of TMS integration.

With the shipping industry’s potential for expansive capital gains or losses due to efficiency versus inefficiency issues, lacking a TMS System can mean the difference between success and “getting by.” 21% of large businesses and 9% of small businesses are using a system from a TMS provider to boost their ROI. Rather than thinking about it as a numbers game, think of it as a group of ten businesses. Do you want to be number one or two in line, or would you rather fall somewhere behind? Integration into Transportation Management Systems is a partnership where all parties win.
Freight rating software is a necessity for shippers and 3PLs. There is more at stake in the choice of a freight rating system. One that is integrated with TMS offers more value for customers and better leverage when negotiating contracts with additional features providing the latest data. When shopping for a Freight Rating Software System with TMS, look for key points that will add value and provide additional benefits for shippers.

The Basic Functionality of a Freight Rating System

The fundamentals of a Freight Rating System match a user’s shipping and freight characteristics and a carrier’s service and price options. Shippers and 3PLs can select the best rates from a range of carriers to meet their needs. The tools optimize the headhaul and backhaul components of a shipper’s network and deliver analytics used by shippers during negotiations with carriers.

CERASIS TMS FREIGHT RATING SYSTEM INTERFACE

CERASIS TMS DECISION PAGE RATED BY:
- PRICE
- TRANSIT TIME
- LIMIT OF LIABILITY
Useful Features in a Freight Rating System

There are some fundamental steps to take in finding the right system for a particular shipper’s needs. These elements go beyond price and should be taken into consideration as to how they can provide additional benefits to a shipper.

- Determine the software’s objective. Is the end-goal to select carriers or to find the lowest freight charges?
- Find out how pricing is made available to shippers. Is the pricing done through a licensing agreement or by a “software as a service” offering?
- Make sure that the data is reliable and as real-time as feasible.
- Be satisfied that the system meets a company’s requirements across all types of freight.
- Investigate how frequently the vendor updates information and the level of shipper involvement in maintenance.
- Gain clarity on how well the software interfaces with leading enterprise resource planning (ERP) systems. Platforms need to communicate smoothly with transactions and feed into all supply chain and logistics systems.
- Select a freight rate system that is compatible with the existing platform and technology of a business.

A great freight rating system should be web-based and offer additional value to shippers. The software can offer freight invoice auditing, creation of Bill of Lading, storage and maintenance of negotiated freight rates, storage of supportive documentation, and analytics to enable shippers to continually improve on their processes.

Go with TMS Integration

Transportation Management Software Systems (TMS) reduces overall hard and soft costs of transportation. It collects data such as rates and vendor options in a clear, simplified, and prioritized format to aid in the decision making process. TMS is used by companies to strategize, plan, and execute shipments. Many companies are beginning to realize their potential but are failing to implement a TMS system. Only 35 percent of shippers use TMS to manage operations, according to the Logistics Management’s 2014 Technology Usage Study. Those who do have a TMS often use older versions without the latest value-adding enhancements. Use their oversight to your benefit and gain a competitive advantage. Enhance an existing transportation management system and learn what TMS can do for an organization.
Meet the specific needs of an organization through standard technology that supports custom business logic. Not all TMS systems can handle the logistical needs of such companies. Businesses who are growing quickly and need to focus on scale demand more from a freight management system with TMS. The Cerasis Rater TMS supports LTL freight shipping and handles inbound, reverse logistics, and traditional transportation modes quickly and efficiently.

Increase functionality with TMS integration that is customized to the delivery objectives of a vertical market, such as automotive aftermarket.

Make fast cost-conscious decisions when dealing with a variety of modes of shipping. TMS can provide supportive real-time data.

Assess performance with a logistics key performance indicator (KPI) reporting function that removes the guesswork.

All users can have freight visibility and view the goods at key points along the way. This encompasses various delivery points, customs clearance, invoicing and booking.

A Modern Freight Rating System Gives a Competitive Advantage

A freight rating system with TMS are now feasible for small and medium-sized businesses. Costs have decreased and smaller players can use the optimized features of this system to outdo some of the larger companies that are using outdated configurations or are not attempting integration of the system at all within their transportation management strategy. Today’s systems can offer more value, less cost and a simplified solution that integrates with existing processes and enhances communication and negotiations. It is time to take the next step in the growth and development of the shipping process.

The Cerasis Rater, our TMS, streamlines and simplifies the freight rating system with TMS. Cerasis offers a rating engine for LTL and offers support for both small parcels and full truckloads.
Anywhere you look, technology is making an impact on our lives. It influences how we work, how we communicate, and how we play. For businesses, there are countless different uses for technology and harnessing the power of them properly is a good idea. Here at Cerasis, there are numerous technologies that we offer that are designed to help simplify the way your transportation management practices. If you're not taking full advantage of everything available to you, taking a closer look at some key points can help.
Here's a look at some how current technology solutions can do for your business.

1. Using a Transportation Management System to Streamline Transportation Management Practices

For many, the process of actually finding and setting up the right shipment for any freight – full load or LTL – can be the hardest part. There are plenty of different shipping companies out there, and using a transportation management system to manage all inbound and outbound shipping needs will put those shippers who use one at an extreme competitive advantage.

2. Have Easy to Analyze Actionable Insight Gleaned from the Data Created in the Transportation Management System

In order to continually improve your transportation management best practices, having the ability to analyze important transportation metrics easily, is a must. There are, of course, tactical metrics for accounting functions like viewing open and paid invoices or the ability to identify when shipments are due, but also must include strategic metrics and reports for more in-depth analysis. It is these deeper reports which allow you to truly improve transportation management practices and include:

**Matrix Report**

- Identify factors that impact your freight shipping costs.
- After setting a baseline cost per pound for your freight, the Matrix Report compiles the invoiced cost for your shipments and breaks them down into line-haul, fuel, and accessorial charges.
- Lists the weight and distance traveled (both totals and averages) and shows how many shipments were controlled by minimum charges.
- With this freight data, you are able to see how changes in you shipping patterns can affect your overall cost.
Lane Analysis

Allows customers to view their shipment details by lane (Origin/Destination Zip Codes, ST, Country, NMFC/FAK Rated Freight Classes by Carrier and Mode)

By Carrier On Time Performance

This report breaks down shipments by; Early, Late, Ontime, Excluded (includes an Accessorial which may affect actual delivery) & Unknown (Missing key EDI delivery data, so Status could not be determined). This data is specific to the customers and their locations and not simply the carriers overall On Time performance ratings.

Freight Class Breakdown

This breaks down shipments by the NMFC Freight Class & FAK Freight Class, if one exists, along with the associated number of BOL’s, Weight and Invoice Price at the Class level.

(13) Month Rolling & Quarterly Shipment Summary Data

This is a summary of key shipment attributes to include; Price Charged, Total Bills, Linehaul, Fuel, Accessorial and Savings etc. broken down by the current and past (12) Months.

Quarterly Net Spend Breakdown Graph

This gives users a visual depiction of an “At a Glance”, prior and current Quarter’s Transportation spend trend.

Analysis is one thing that you can't overlook, and with technology working for you it's easy to pay attention to things that you would have overlooked before. You can use a TMS solution to get an accurate report on freight data, costs, speeds, and much more. Every aspect of your shipping will be displayed for you to develop new strategies from.
3. e-Commerce is No Longer for Small Packages: Manufacturers and Distributors Looking to Go Omni-Channel Need Off the Shelf LTL E-Commerce Shipping Solutions

For e-commerce businesses who are now shipping larger freight, LTL shipping is now more of a daily event than it has ever been before. Thanks to Amazon, retailers with small packages have been forced to master e-commerce from a small package perspective. However, as consumers are now expecting more and more from retailers, this mindset is also trickling down to those manufacturers and distributors now offering e-commerce to their B2B buyers. No longer can a manufacturer simply put on their site once the buyer has chosen the product: "Call us to arrange freight!" It is now an expectation of the buyer, just like the experience they had 5 minutes earlier when they bought shoes on Amazon.com, that the shipping costs and details are now presented and easy to understand. Conversely, like the great technology through extensions, plugins and applications have allowed for the business to fully have visibility and control in the management of e-commerce freight, so has our extension for LTL e-commerce which is already integrated into our TMS. All the same functions and abilities of the TMS are now available to companies wanting to manage this new channel.

These are just a few examples of how you can improve transportation management practices when you rely on the right technology solutions. Implementing these technologies for your company might seem like a hassle or an expense you can avoid, but if you regularly ship products it's something that you can't ignore. And, to boot, no longer are server side softwares needed in order to deploy this technology. Our web-based TMS is ready to go with just a simple username and login. No installs needed....and integration into your ERP or WMS is a breeze!
The popularity of the use of transport management system (TMS) has been growing steadily in the last few years. However, its usage is yet to reach a point where shipping professionals consider it indispensable for their business. In fact, recent studies have shown that only about 35 percent of shippers are using TMS to manage their operations. And many of them are still using old versions and have not decided to upgrade to the latest version.

However, most of the shipping professionals have at least some knowledge of TMS and are aware that they will have to start using it at some point in the future if they want to continue doing business. As the shipping business has gone global, it has grown in complexity. Today’s shippers and carriers are not only expected to have their reach in every corner of the world, they are also required to provide fast, inexpensive and high quality service.

In a world where access to real-time information is vital for every decision-making, the importance of a Transport Management System (TMS) for today’s shipping business cannot be overemphasized. A transport management system helps coordinate all the data points in a transportation network. The collection of vital data, such as rates and route options, allows the TMS to present the data in an easy to understand format so that logistics managers make the best decision possible about transportation.
The latest transport management systems (TMS) available in the market do not stop in capability for data collection and reporting. Logistics managers and 3PLs are now using transport management systems for the entire shipping operation, which involves the following four key processes:

1. Planning and decision-making: A transport management system provides vital information in real time to enable shipping professionals to plan and make decisions according to a given set of parameters. These include deciding between a selection of carriers on transportation costs, shorter routes, and fewer stops along the way.

2. Execution of transportation plans: A TMS makes it faster and easier to execute transportation plans by automating vital functions such as carrier rate acceptance, dispatching, and EDI.

3. Visibility: A TMS makes it easier for a logistics manager to have freight visibility along the way so that everyone involved, including the customer, knows exactly where the shipments are at any time. Logistics managers have this visibility from point A, arrival at point B, customs clearance, and invoicing and booking.

4. Measurement: Most TMS have a logistics key performance indicator (KPI) reporting function that makes it easy to measure performance.

**A Transport Management System brings Needed ROI & Efficiency**

The biggest and obviously the most desirable advantages offered by TMS is the savings in costs, resulting in increased ROI. A study by ARC Advisory Group has found that the use of transport management system results in a saving of approximately 6 percent. Users have attributed the savings to lower cost mode selections, better routing, and better procurement negotiations. A TMS makes this possible by obtaining cost information from a variety of providers.

By providing shippers with the ability to choose carriers from the comfort of their office, a TMS can turn the market into a buyer's market. All that a shipping manager has to do is point and click the mouse button to choose the best option presented to him or her. The transportation best practice of employing a TMS solution cuts time and costs, which is what every shipping manager is looking to achieve.

Another important reason to use TMS is the dramatic increase in efficiency. By automatically tracking multiple products, shipments, and solutions, the TMS organizes all the information into precise and easy-to-read lists, which help managers to make decisions quickly and efficiently. Automation also eliminates human errors, which often result in bad decisions. Companies who are shipping freight are increasingly looking to TMS to increase their competitive edge thanks to the realization of ROI and efficiency.
Using a Transport Management System Levels the Playing Field

Until recently, large enterprises were the main constituents applying the use of TMS. To a large extent, this is still true. The main reason most small to mid level shippers were not so enthusiastic about employing a transport management system was the complexity of the system, high cost of implementation, and maintenance. But, these smaller and mid-level shippers understood the non-use of a TMS put them at a great disadvantage. The savings in cost and increase in efficiency gave the large companies a distinct advantage.

But things are changing. Today a transport management system (TMS) is no longer the clunky and expensive dinosaurs they used to be. The latest developments in technology are making them easier to install, easier to use, faster, more functional, more efficient and less expensive. Any shipper, whether big or small, can greatly benefit from these systems. In fact, many developers are specifically targeting small to mid level shippers because they are the most numerous.

Another significant development that is likely to have far-reaching impact on the future of TMS is the growing popularity of cloud-based computing. Many TMS developers are offering their service in the cloud which makes it unnecessary for companies to maintain large and expensive servers or a team of dedicated staff to maintain those systems. Shippers are then able to access a Cloud-based system from anywhere and are far less costly to maintain, which makes them highly attractive to users.

The drop in the costs of TMS is attracting an increasingly number of companies of all sizes. 3PLs focused on transportation management have been known to provide TMS to shippers free of cost as they can make money off of margins. Due to this easy to deploy technology it means that small merchants associated with 3PLs will increasingly seek to get free access to TMS.

A growing number of shippers are turning to TMS as a means to provide improved customer satisfaction, increase transportation and warehouse efficiency, increase delivery capabilities, reduce inventory, improve cash flows, and increase their ROI.

Thus, the state of the transport management system is superb, and there is a great deal of things to be optimistic about in 2016. The TMS market is still nascent, and there is a lot of room, for growth. As an expert has pointed out, the TMS market is currently at a stage where the personal computer was in the 80s. It has only one way to go, and that is up.
Chapter Two

THE BENEFITS OF USING A TMS
The 5 Benefits of Hybrid SaaS TMS

New, innovative technology platforms have greatly sped the expansion and evolution of transportation as well as logistic solutions. Most notably are we seeing technology platforms that improve and simplify the users by means of integrating partners and using collected data. In today’s post, we talk about the 5 main benefits derived from the use of SaaS TMS and introduce what we call a Hybrid SaaS TMS. The transportation management system, or often referred to as TMS, is a great example of how this technology is being used to create a more interconnected space both digitally and physically.

What is SaaS TMS & Introducing Hybrid SaaS TMS

SaaS TMS or software-as-a-service TMS is an environment in which customers and customer partners can access shared solutions over the internet. The transportation feature functionalities can be compared to what many recognize as on premise solutions. To be clear, at Cerasis, our TMS, the Cerasis Rater, is not a pure SaaS TMS offering, only due to the fact that we also offer services that happen outside of the TMS such as carrier relations & rate negotiations, freight accounting services, freight claims, and other services. We call this SaaS TMS model Hybrid SaaS TMS

The thing that makes software-as-a-service different is that rather than working solo within your own brick and mortar organization, customers and their partners can now take part as a community in order to find real, workable solutions.

A carrier becomes established in the network, and is then connected to any appropriate partners. Through hosted applications, the carrier must integrate with users separately. This type of connectivity develops a competitive advantage in certain areas.
Cost Structure

One of those areas would be cost structure. Because SaaS is sold as a service rather than a product, the users’ ROI is increased and is also generally seen much sooner. The ROI can be seen much sooner because the process moves from implementation, integration and optimization in the most efficient way possible. Expensive upgrades are non-existent which is both money saving as well as time saving.

Scalability

The second area of benefit is scalability. Scalability in the transportation management industry is simple yet often hard to come by. Scalability can often be defined as having quick access to needed carriers which are already in the network. This type of ease gives users a greater ability to flex to demand, bring on new customers, suppliers, upgrade service or bring on new carriers.

Accessibility

Accessibility would be another benefit. When there are more partners integrated onto one technology platform that will mean that there is more data streaming over the network. Each user will benefit because they have access to a better grouping of applicable, accurate information. This also assists with reporting and benchmarking purposes as the data will provide business intelligence. This information can then be shared between the users within the network. This type of collaboration also creates greater value for all involved.

Visibility

Visibility is probably one of the most important aspects of integration of an enterprise in using a SaaS TMS. When all partners are working on the same platform environment it creates greater visibility to all shipping locations which in turn increases communication. When each party is aware of what happening, how it is happening, when it is happening and why it is happening then efficiency is increased and team pulling is increased as well. This type of highly visible environment also allows data so that performance metrics can operate in a more efficient and powerful way.
Visibility is closely linked with collaboration. When there is greater visibility then businesses will share data faster. All parties involved, whether they are vendors, carriers, or shippers, will be able to collaborate and work via the extensive networks to share assets and create an economy of scale.

When SaaS TMS is leveraged by shippers it can propel sudden and important changes within the organization. An example might be a retailer who is managing inbound transportation. If there are problems with visibility and the retailer wants to reduce inventory but increase supply chain flow in most cases facility expansion would be needed.

Real Results

Shippers can leverage SaaS TMS to unleash rapid and significant change throughout the organization. For example, consider a retailer that is managing inbound transportation, but has problems with visibility and wants to reduce inventory and increase supply chain flow without expanding facilities for warehousing. However, when carriers or vendors are brought on through SaaS TMS technology the retailer could instead track shipments and through the greater visibility afforded him keep better track of supply and demand, reduce stock that is kept for safety and in the end reduce warehousing and transportation expenses. That is how SaaS works. By increasing the amount of information available to each individual in the process, unnecessary steps can be avoiding, business can be conducted in a more efficient and economical way.

How SaaS TMS is Different

In order to understand why SaaS is different than other technology platforms you should look at the deployment methods it uses.

SaaS technology uses a platform that the customer can access via the “cloud.” This cloud platform supports a network which is multi-tenanted allowing many business partners to integrate using the same technology. Hosted technology differs from SaaS technology in this respect because it is only accessed on demand and does not allow the multi-tenanted landscape. SaaS also differs from on premise technology which is installed and ran on each individual customer’s hardware and devices. This requires additional resources and expense to maintain databases and infrastructure.
According to a research study from Forrester, EDI continues to prove its worth as an electronic message data format. This research states that “the annual volume of global EDI transactions exceeds 20 billion per year and is still growing.”

As a shipper in today’s growing market, there are many advantages to shifting to the use of transportation EDI with your transportation providers or 3PLs. If you are unfamiliar with the concept of EDI, read our first post in this series on what is EDI in transportation and how it works, but as a quick recap, essentially, EDI takes human interaction out of the equation completely, and lets technology take over.

EDI isn’t a new technology in and of itself. In fact, some industries, such as trucking, automotive, finance, and even government have been using EDI for years. However, now that shippers (and consumers) are making the shift to doing more and more of their everyday tasks through computer technology, transportation EDI is the obvious choice for companies who want to be in on this rapidly growing trend in transportation technology. There are many benefits of transportation EDI which are a value added service via a transportation management system offered by transportation providers or 3PLs.
For shippers or 3PLs that handle numerous transactions, using EDI, typically within a TMS, can result in millions of dollars of annual savings due to early payment discounts. From a financial perspective alone, there are impressive benefits from implementing EDI. Exchanging documents electronically improves transaction speed and visibility while decreasing the amount of money you spend on manual processes. But cost savings is far from the only benefit of using transportation EDI in a TMS.

But let’s start with Cost Savings anyway:

- Expenses associated with paper, printing, reproduction, storage, filing, postage and document retrieval are all reduced or eliminated when you switch to transportation EDI transactions, lowering your transaction costs by at least 35%
- A major electronics manufacturer calculates the cost of processing an order manually at $38 compared to just $1.35 for an order processed using EDI
- Errors due to illegible faxes, lost orders or incorrectly taken phone orders are eliminated, saving your staff valuable time from handling data disputes with carriers
- Finally, there is also resources needed in your transportation department, since there no longer has to be an employee present to handle these sorts of tasks. When you just consider solely the time saved by eliminating the need for sending and receiving paper documents, or even the time saved by not having to have someone send and answer emails, the cost benefits of utilizing EDI are very apparent.

The major benefits of EDI are often stated as Speed and Accuracy:

- EDI can speed up your business cycles by 61%. Exchange transactions in minutes instead of the days or weeks of wait time from the postal service
- Improves data quality, delivering at least a 30—40% reduction in transactions with errors—eliminating errors from illegible handwriting, lost faxes/mail and keying and re-keying errors
- Using EDI can reduce the order-to-cash cycle time by more than 20%, improving business partner transactions and relationships
- Further, transportation providers or 3PLs who use transportation EDI on your behalf as a shipper can often handle a much larger task load than those who do not, and they do it with better accuracy.
How the Web Based Transportation Management System Will Make the Server Side TMS Go the Way of the Dinosaur

While it can't be said that every company has tapped into the power and flexibility of a web based transportation management system, such applications have been around long enough to no longer qualify as new (in fact our web based transportation management system, the Cerasis Rater, has been web based since 1997, before Google was even a company) - and their presence in the enterprise is growing. Is it fair to say that traditional TMS software has been overtaken by web based transportation management system yet? Perhaps not, but such online, hosted or on-demand systems are proliferating. Just take a look at the recent information in Inbound Logistic's TMS Buyer's Guide. They are quick to deploy in most cases, they are highly scalable and the faster-time-to-ROI argument hasn't hurt web-based TMS adoption either.
The Widespread Adoption of the Web Based Transportation Management System

Does a Transportation Management System Need To Have a Large Expense to Deploy?

Let's talk about TMS in general first. A new study of more than 400 logistics managers conducted by Peerless Research Group found 43 percent were either already using or planning to implement a TMS. Clearly from these statistics, not many shippers have yet taken steps to utilize these technologies to improve on-time delivery, reduce transportation costs and improve visibility into the moving pieces of their supply chains, which are all the main reasons why shippers would want to implement something like a web-based transportation management system and the core benefits of a TMS.

So, some may ask, why? Well, typically, for some companies, size is a primary issue. Organizations doing less than $8m to $10m in sales will have a hard time justifying the costs of a TMS. Many small companies may not even be aware of the existence of TMS since their transportation needs are well-met with manual processes. But for larger companies, it is the structure of their operations that may be the impediment. A lot of organizations are decentralized, with their carrier management and rate negotiation functions spread across a wide field of operations, with each site using a limited (and frequently disparate) set of tools to accomplish the same kinds of transportation goals. In these cases, companies may not feel like there is an advantage to centralizing transportation management with a TMS. Or perhaps they feel like the benefits of doing so wouldn't outweigh the disruption they imagine it would cause to implement a TMS.

Then of course, there are a whole host of companies who already have some kind of TMS in use, typically through their relationships with 3PLs or 4PLs who bring a technology to the table. Many shippers use the TMS tools provided by their logistics service provider, and in some cases, they simply outsource the process entirely to the 3PL.

However, what most small shippers may not realize is that they can not only outsource entirely to a third party logistics provider, but using the 3PLs web based transportation management system means that the shipper may not incur any cost at all to use the tool provided by the 3PL - and often integrated managed transportation services come with the web based transportation management system.
So If Shipper/Organization Size is Not an Issue, What Would be Reasons NOT to Deploy a Web Based Transportation Management System?

A Logistics Manager may be sold on using a web based transportation management system. He or she sees that it will enable them to do more with their resource, scale, sustain, and even grow with the company without adding much overhead in their department. But yet, there are challenges that the logistics manager may face when seeking buy-in from key decision-makers regarding engaging and implementing transportation process automation technologies like TMS. For some reason, there are still reservations on the part of leadership when considering a large system integration project like TMS?

Often, the reservations come from either an old paradigm or misunderstanding of how new technology systems, especially web based systems like a web based transportation management system may work. From the sales feedback we hear in the marketplace, overwhelmingly the objections we come up against once the Logistics or Transportation Manager is on board and we talk to leadership is a consensus that executive leadership in many organizations has a dated functional view of transportation. Some regard this increasingly strategic facet of the supply chain as little more than the a "shipping department."

The question transportation hears frequently when pitching the idea of investment into a TMS program is, "Why would you need a system with all these bells and whistles for a tactical function like shipping?" It's unfortunate, but many still fail to see the value transportation can drive across the enterprise and all the touch points it involves.

Luckily, over time, this contentious point continues to grow less and less prevalent as supply chain management continues to grow more integral to business. We see its rising influence in all the popular literature and even the universities offer business degrees with focus on supply chain education. So while there is still the "old guard" who consider anyone in transportation "box kickers and label lickers," there are several entire generations of younger professionals who give this discipline the respect it deserves.

It is also worth considering that people are fairly spoiled by the success of transportation in modern life. They go to the supermarket and 99 times out of 100, the product they're looking for is there on the shelf where they expect it to be. This makes it pretty easy to take transportation and logistics for granted, without thinking much about what goes on behind the scenes to make this happen. We have the best practitioners in the world here in the USA, so in this respect, we can be our own worst enemy.
However, Despite Reservations....Isn't it Really About the ROI of Something Like a Web Based Transportation Management System that Matters?

The most common reservation Cerasis Account Executives hear, as you may expect, is the cost of purchase and maintenance for a TMS solution. Many fail to see the direct payback or ROI into such a system.

For more sophisticated companies, a common point of resistance to engaging a third-party web based transportation management system is a bias against "bolt-ons" or software tools or solutions that are not produced by their implemented ERP provider. In many cases, organizations prefer to have anything related to their supply chain management, even their transportation management, built as core functionality within their ERP systems. This is a typical mindset at a larger organization. "Bolt-on" may be perceived as requiring IT resources that the organization isn't prepared to allocate to such projects. IT leadership worries about new systems and how much support they'll require both to integrate and to protect from a security standpoint.

However, these days, integration into something like an ERP is a non event. What we mean by that is that it is so easy with APIs and connect services to have a web based transportation management system integrated by the third party logistics company's dedicated technology team.

The Study States that Logistics Manager Want More Technology to Improve Transportation Management...so Why All the Fuss From the IT Department?

The same PRG study went on to state further that load optimization/consolidation, electronic communications, settlement, reporting and integration with other enterprise applications were each identified as prime objectives by a near plurality of respondents. With each of these things being far more effectively achieved through a TMS system, could it simply be IT constraints that dissuade would-be buyers from making the decision to engage a technology like this? Maybe....We definitely wouldn't underestimate or minimize the reality of IT constraints. Everyone, especially the largest organizations, can relate to having to make significant IT cutbacks. IT budgets tend to grow larger as they go through the process of adding systems. Then, one day, the comptroller, CFO or CIO is given to finding savings, especially in an economy that is focused on cutting out as many wastes as possible. They look at a large IT organization and it seems ripe for cutting. In fact, in this last downturn, many large organizations took the step of outsourcing their IT altogether. We have heard from many of our own shipper customers that IT limitations are the top concern when deciding on a new technology deployments in any aspect of their businesses.
But, A Web Based Transportation Management System Should Decrease, Over Time, This Hesitation With Education

ereption of what is involved in engaging TMS? Does this help mitigate IT resource allocation concerns when deciding?

The relatively low level of effort required of IT to implement and maintain a SaaS or web based transportation management system has certainly been one of the main drivers behind the rise in new TMS implementations over the last few years. The proof is out there, easy to find. Most of the largest companies in the world are already using these applications. It is starting to change for the mid-sized business too. The cost of a SaaS-based TMS versus an ERP-provided transportation management solution is like the difference between night and day. The SaaS solutions are so much less expensive and quicker to deploy. Further, the user training is far simpler with the SaaS solution. The front-end of the modern TMS is far more intuitive than the clunky offerings from server-based ERP/TMS application providers. Today, users are already hip to the slick user experience they encounter when visiting sites like Amazon.com and others. The ERP-based solutions lack the elegant front end offered by the web based transportation management solutions.

Conclusions on the Web Based Transportation Management System

Overall, the change to the wide spread use of web based transportation management systems is happening, albeit slowly. The internet continues to pervade all areas of user's lives, especially those of younger professionals: the Gen Xers and Millennials. As these users grow further into leadership roles in business, we'll begin to see the final phase-out of server-based TMS. Twenty years from now, the server-based model will be regarded the same way mainframe computing is regarded today. It'll be a dinosaur.
6 Benefits of a TMS for Better LTL Freight Management

Most businesses that ship freight via Less-than-Truckload or LTL freight services will improve the efficiency and cost-effectiveness of their transportation and logistics departments with the use of an automated transportation management system (TMS).

Many larger shippers, such as original equipment manufacturers (OEMs) or large distributors, with freight expenditures in the millions of dollars, typically have logistics departments with one or more traffic managers and are already using a TMS. However, many smaller companies, with lower freight spends, would also benefit from implementing a transportation management system for the same reasons of helping manage LTL freight more efficiently that a large freight shipper would use a TMS.

There are many benefits of a TMS that shippers will realize if they implement one. However, a lot of smaller shippers believe that an implementation of a TMS is expensive. That is a myth. Most Transportation Management Systems today are web-based, have easy to use web services such using APIs, and are easily integrated into other systems, so there are seamless data interchanges, such as integration with an ERP system or address book program. As a shipper, transportation management by avoidance is not a good option. Now more than ever before, transportation issues, especially in the fast-moving and complex world of LTL freight, demand increased time and attention. Transportation will not take care of itself. Surprises will eat into your margins. If you don’t know where your inbound freight is, you may be faced with shutting down a production line, or you may have to delay shipping orders to your customers. You may get hit with customer chargebacks if someone at the warehouse makes a mistake and sends shipments without knowing that they need to use a particular carrier in a specific lane (governance). The result is not a good one nor as most would agree, the desired outcome: lower profits and lower customer satisfaction ratings.
The use of a TMS in LTL freight helps insure that your loads are matched to the best carrier, equipment, and lanes so that you can get the best possible rates without sacrificing the service you expect and deserve. The main advantages of a TMS applied to LTL freight include:

- **Improved visibility to your shipments**: When you know where your freight is, you can better communicate to your customer, allowing you to build better relationships with them. On the inbound side, it helps build rapport and accountability with suppliers.

- **Availability of data and analytics**: With reports generated from your TMS, you can better gain insight into your LTL freight shipping activity and business outcomes. For example, you may find in a matrix report valuable information such as what would have you saved if you chose the least cost carrier each time or how is Carrier A performing in the way of claims vs. Carrier B. This kind of information allows you to make future business decisions that are based on fact and not gut or opinion.

- **Automation in the Process of Logistics/Transportation**: With a robust Transportation management system, you can realize such benefits as real-time freight rates, organizational control or governance by restricting user choices to those desired by management, speed, and scalability to avoid future growing pains as the TMS will grow easily with you as you ship more freight, and of course, a TMS that is backed by a dedicated technology team will make sure you have the latest and greatest technology to keep up with the fast paced changing world of logistics technology.

- **Simplifies data entry and the elimination of many manual steps**: Logistics automation features such as integration to your commodities via your ERP system and access to your address book, as well as automatic storage and entry of fuel surcharges and accessorials, will have you never again worrying about keying in the wrong information. These kinds of manual data entry errors will lead to increased shipping costs such as having to pay for shipping twice or paying a higher freight rate due to entering an incorrect commodity freight classification. Remember, several factors go into creating a freight rate, so it is vital you don't let something such as manual entry, create a rate you shouldn't have to pay.

- **Invoice retrieval, consolidation, and audits**: Transportation accounting can be quite the headache, especially if you have multiple locations or multiple LTL freight shipments each week. Imagine if you were the controller or CFO at a manufacturing company, and you had 15 locations that each shipped 10 LTL freight shipments each week. That is 150 freight invoices that must be managed, paid, and HOPEFULLY audited against the original quote! Whew, that is a lot of process work and plenty of opportunity for costly errors. A good TMS should house all shipment information for easy access, automatically provide reporting on variances between quote and actual freight invoice, as well as provide further auditing features for piece of mind.
Enhanced communications between all parties: Because most TMS programs are now web based, many of them also store documents for future use in very important discussions between various parties, such as the shipper, the consignee, the carrier, or a third party logistics provider. This allows for easy communication without having to dig for documents. They are available for whenever you need them. Add to the automatic notifications via technological applications such as EDI with carriers so all parties know where the freight is at any time, and a TMS allows you not to miss a step in communicating between all sides. It is the communication aspect in logistics where things can go awry, and when things go wrong, you know there is money being lost.

Partnering with a transportation management provider to obtain the benefits of a TMS also gives you access to that partner’s entire team of logistics experts. Further, you gain access to an array of other value-added services which can include LTL freight back office support to handle pick-up scheduling, tracking, appointment confirmations, proof of deliveries, claim processing, bills of lading, auditing of freight bills and daily reporting on pricing so you can charge quickly.
The transportation management system is undoubtedly one of the buzzwords of the modern logistics industry. Shippers around the globe are realizing why the time has arrived to take advantage of transportation management system benefits. More shippers are utilizing TMS to improve production, reduce inefficiencies, and keep control of management processes under one roof. As a result, the use of the TMS is expanding, and it will be one of the greatest technology trends to benefit the shipping industry in 2016. Let's take a look at why it's expanding and how it will benefit the shipping industry.
Driving Forces Behind the Expansion

There are multiple forces that are catalyzing shippers to move towards the implementation of a TMS. Transportation management system benefits are derived from the following driving forces:

- The cloud is making the initial investment in a TMS minimal, especially when compared to the typical initial cost of a TMS historically. In the past, shippers were unable to spend the quantities of resources to develop and implement a TMS on premises. However, the introduction of the cloud has forced many operations to think about the applications of a TMS in a software-as-a-service environment. Essentially, the initial cost is lowered, and the shipper can realize the transportation management system benefits faster.

- Shippers demand in-house solutions. Regardless of what studies say, shippers do not want to actually outsource all properties and operation to third-party providers, often called managed transportation. This is simply human nature in business, but, as explained by Steve Banker of Logistics Viewpoints, today’s TMS models are enabling shippers to combine the traditional benefits of a 3PL with the transportation management system benefits through cloud-based solutions. We call this a hybrid managed transportation model. Meaning, while the 3PL provides the TMS technology, at the same time, the 3PL also provides value-adding services. Meanwhile, complex rate computation, according to Peter Moore of Logistics Management magazine, is only truly achievable through the use of a TMS.

- Omni-channel demand and amazon structured delivery schedules are clearly responsible for the overwhelming demand for faster, cheaper cost of shipping by consumers. Unfortunately, mini shippers do not have the capability to provide shipping and handling services at Amazonesque ratios. Yet, more consumers are getting online and finding their purchases around the globe. A TMS is able to appropriately match ordering and fulfillment centers based on where the delivery address is located. In other words, a TMS is able to help shippers become more like the capabilities of amazon and giant retailers.

Transportation Management System Benefits

The expanded use of a transportation management system directly benefits shippers in many ways. According to Bridget McCrea of Supply Chain 24/7, up to 35 percent of today's shippers are actively using a TMS, and 39 percent of shippers have current plans to move towards the adoption of a TMS within the coming year. As a result, 69 percent of all shoppers are expected to be fully utilizing a TMS by the end of 2017, if not the end of 2016. So, shippers who have yet to think about transportation management system benefits need to know exactly what benefits exist.
A Proven Return On Investment

Shippers that have implemented a TMS see 6.5- to 7.5-percent return on investment, accounting for less than 25-percent net profit going back into the software. In other words, after accounting for monthly operating and subscription costs, the most conservative return on investment estimates for the use of a TMS in today's operation stand out at least 5.75-percent increase in profits.

Cloud Storage

One of the greatest drawbacks to a traditional transportation management system revolves around where data is stored, analyze, and applied. The use of cloud computing powers is enabling today's shippers to have the full transportation management system benefits without the on-site storage costs.

Response to Driver Shortage

The driver shortage is only around 40,000 drivers as of 2016, reports Bridget McCrea of Supply Chain 24/7, in another article. However, the driver shortage is expected to grow to 240,000 by 2020. That's a 600-percent increase over the next four years, and the push towards more products, faster, and at lower rates is only further exacerbating the problem, as today's drivers are pushed to their breaking point to meet this demand. The TMS simplifies route schedules, loading and unloading, and a host of other processes to make the burden on the drivers last cumbersome.

Proactive, Not Reactive Supply Chain Management

Traditional supply chain operates on a reactive basis. This is the typical operation of any business. Today's demands generate the processes of tomorrow, and employees are constantly working to meet today's mantra. However, the TMS will enable companies and employees to look proactively at what could happen and design solutions before issues arise, making the entire supply chain management system more efficient and competitive. This will further drive better customer service, which is one of the best of the transportation management system benefits.

Digital Empowerment in Making Decisions

From executive-level leadership to drivers, making decisions is part of the job in shipping. However, these decisions must have a basis for why they were made and what benefit can be achieved. As a result, the TMS is enabling greater use of data capture systems to ensure all decisions are made with the appropriate information, at the appropriate time, without any unnecessary delays. This leads to a fundamental growth factor in the adoption of TMS solutions across the industry.
For example, at Cerasis we have a report called the "Least Cost Compliance" report. This allows management to see what all locations picked in the way of carriers and if the location picked the "Least cost carrier" or not. In the system, it will prompt the user to give a reason why they did not and what the cost savings difference was. Now, this is not the pursuit of "least cost," but just gives more control and reasoning in why different carriers were chosen.

Do you remember the last time your organization made a split-second decision that adversely affected your bottom line? Now, what could you have done differently, what your processes and decisions have been better managed if you had more information on hand, could your transportation managers or coordinators have done something to minimize costs, or could the pickers of your warehouse have found a way to get today's shipment loaded faster after integrating into a transportation management system allowing for a WMS to "talk" to a TMS?

These questions are simply the defining factors of transportation management system benefits to your company. Unfortunately, more than one out of four shippers continue to conduct business without the application and use of a TMS. 2016 will see the number of shippers using a TMS double, and the benefits will reach beyond the company and impact public perception, your customer base, and your bottom line.
CONCLUSION
A Competitive Advantage in Using TMS

As a shipper you are tasked with many responsibilities. Second to none, the boss man is always stating, “CUT COSTS!” There are a number of ways to do that, but how do you do it effectively? There is a difference between cutting off your nose to spite your face, and investing in yourself to look prettier. What did I just say? What I am saying is use a tool to help you achieve your bosses’ stated goal of reducing costs. And these days, that tool is typically a piece of technology. And like that FitBit you have syncing to your mobile phone that you can then access on the web, the world of Logistics, thanks to web-based API/EDI/XML/Web Services driven technology, is also making managing transportation as easy as taunting your friend because she has only done 2000 steps today and you just finished a marathon.

Not quite sure yet about the best TMS to use for your needs? We can help. Simply click this link here to send us a question or request a TMS Demo here. We’d love to talk to you. You have your marching orders and we have ours. Ours is to put solutions into your hands so you and your transportation department (and yeah, your boss) can run like the machine you are.
We hope you enjoyed this educational e-Book on the trends for the basics all the way up to the best practices and importance of using a TMS.

Cerasis, a transportation management company founded in 1997, has always believed in the use of technology to improve process to not only reduce cost but to stay strategic, competitive, and have the ability to use data from technology to continually improve. In fact, one of our core values is just that: continuous improvement of our people process and technology.

We built our Cerasis Rater TMS in 1998, launching it as web-based before Google was even a business. Our (now Army, as our Development Manager, Jerel Byrd calls them) development team are always continually improving the Cerasis TMS, as we know it is vital to have a system that is not only innovative, but sound, secure, and enables those in transportation to do their job all while doing it cost effectively.

Are you using a TMS to help manage your transportation department as a shipper? What are you seeing in the space?

In addition to our transportation management system (TMS), the Cerasis Rater, when you are a Cerasis shipper, you gain access to the following managed services:

• Transportation Accounting to include: Invoice auditing, one weekly invoice no matter how many shipments, and freight payment services
• Comprehensive end to end freight claims management: if your freight is damaged or lost, we will handle the freight claim on your behalf
• Carrier Relations: We will negotiate rates on your behalf and you get better rates thanks to our buying power
• Inbound Freight Management
• Reverse Logistics
• Robust Analytics and Reports
• Small Package Auditing
• Small Package Contract Negotiation
• Warehousing
• International
• & More!

Want to learn more? Visit http://cerasis.com
Get a Demo of our TMS or Inquire About Our Services