More than 500 logistics and supply chain managers reveal the status of their current supply chain software and their future technology goals.
Introduction

Tasked with making the movement of freight between trade partners easier, cheaper, and more efficient, Transportation Management Systems (TMS) have been playing a role in the smooth running of the supply chain since the 1980s. 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.

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”).

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.”

By the Numbers

As TMS has matured, these systems have been called upon to help companies control and manage ever-higher freight costs; integrate with other supply chain technologies (like Warehouse Management Systems and Global Trade Management Systems); and handle electronic communications with customers, trade partners, and carriers. As their breadth of offerings has expanded to incorporate these and other capabilities, TMS has become a popular choice for firms of all sizes and across all industries.

In a recent study sponsored by Oracle and conducted by Peerless Research Group (PRG) on behalf of Supply Chain Management Review and Logistics Management magazines, shippers gave their input on their current supply chain technology infrastructures, addressed how they tackle the transportation component, and revealed the gaps that still need to be filled in order to attain end-to-end visibility of a streamlined supply chain.

For this survey, we interviewed 511 managers of supply chains, logistics and distribution operations across varied industries to learn the role that technology is playing in those operations—and, which solutions the participants would like to integrate into their high-tech portfolios.
Improving Efficiencies, Stoking Innovation

According to survey respondents, the most effective long-term logistics strategies rely heavily on innovation, and focus on lowering costs, maintaining high levels of customer service, and attaining the ability to target logistics initiatives that drive business growth. Also important to producing the best possible results are improving efficiencies and productivity in logistics operations, promoting sustainability initiatives, supporting global trade requirements, and improving asset utilization.

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).
Investing, Managing and Analyzing Transportation and Logistics Costs

Just this past year, these companies spent, on average, slightly under $25 million on transportation and logistics. One-fourth (24 percent) spent less than $500,000, while 38 percent spent between $1 million and $20 million, 14 percent between $20 and $99.9 million, and 13 percent invested over $100 million in these areas.

To better manage and/or contain transportation and logistics costs, companies were making efforts to negotiate better rates, consolidate shipments, identify the most efficient shipping routes, work with fewer partners such as carriers and forwarders, keep closer tabs on billings, and adopt key performance indicators (KPIs) and performance metrics.

"We're looking to integrate predictive analytics into our operations. This will prevent failures and shift a focus to enabling what if simulations to help preempt market level impacts as well as optimize total supply chain capacity, and not just transportation."

—Corporate Management; Consumer Products; $2.5B+

“We are seeking more opportunities to direct ship from factories to franchisees.”

—Logistics Manager; Retail; $2.5B+

“We have an SaaS-based TMS application. It’s a quick access routing guide as well as rate shopping tool. The reporting tool gives us the ability to manage freight payments and contract management.”

—Vice President; Consumer Products; $2.5B+
Transportation Management Systems

As asked to pinpoint a single improvement that could be made in the area of controlling transportation and logistics costs, supply chain managers offered a wide array of answers. Initiatives to improve their TMS solution, better management of global shipping lanes, improved reporting from their 3PLs, greater insights into long-term costs, and enhanced collaboration among supply chain partners and carriers were all keys to achieving transportation and logistics cost management success.

According to our survey, two out of three (68 percent) shippers are currently using metrics to identify and analyze transportation and logistics costs. The highest percentages of companies are measuring costs by routes/lanes, on-time performance for various shipping routes/lanes, and spend by carrier and volume.

Many of those we surveyed (80 percent) rate their organizations’ sharing and information exchange capabilities as being excellent, very good or good. Yet, one out of five is less confident in their company’s ability to communicate effectively with their partners.

“TMS allows us to look at and better determine order size and to consolidate and change dates. We could communicate any changes back to customers. We need to be efficient and still satisfy customers’ on time needs.”
—Transportation Manager; Food and Beverage; $50M-$100M

“We obtain clear and precise cost projections using the previous year shipments as a model.”
—Vice President; Computer Manufacturing; $100M-$250M

“We look at activity based costing right down to the specific route on customer delivery route planning instead of a 7 level zip.”
—Corporate Management; Retail; $2.5B+

“Not all of our suppliers and partners are on the same systems. As a result, data doesn’t flow freely.”
—Logistics Manager; Automotive Equipment and Parts; $100M-$250M

“A consequence of not sharing information results in higher shipping costs, a lack of transit visibility, and a failure to meet on time delivery schedules.”
—Director of Supply Chain & Logistics; Computer Manufacturing; $250M-$500M

### Aspects of transportation and logistics operations being analyzed

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<th>Aspect</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>On time performance for various shipping routes/lanes</td>
<td>65%</td>
</tr>
<tr>
<td>Spend by carrier and volume</td>
<td>63%</td>
</tr>
<tr>
<td>Costs by routes/lanes</td>
<td>61%</td>
</tr>
<tr>
<td>Cost per mile</td>
<td>52%</td>
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<tr>
<td>Cost per hundredweight</td>
<td>42%</td>
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<tr>
<td>Cycle time</td>
<td>35%</td>
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<tr>
<td>Consolidation and pooling</td>
<td>34%</td>
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<tr>
<td>Carrier capacity</td>
<td>33%</td>
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<tr>
<td>Carrying costs</td>
<td>32%</td>
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<tr>
<td>Fulfillment by supplier</td>
<td>27%</td>
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<tr>
<td>Sourcing options</td>
<td>26%</td>
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### Organizations’ ability to share and exchange information with partners

- Excellent: 9%
- Very good: 31%
- Good: 40%
- Fair: 18%
- Poor: 2%

Many of those we surveyed (80 percent) rate their organizations’ sharing and information exchange capabilities as being excellent, very good or good. Yet, one out of five is less confident in their company’s ability to communicate effectively with their partners.
Adoption of Transportation Management Systems

The market for transportation management systems (TMS) continues to develop. In describing their organizations’ usage and adoption of TMS, one out of three are currently running such systems, while another 13 percent plan to put money into a TMS upgrade during the coming year. However, nearly one-half have yet to implement a TMS. While one out of ten do claim they are presently evaluating TMS solutions and plan an implementation within 12 months, just over one-third (37 percent) assert they have no plans for a TMS at the present time.

Of those running a TMS application, reviews are mixed on the system they employ. While almost one-half are highly satisfied with their TMS, 40 percent are just somewhat satisfied. Fourteen percent are unhappy with their current platform.

Looking at the more significant benefits or advantages achieved from their TMS application, supply chain and logistics managers say they’re experiencing better cost control, improved ship times, better efficiencies, and enhanced functionality and visibility. Without a TMS in place, shippers say their firm would suffer from bad spend decisions, higher cost structures, and decreased customer satisfaction and shipping efficiency.

“Our TMS implementation has increased our overall transportation knowledge and efficiencies.”
—Logistics Manager; Aerospace; $2.5B+

“We are very satisfied with our TMS. Our efficiencies have improved and we’re operationally on time, on budget; we’ve dramatically reduced head count. Our implementation is SaaS- based so it’s low footprint.”
—Traffic Manager; Food and Beverage; $2.5B+

“Our TMS application is just OK. Our tool does not have a KPI dashboard, and I am not happy with its reporting capabilities. This is critical to us.”
—Corporate Manager; Industrial Manufacturing; $1B-$2.5B

“This helps us have a sufficient number of trucks available for fluctuating shipping plans. Today I don’t need trucks but in two days maybe I will!”
—Logistics Manager; Primary Metals; $500M-$1B

“Without our TMS we’d have more manual processes that would be inefficient. We wouldn’t optimize carrier and lane selection thus resulting in a loss of cost savings/avoidance.”
—Traffic Manager, Automotive Parts; $50M-$100M
In and Out of the Warehouse’s Four Walls

Within the four walls of the warehouse, almost one-half (45 percent) of companies we studied are currently using WMS while eleven percent plan upgrades to their current application. In addition, 7 percent are currently evaluating WMS for adoption within the next 12 months but 32 percent have no plans to use such systems.

In general, almost one-half (46 percent) of shippers are highly satisfied with their WMS solution while another 44 percent claim to be “somewhat satisfied.”

Organizations’ status regarding the usage and adoption of a WMS

- Currently running 45%
- Presently evaluating for adoption within the next 12 months 7%
- Planning to invest/upgrade our current application sometime during the next 12 months 11%
- Other 5%
- No plans to run/evaluate at present time 32%

Key benefits and advantages operations gain from WMS implementations include the ability to better manage inbound and outbound inventory levels, improved cycle-counting capabilities, greater control and visibility, and higher supply chain process efficiency.

Lacking a WMS, companies say they would be plagued by production and service bottlenecks, directed warehouse workflow and inventory tracking challenges, and an inability to manage changing customer demands, to name just a few of the obstacles cited.

“A WMS is essential to running our outward-facing sustainment supply chains. On occasion, we use our WMS but in other times we use our warehouse provider’s WMS. Cost to the program determines the best way.”
—Supply Chain Manager; Aerospace; $2.5B+

“We gain better space planning and a reduction in errors which is otherwise magnified in international shipping.”
—Logistics Manager; Retail; $2.5B+

“We have greater inventory control resulting in fewer expedites. This helps in lowering our costs.”
—Purchasing Manager; Automotive Equipment; $500M-$1B

“Errors are more prone without a WMS. There would be a greater loss of products without a WMS.”
—Logistics Manager; Plastics; $250M-$500M
At present, just 10 percent of those surveyed have a global trade management (GTM) system in place with another one in ten currently evaluating such systems. The majority, 72 percent have no plans to run or evaluate a GTM at this time.

Of those shippers that are using GTM, most are happy with their current solution. Almost one-half are either extremely (9 percent) or very satisfied (34 percent) with their GTM while an additional 46 percent say they are somewhat satisfied.

Key benefits gained from GTM applications include four-way matching capability, automated import/export procedures, lower costs, and better planning with sister companies who are located overseas.

“Without a GTM we have an absence of transportation records and a lack of end-to-end visibility.”
—Materials Coordinator; Chemicals; $500M-$1B

“Our GTM facilitates, optimizes and streamlines our ‘anywhere-to-anywhere’ business model.”
—Logistics Manager; Aerospace; $2.5B+
Summary

Operations fully recognize the need to gain a firmer grasp on shipment costs and planning.

Over the next 12-18 months, roughly half (49 percent) of survey respondents say they’ll be doing more to understand and control costs as well as focused on securing better rates, routes, modes, load consolidation, etc. (47 percent). Roughly four out of ten of these logistics managers will set their sights on improving carrier and partner collaboration (41 percent), in-transit visibility (38 percent), and overall supply chain processes for both inbound and outbound shipments (37 percent). Other key initiatives include the integration of transportation applications with other systems, establishing or upgrading electronic communications with customers and carriers, and enhancing supply chain flexibility.

Based on survey findings, it’s clear that logistics and supply chain managers have their plates full in 2014. While some clearly have their technology infrastructures in place and are operating at optimal levels, a much higher percentage of companies have long wish lists and tall orders to fulfill as they strive for end-to-end supply chain visibility and control.

With technology advancing at the speed of light—and with supply chain software vendors consistently upgrading and enhancing their core offerings—companies using TMS, GTM and WMS solutions are well positioned to leverage these applications in the most efficient manner possible. Using innovative delivery methods like cloud-based computing, for example, the smallest of firms can quickly get up and running with a fully-functional TMS without having to blow an entire year’s IT budget in the process. At the same time, licensed TMS, WMS, and GTM are becoming even more economical and easy to install, implement, and integrate with existing systems.

Whether 2014 is the year that a higher number of global firms implement and/or upgrade their transportation systems remains to be seen, but one thing is for certain: to operate a world-class manufacturing, distribution, or retail facility in today’s competitive business environment requires robust, state-of-the-art technology systems that are designed for success and ready to serve.

Methodology

This research was conducted by Peerless Research Group (PRG) on behalf of Supply Chain Management Review and Logistics Management magazines for Oracle. This study was executed in December 2013 and January 2014, and was administered over the Internet among subscribers to Supply Chain Management Review and Logistics Management. All respondents were pre-qualified for being involved in the management of their organization’s supply chain fulfillment operations.

Respondents are predominantly top corporate executives, directors of supply chain operations, and top logistics and DC managers. Respondents are employed in manufacturing (59 percent), wholesale or retail trade (19 percent), or work for a 3PL (11 percent). Companies of all business sizes are represented with 42 percent employed with smaller companies (under $100M in annual revenues); 31 percent from mid-sized firms ($100M-$999.9M); and 26 percent working for larger corporations ($1B or more).

About Oracle OTM

Oracle Corporation develops, manufactures, markets, hosts, and supports database and middleware software, applications software, and hardware systems.

Oracle Transportation Management (OTM) is a family of applications that support the needs of shippers and Logistics Service Providers (LSPs). They enable all shipping related functions including planning and execution for inbound and outbound shipments, freight payment, and fleet management. They include a wide range of analytics to provide visibility and decision support.

Contact Information

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