WHITE PAPER

THE CASE FOR ERP AND TMS INTEGRATION

4 REASONS WHY ERP FAILS TRANSPORTATION MANAGEMENT

Discover why ERP systems continue to fail at delivering the value required for transportation management, and the four reasons why integrating a Transportation Management System with an ERP can help you keep up with the speed that modern commerce demands.

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ERP + TMS: THE BEST OF BOTH WORLDS

Over the last 30 years, Enterprise Resourcing Planning (ERP) systems have evolved into the large-scale systems that form the foundation for most modern businesses. The ERP is a nearly ubiquitous system used by thousands of organizations to manage business information, providing a high-level view of company activity and performance. The truth is that ERPs are great at managing core business functions, but how well is your ERP keeping up with your complex transportation requirements? More than likely, it isn't.

This paper is not an argument about choosing ERP vs. a best-of-breed Transportation Management System (TMS). Rather, it illustrates the compelling need to integrate TMS with an ERP and how the transportation management capabilities in your ERP fall short in providing the functionality needed to address the complex requirements in managing shipping, logistics and transportation.

Working together, an ERP-TMS combination can help form the best possible technology infrastructure to enable you to leverage data from both systems, gain greater visibility, and to ultimately drive better, faster decisions and keep up with the speed that modern commerce demands.

TRANSPORTATION CAPABILITIES: THE DIFFERENCE BETWEEN ERP AND TMS

It's clear that there is some confusion among buyers when it comes to selecting the technology to support their transportation management activities. The primary reason for this confusion is that ERP system vendors often tout ERP systems as "one-stop" shops offering a multitude of capabilities including TMS. While the promise of a do-it-all ERP may get the short-term attention of a company's finance department as an easy, low-cost alternative to a dedicated TMS, the realities of the overall cost, project length, lack of necessary functionality, and poor adoption by the supply chain department, make such a decision suboptimal.

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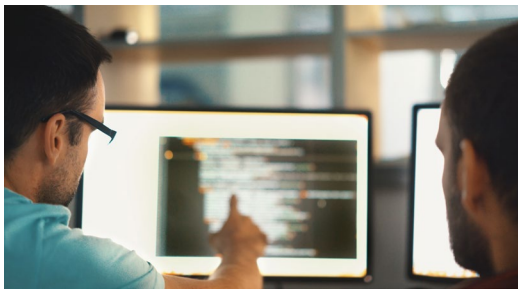
Mainstream ERP systems have noticeable and well-documented gaps in transportation management function, which is why they have traditionally failed to deliver the magnitude of value demonstrated with a dedicated TMS system.

A dedicated TMS helps in enhancing transportation efficiency, providing real-time dashboards, enabling better decision-making, and handling numerous tasks that cannot be addressed by ERP systems. A study by Ohio State University's Jim Hendrickson reported 86 percent of the respondents believe their ERP needs to be supplemented with other supply chain execution automation. In fact, the report mentions that an external TMS solution is most often cited as the system needed to augment the ERP software. Read more about that report on page 4 of this paper.



86 percent of businesses believe ERP needs to be supplemented with other supply chain automation.

There are four main reasons why integrating a stand-alone TMS with an ERP gets you the best of both worlds.

1. **Accelerate implementations and realize ROI faster**
2. **Provide visibility across the transportation value chain**
3. **Achieve unrealized value/savings/ROI**
4. **Deliver critical functionality**

Looking at these areas in detail we can understand the advantages of a stand-alone TMS vs. the embedded functionality in the ERP system.

1) ACCELERATE IMPLEMENTATIONS AND REALIZE ROI FASTER

Businesses often spend weeks, if not months, identifying the criteria for selecting the right ERP for their organizations. ERPs are transformational projects, and often cost hundreds of thousands, and sometimes, millions of dollars depending on the complexity and size of the business involved.

If you are selecting any new enterprise business system, two criteria to keep in mind are:

1. **Time to Implement –** Time until the system is operational and providing value to the business.
2. **Time to Break Even –** Time until the costs of the solution and implementation equal the business benefits.

According to a 2015 Panorama Consulting report, the average ERP implementation takes 14.3 months, and 75 percent of implementation projects exceed their initial timeline. By comparison, a TMS implementation typically takes weeks or sometimes a few months.

If you are looking to solve your transportation management issues, here are some reasons why ERPs alone might not help you:

- **ERPs are complex systems tailored to the needs of finance and accounting** departments who take ownership of the ERP system and its implementation and direction. Transportation functions and features in the context of an ERP are considered an after-thought.
- **ERP choice and direction is finance driven** which means transportation management will usually lag priority for integration, installation, and enhancement requests.
- **ERPs are notorious for taking years to implement.** Alternatively, implementation of dedicated TMSs integration are on average much shorter of duration.
- **Lines of business want to own and control the solution they use and not be dependent on IT to make desired changes.** SaaS-based TMSs offer enhancements and modifications through simple configuration changes that can be done within days as opposed to months or even longer, if changes are even possible.

NEW STUDY CONFIRMS THAT **ERPS ALONE AREN'T SUFFICIENT** FOR SUPPLY CHAIN MANAGEMENT

While forming the backbone of most modern businesses, ERPs lack key functionality with respect to supply chain management capabilities, including transportation management. In a recent Ohio State study, 86 percent of business respondents said that an ERP alone is not capable of managing the complexity of today's supply chain objectives. Among the systems that were identified as being critical to providing increased specialization, Transportation Management Systems was the clear first choice, with 92 percent of respondents indicating it to be critical or important.

The survey results are part of a larger study led by Jim Hendrickson, professor at The Ohio State University's Fisher School of Business. Hendrickson wanted to determine the value of SCE systems within the context of an ERP. They asked survey respondents to rate the value of each system based on business

According to a recent Ohio State study 89 percent of companies that implemented a TMS system were able to get to their breakeven point between months 6 and 18.

value and cost savings, with business value being defined as the direct value the system has in allowing the business to better manage the complexity of their supply chain. Cost savings was measured in terms of the reduction of cost for a function the system was intended to manage.

Hendrickson's study set out to understand how businesses define, evaluate and acquire Supply Chain Execution software. Within that framework, he wanted to understand the approaches that companies took to develop and justify technology buy decisions.

Hendrickson's team surveyed a cross-section of industries, including transportation, supply chain consulting, supply chain services, manufacturing and retail. Companies included in the survey had revenues that ranged from less than $100 million to more than **$1 billion**.

Key findings include:

- **The top 3 systems identified as critical/very important include:**
  - **ERP (92 percent)**
  - **WMS (72 percent)**
  - **TMS (67 percent)**
- **86 percent don't believe that ERP is enough to manage the modern complex supply chain.**
- **92 percent said that TMS was required to increase specialization of an ERP.**
- **81 percent identified TMS as the system that offers the most business value.**

Get the full report.

Dedicated TMSs focus specifically on transportation and connect the dots in one system allowing for views that are integral to a logistics function, providing a full 360-degree view of carrier performance.

2) PROVIDE VISIBILITY ACROSS THE TRANSPORTATION VALUE CHAIN

If you are looking to gain greater visibility into your transportation activity, an ERP is going to limit you to static information. With an ERP, you won't see the real-time data for freight movements that keep you a step ahead of potential issues. For example, the ERP won't get updates on the carrier's insurance information. That's where a connected TMS will benefit you.

Here are some additional reasons why ERP limits overall transportation visibility:

- **ERP struggles to produce complete transportation lifecycle visibility** as transportation activity is scattered across multiple ERP subsystems and/or maintained in spreadsheets.
- **ERPs don't offer a dynamic, 360-degree view of a carrier's performance.** Dedicated TMSs focus specifically on transportation and connect the dots in one system allowing for views that are integral to a logistics function, providing a full 360-degree view of carrier performance. These types of analytics can even become predictive functions that automatically adjust behavior to achieve desired outcomes.
- **ERPs currently don't support all modes of transport.** Using ERP for transportation management will mean severely limiting your options and cost savings because you fail to realize the value that multi-modes can drive across the enterprise. Modern stand-alone TMS solutions automatically optimize to the appropriate mode based on constraints of shipments and facilities.
- **ERPs are typically not accessible from outside the company's network**, which means internal users and carriers, brokers, and freight forwarders cannot interact together. Enterprise TMS solutions in the cloud provide a seamless communication tool where processes such as spot rating and procurement bidding occur in real-time with embedded communication tools.

The key to controlling your freight is having end-to-end visibility of every shipment at the most detailed level. With the right, dedicated TMS, you can get top-down visibility of loads and bottom-up visibility at the SKU level, going well beyond the capabilities of an ERP.

TMSs greatly facilitate high user adoption through an intuitive user interface that uses a vernacular easily understood by transportation experts.

ROCKFARM: MAKING THE MOST OF A UNIFIED ERP/TMS PLATFORM

Rockfarm Supply Chain Solutions' TMS is an integral part of the supply chain solutions that the 3PL offers to its own customers. Headquartered in Dubuque, Iowa, the worldwide supply chain management, technology, and consulting company takes a "control tower" approach to TMS by serving as the central provider of logistics services for its varied customer base.

When using its TMS as a pre-sales tool, for instance, the 3PL lays out the system's potential processes and workflows and then ties them into the specific customer's operational needs. During those presentations, Rockfarm president Brad Stewart says they shine a spotlight on the obvious transportation management functions provided by the TMS, as well as the many other functionalities that can be optimized and leveraged over time.

"We show them how all of the different pieces come together on a single, live platform that's built on continuous improvement," said Stewart.

Emphasis is also placed on MercuryGate's integration capabilities – yet another selling point that Rockfarm uses during the pre-sales process.

"We've yet to find an ERP that our TMS couldn't integrate with," said Stewart. "That's really important because we have information from our clients' ERPs and into our TMS – and vice versa."

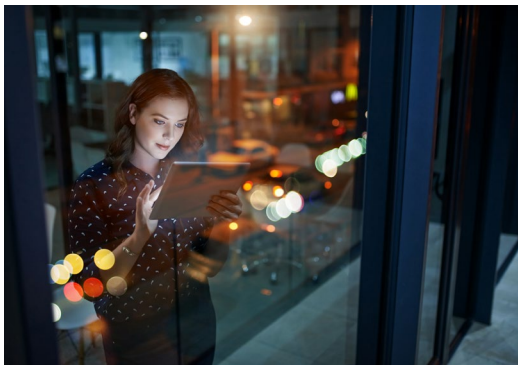
Using status qualifiers, Rockfarm's TMS identifies carrier routing pro numbers, pickup times, and other variables. Stewart says that Rockfarm wouldn't be where it is today had it not been for the MercuryGate TMS and the commitment to continually improving and optimizing the software. "We wouldn't be here without it."

3) ACHIEVE UNREALIZED VALUE/SAVINGS/ROI

Every successful business system implementation begins with a business case outlining the benefits of the system and a forecast of when the business will be able to show a return on its investment. Given that the average ERP implementation costs $4.5 million and takes 14.3 months to roll out, your ROI is likely years away. According to a recent Ohio State study 89 percent of companies that implemented a TMS system were able to get to their breakeven point between months 6 and 18.

TMSs are specifically designed to meet the unique needs and facilitate workflow around real-world logistics processes. As a result, TMSs greatly facilitate high user adoption through an intuitive user interface that uses a vernacular easily understood by transportation experts. In fact, the terminology in the TMS can often be configured to your business terms instead of the TMS's terms.

A TMS allows for a more nimble and adaptive logistics network—thereby making logistics personnel faster in reacting to changes.



Some other factors to consider when developing your business plan:

- **ERP user adoption of TMS functions is very low** due to non-friendly and overly complex processes which often are not compatible with actual operational processes. Internal adoption of the transportation management function is a non-starter to realize the savings and value proven possible with TMS capabilities. A stand-alone TMS provides configurable workflows that adapt to the operational challenges of moving freight in varied modes with specific requirements.
- **ERP system focus is mainly on the transactional** where TMSs focus on both transactional and strategic. For example, ERPs view the cost of transport very simply. But in logistics and transportation management, when it comes to costs, you must also include the "soft" costs and other non-cost variables. For example, a carrier may be a low-cost option, but if that carrier doesn't accept your loads with any regularity, low-cost is meaningless. Many assessorial charges are complex and treated manually in the ERP but those charges are automated in the stand-alone TMS.
- **Missing or manual functions out of the ERP's TMS also have impact to the ROI.** These are variables 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 can occur due to not using automation features that are available in a TMS; or even the time dealing with factors like freight and transportation accounting, including freight claims. While missing from the ERP's TMS these functions are inherent in the stand-alone TMS and are a natural process providing huge value.

4) DELIVER CRITICAL FUNCTIONALITY

An ERP and a TMS offer different and complementary benefits to the organization in terms of functionality. The ERP is aimed at the management of business information, including finance, procurement, and inventory. The TMS ties into your full transportation lifecycle, including information on carrier performance, rate bid optimization and freight pay. It also gives you the ability to do shipment planning in a more dynamic way.

Here are some advantages you will find when integrating your TMS and ERP:

- **SaaS-based TMS offers modifications through simple configuration**, and workflow changes that can be done very quickly. The system was built for logistics providers to rapidly extend and reuse processes already established in the TMS. ERPs offer limited logistics-centric workflow processes. Unlike the ERP TMS, the stand-alone TMS knows the required processes based on the freight moving and/or the mode selected. The user no longer needs to understand the complexity of the freight movement since the system guides them through the intricacy of the transportation process.
- **TMS solutions allow for management by exception.** From modeling potential disruptive events, to having alternate transportation plans ready, to making route/delivery adjustments on-the-fly, a TMS allows for a more nimble and adaptive logistics network—thereby making logistics personnel faster in reacting to changes.
- **Transportation optimization is complex programming.** The permutations become so exponentially complex so quickly that conventional programs used in ERP have difficulty considering them all. In addition to route planning, this category also includes carrier selection, multi-load planning, carrier selection, and driver planning. ERPs lack the functionality and execute optimizations as external analysis and not as embedded processes in the workflow.
- **MercuryGate's TMS allows access to a centralized network that includes tens of thousands of supply chain partners**, without the need to integrate with each provider individually. By having access to all their supply chain information in one centralized location, users can better manage their logistics spend, foster optimization, and improve supply chain productivity.
- **TMSs have flexible models that can be changed to adapt for new processes** and models. ERPs are known to have inflexible data models that were not designed around the needs of transportation management.

THE **BOTTOM LINE**

A TMS integrated with an ERP has the best of both options without their downsides. Even though reducing freight costs is a standard value proposition for TMS, there are many other forms of direct and indirect ROI that such solutions present, including higher customer satisfaction, improved supply chain visibility, and enhanced operational efficiencies. When you carefully consider all of the people involved in managing the daily workflow and how it will improve their effectiveness, the time and money spent on a robust transportation management platform will pay off on several fronts.

Business needs change and the rigid transportation processes in the ERP inhibit growth of the organization. On the other hand, the dynamic TMS solutions of today allow rapid change of the transportation model enabling the business to adapt and grow. A dedicated TMS stands as the only "one-stop" shop for real-time visibility of shipments across trading partners, and across the breadth of the supply chain, putting you in control of your business.

GIVE YOUR ERP A BOOST WITH MERCURYGATE TMS

The MercuryGate TMS is ready to integrate with any ERP you might have. We have experience integrating multiple systems and have a proven methodology for passing information from one system to another.

Every integration project starts with understanding the customer's unique workflow and full system architecture. We spend time understanding the full data landscape. With that knowledge, we can plug in TMS to pull and push data from the correct systems. Taking the time upfront to understand the data flow creates greater efficiencies once the connections are in place.

"I'm often asked if we can integrate with this system, and the truth is we can integrate with any system you have in place. It's just a matter of understanding what the data needs and how the data needs to be passed," said Kevin LoGuidice.

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The open architecture of the MercuryGate TMS makes it simple to integrate transportation planning, execution and settlement with any external system, including ERPs. Integrating with ERPs is often required to provide the company with an efficient means for sharing data and for providing a clear and reliable view of the entire fulfillment process. MercuryGate has interfaced its TMS to common commercially available ERP systems, including:

- Microsoft Dynamics ERP
- SAP
- Oracle
- JD Edwards
- NetSuite
- Infor
- Epicor

"The more information you can exchange, and the more systems you can put together, the more visibility you have in your workflow," said LoGuidice. "It's more true today than ever that nothing happens without information, and the more data you are exchanging the better."

Sources:

http://go.panorama-consulting.com/rs/panoramaconsulting/images/2015%20ERP%20Report.pdf

Hendrickson, Jim. Evaluating the Business Case and Approval Process for Supply Chain Execution Systems Acquisition. Fisher College of Business, The Ohio State University, 2016.

ABOUT **MERCURYGATE**

MercuryGate provides powerful transportation management solutions proven to be a competitive advantage for today's most successful shippers, 3PLs, freight forwarders, brokers, and carriers. MercuryGate's solutions are unique in their native support of all modes of transportation on a single platform including Parcel, LTL, Truckload, Air, Ocean, Rail and Intermodal. Through the continued release of innovative, results-driven technology and a commitment to making customers successful, MercuryGate delivers exceptional value for TMS users through improved productivity and operational efficiency. MercuryGate offers business intelligence to improve transportation processes, increase customer satisfaction, and reduce costs.

Find out why MercuryGate has set the industry standard for the most adaptable, comprehensive transportation solutions suite in the industry at www.mercurygate.com.

To learn more, email sales@mercurygate.com

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