

Magic Quadrant for Transportation Management Systems

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Reducing freight costs continues to be the prime motivation for investing in a transportation management system. However, securing capacity and improving overall freight efficiency are becoming equally strong motivations.

Market Definition/Description

Multimodal transportation management systems (TMSs) generically refer to the category of software that deals with the planning and execution of the physical movement of goods across the supply chain (see "Gartner's Model for Holistic Multimodal Transportation Management Suites"). The Magic Quadrant for Transportation Management Systems focuses on multimodal, shipper-/non-asset-based, third-party logistics (3PL)-focused transportation management, where users support a variety of shipping modes, including over-the-road for-hire, private/dedicated fleet, small package, rail, intermodal, air and ocean. At a minimum, shipper companies use TMSs to manage freight sourcing, planning, execution and settlement. Multiple subcomponents make up a comprehensive TMS across planning (for example, load consolidation, routing, mode selection and carrier selection) and execution (for example, tendering loads to carriers, shipment track and trace, and freight audit and payment).

TMS suites have been extended to include all transportation management functions across multiple modes — from strategic planning and strategic freight sourcing and freight procurement, through visibility and performance management, to freight payment and audit capabilities. With the expansion of global supply chains, TMSs also embrace global logistics functions and features. This research covers multiple TMS delivery and implementation approaches, including on-premises, hosted, on-demand cloud/SaaS and TMS-managed services, which are all subject to the Inclusion Criteria outlined later in this research.

This research focuses on non-asset-based shipping enterprises, but does include shippers that support for-hire and fleet. It does not focus on specialized solutions targeted only at private fleets or stand-alone parcel shipping. Enterprises that are focused exclusively on asset-based transportation capabilities, such as owned fleets, require additional functionality (for example, capacity planning and yield management), which is not the focus of this research. However, fleet is considered under the TMS vendor's ability to support multiple modes, which include fleet and others. Additionally, although parcel labeling and manifesting solutions can be included in a multimodal TMS, stand-alone parcel manifesting solutions are not included in this research.

Multiple subcomponents make up comprehensive multimodal TMS solutions. In this Magic Quadrant, we will evaluate the following product capabilities:

- Strategic network design and planning
- Freight sourcing and bid optimization
- Tactical planning
- Operational transportation planning and optimization
- Transportation execution and carrier communication/collaboration
- Trading partner (carrier, supplier and customer) network/community management
- 3D load design/building
- Freight rating and contract management
- Multicarrier parcel shipping
- Rail and intermodal shipment planning and execution
- Multileg/multimodal international planning and execution
- Asset- or fleet-based routing, scheduling, and dispatching
- Freight audit, payment and settlement
- Carrier appointment management/dock scheduling
- Visibility and event management
- Analytics, performance management, scorecards and management dashboards
- Globalization for international deployment (language, currency, local rules and geographic data)
- Technology architecture, adaptability, flexibility, usability and deployment options

Gartner's Viewpoint of the TMS Market Has Changed in the Past Year

One of the important trends in logistics management is a concept that Gartner calls supply chain execution (SCE) convergence, which refers to the need for supply chain organizations to better orchestrate and synchronize processes across functional domains (see "Supply Chain Execution Convergence: Delivering on the End-to-End Process Promise"). More precisely, leading supply chain organizations want to orchestrate end-to-end processes, such as order to cash, that span traditional functional boundaries, including warehousing, transportation, manufacturing or global trade management. In Gartner's 2013 SCM User Wants and Needs survey, we found that more than 40% of respondents said that the inability to orchestrate and synchronize end-to-end business processes was one of the top three barriers to meeting their supply chain management (SCM) goals and objectives.

Warehousing and transportation are notable points of convergence, but they're not the only ones. SCE convergence or logistics as a platform, where multiple SCE functions are built on a common technical architecture that shares a UI, data model and business logic, is obtainable from a small number of TMS vendors today. This select list of TMS vendors has strong application platforms, some existing converged capabilities and broad visions for SCE convergence. They enable the assembly of end-to-end processes by connecting processes and services that span a variety of previously independent functional areas.

Because logistics as a platform is so fundamental to further enhancing the performance of logistics management, we have made it a central role in this year's TMS market evaluation. Given this change and the effect it is having on the SCE application landscape, we have made it a very important component within the Completeness of Vision dimension of this Magic Quadrant, which has impacted the positioning of some TMS vendors. To be a Leader or a Visionary, a vendor must have more than a passing SCE convergence vision and strategy. While this impacts vendor's position in this Magic Quadrant, it does not affect the validity of particular TMS solutions for companies that are narrowly focusing on transportation.

Key Criteria for 2014 Magic Quadrant for Transport Management Systems

All solutions in the TMS Magic Quadrant handle basic Level 3 transportation operations (see "Apply an Architectural Framework to Stratify Holistic Multimodal Transportation Suites") for over-the-road TMS. Distinguishing characteristics will be:

- Breadth of the TMS (not just planning, execution and settlement), but also system-of-innovation capabilities like tactical planning, fleet management, multicarrier parcel management, 3D load design and SCE convergence
- Depth of the TMS as demonstrated by live references in Level 4 and above transportation environments, holistically using the breadth of the vendor's TMS application
- Global go-to-market strategy and offering
- Vision, thought leadership, road map and track record beyond basic over-the-road multimodal TMS
- A compelling SCE convergence strategy — that is, the breadth of TMS plus the SCE platform

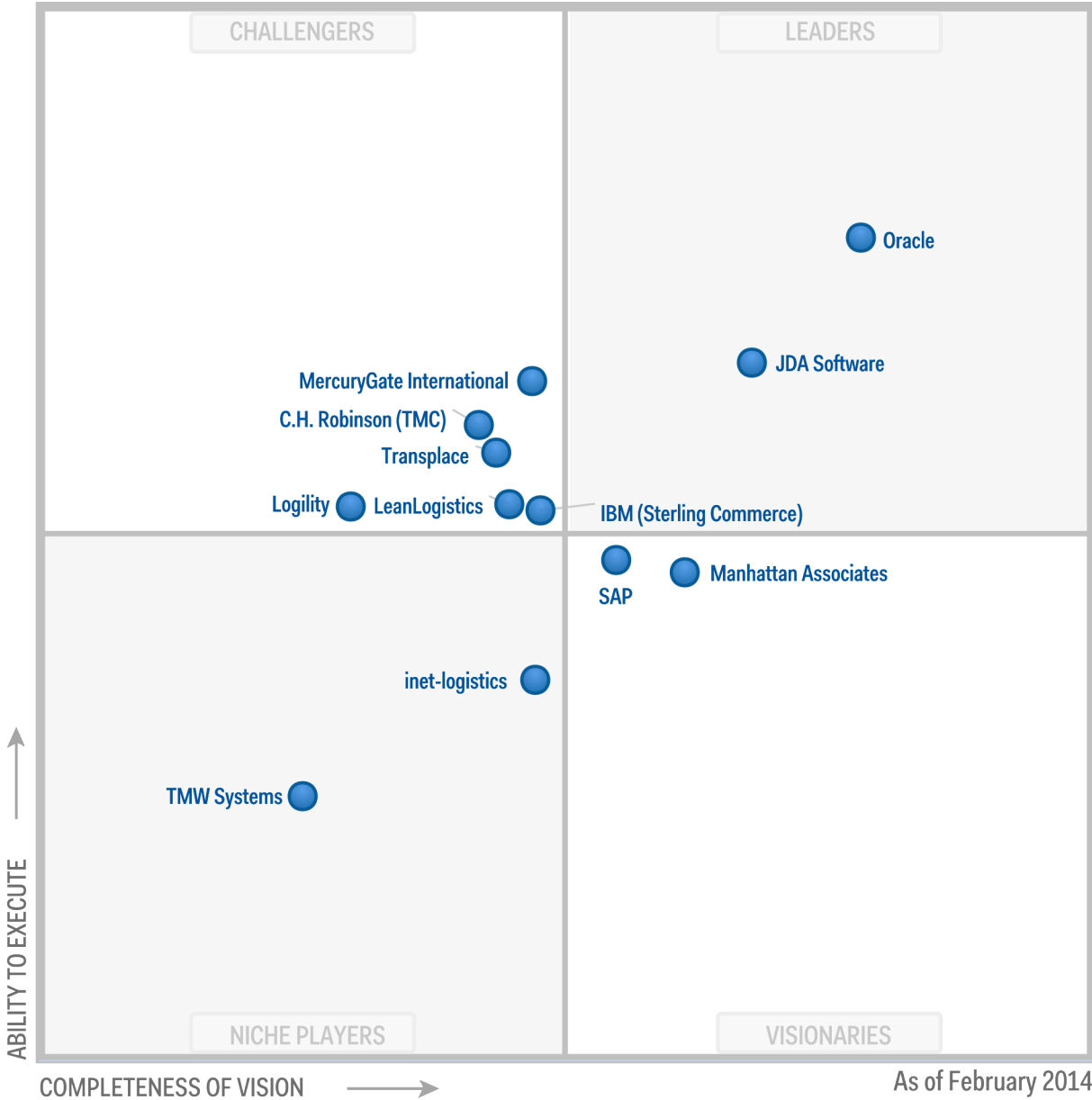
TMS solutions break down into categories:

- Traditional, primarily on-premises applications with the potential for cloud hosting — JDA Software, Logility, Manhattan Associates, Oracle SAP and TMW Systems.
- SaaS-only TMS — inet-logistics, LeanLogistics and IBM (Sterling Commerce).
- Managed service providers such as C.H. Robinson, Transplace and LeanLogistics — which offer operational services beyond just the software. However, they must on occasion offer the TMS as a stand-alone. Pure managed service providers, while having strong TMS offerings, are not considered Leaders because they are not pure-play technology providers, nor do they have broad SCE convergence strategies.

Key issues distinguishing vendors on the right side of the Magic Quadrant from those on the left side are the vendor's strategy and its ability to support SCE convergence. Currently, SAP, Manhattan Associates, Oracle and JDA have the most compelling visions and capabilities beyond core TMS.

Magic Quadrant

Figure 1. Magic Quadrant for Transportation Management Systems



Source: Gartner (February 2014)

Vendor Strengths and Cautions

C.H. Robinson (TMC)

C.H. Robinson, based in Eden Prairie, Minnesota, is one of the largest global 3PL companies, and best known for its freight brokerage services. It has expanded its offerings to include TMS as a managed service, leveraging the technology it uses for its own operations. TMC, a division of C.H. Robinson (CHR), is a separate business that deploys Managed TMS and benefits from the vendor's deep transportation domain expertise and applied transportation management technologies, as well as the ability to plug into its very large carrier network. CHR continues to invest in Managed TMS by offering added functionality and making notable improvements in user interface and ease of use. It has also been testing emerging capabilities like mobility.

Strengths

- CHR offers TMS as a managed service that supplements cloud TMS technology with operational services geared toward the needs of a specific client.
- Managed TMS benefits from the size, global reach, and breadth and depth of expertise of the overall CHR organization.
- CHR uses the same TMS internally, which is functionally broad and deep.
- Managed TMS is staffed and operated on behalf of clients that need additional domain expertise and transportation skills.
- CHR has a very large carrier network, with 25,000 carriers on the network for Managed TMS, but it can access its brokerage network of 53,000 when needed.
- CHR has strong expertise and TMS capabilities to support complex global freight operations.
- The vendor has the expertise and tools to accelerate implementation of inbound programs.

Cautions

- The number of Managed TMS customers is modest (approximately 80).
- This is not a pure-play technology investment, but primarily a managed service.
- Managed TMS uses multiple third-party optimization engines within proprietary planning tools.
- Transaction-based pricing can have higher long-term total cost of ownership (TCO) compared with software-only solutions, but this is not an apples-to-apples comparison, given the additional services included with Managed TMS.
- Pricing is typically variable based on a fee per executed shipment billed monthly so costs can vary from month to month. However, it can offer a flat fee structure for clients that prefer this method.

- TMC is a small business within C.H. Robinson. Although TMS technology is core to CHR's primary business, selling TMS technology is not the parent's primary focus.

IBM (Sterling Commerce)

IBM's Sterling Transportation Management System (Sterling TMS) is a SaaS-based multimodal TMS that covers the core transportation capabilities of planning, execution, freight audit and payment, carrier collaboration, collaborative inbound freight management, and analytics. Sterling TMS's main differentiation has been — and continues to be — its North American carrier network, but functionality remains undifferentiated and incomplete for the most complex users. Armonk, New York-based IBM is changing its North American centricity, but it lacks a comparable international carrier network today. IBM continues to invest and make progress toward a globalized offering despite few customers outside North America.

Strengths

- IBM offers one of the largest North American over-the-road carrier communities (estimated to have approximately 15,000 carriers in its North American network) on a SaaS TMS.
- The Sterling TMS offering is best-suited for midsize shippers (less than \$100 million in annual freight spending), though it does have some larger clients.
- Although TMS is a small part of its business, IBM is a large global enterprise, so company viability is strong.
- IBM supports clients with modest planning complexity or sophistication that require electronic interaction with a large number of carriers, especially if the user regularly needs to supplement normal tendering with broadcast tendering beyond its preferred carrier list.
- Ease of use for shippers and their trading partners, and short implementation and time to value, are often cited by references as IBM's key strengths.
- IBM has a modest ecosystem of sales and implementation partners.

Cautions

- Although competitive in the TMS areas it covers, IBM does not offer as broad or deep a solution as the TMS Leaders do, and the solution is missing key functional pieces, such as fleet management, tactical planning and multicarrier parcel management.
- Its carrier network, which is noted above as one of its strengths, remains predominantly North American-centric.
- While well-suited to midsize shippers (less than \$100 million in annual freight spending), aside from a few 3PL resellers, IBM is not focusing its sales on the midsize shipper segment of the TMS market. Instead, its focus is on larger shippers, where its offering is not differentiated.
- Sterling TMS is primarily a North American-centric TMS, given the strength of its North American carrier network. Although it is growing its global deployment capabilities (now in 30

countries), it has yet to replicate an international carrier network comparable to what it has in North America.

- IBM has not articulated an SCE convergence vision or strategy, even though it possesses certain additional SCE components.

inet-logistics

Headquartered in Dornbirn, Austria, inet-logistics is an emerging European-based and focused TMS provider. The vendor has been in business for several years, but is only recently becoming better known in the TMS market. It offers the only pure SaaS TMS that is currently well-positioned in the European marketplace. It offers a broad portfolio of transportation capabilities, with a strong focus on international multimodal logistics, in addition to strong competency in the intricacies of international logistics.

Strengths

- The vendor has a strong offering and domain expertise in European transportation management, which has unique differences from North America.
- Inet-logistics built the appropriate architecture to support complex inbound and outbound multimodal international shipping, with strong references in the automotive and industrial sectors for complex inbound planning and execution. Inet-logistics offers the only pure SaaS TMS based in Europe that is designed to address the specific needs of European transportation. The company has one of the largest European-based TMS customer bases, but the solution is not limited to Europe and has been growing in the Asia/Pacific region.
- The vendor offers very broad TMS functionality across planning, execution, control and performance management, with a core strength in multimodal, multileg for-hire transportation capabilities across over-the-road, intermodal, ocean and parcel, with strong support for international shipping requirements.
- The vendor offers a network of more than 3,000 pre-onboarded carriers, is directly integrated for rail and also has preintegrated its solution with key freight networks, such as Intra and GT Nexus for ocean, and Champ Cargosystems for air freight.
- The vendor has demonstrated an ability to handle complex inbound freight scenarios, such as in automotive and related industries.

Cautions

- Inet-logistics is a small, growing vendor with a small number of employees. Because continued growth could stress its limited resources, it is looking to supplement its services capabilities with partners.
- The vendor partners with 4flow for transportation planning and optimization. 4flow is also headquartered in Europe, with offices in China and the U.S., and, while it offers a powerful

optimization engine, 4flow is also a small vendor, a fact that should be addressed in agreements.

- Customer references continue to cite resource constraints, such as consulting resources, because of inet-logistics' size and growth. Prospective users should focus on resource planning as part of the evaluation.
- Although the breadth of its application and the number of partnerships inet-logistics has are impressive, these could stress a vendor of its size.
- While it has no current presence in North America, it is expanding sales, support and consulting internationally. It established a presence in Asia three years ago and plans to continue to expand to other geographies in the coming years.

JDA Software

Although Scottsdale, Arizona-based JDA Software, through its numerous acquisitions, has multiple TMS solutions in its portfolio, it has chosen to use the former i2 Technologies' TMS as its go-forward TMS platform. It intends to selectively move some functionality from the previous TMSs onto this platform, which it refers to as a converged solution. Although JDA intends to continue to support its various TMSs for some time to come, it will no longer sell the Manugistics or RedPrairie TMSs to new clients, and over time, existing clients will be encouraged to move to the new platform.

Strengths

- The JDA TMS is a differentiated TMS, with the breadth, depth and adaptability demanded by complex and sophisticated TMS users. Some of the largest and most complex TMS operations use its TMS.
- Planning and optimization are its core competencies, and the TMS continues to have one of the most sophisticated planning engines.
- It supports dynamic, optimized multileg routing versus the more typical, itinerary-based approaches of many other TMSs.
- JDA is a TMS innovator, enhancing its offering with features such as network design, 3D load design, and tactical and strategic transportation planning. It continues to add notable functionality, such as optimized appointment scheduling.
- The TMS solution is architecturally well-suited to shippers or 3PL companies that want to manage transportation as a global shared service in which freight is managed simultaneously across multiple business units and geographic locations.
- JDA offers compelling SCE convergence vision with nascent execution, such as its work on optimized appointment scheduling, but additional linkages are forthcoming.

Cautions

- JDA focuses on, and is best-suited to and most successful with, large, complex shippers and non-asset-based logistics service providers (LSPs) with more than \$100 million in annual freight spending. The vendor's TMS remains complex, mainly because of the sophistication of the planning engine and its complex UI, which make its TMS best-suited for sophisticated and complex shippers and LSPs.
- Community management (that is, carrier onboarding) remains primarily a customer-project-driven activity. Its packaged carrier and trading partner network is not as comprehensive as some SaaS-only TMSs.
- Total cost of ownership (TCO) remains high compared with many other offerings, although JDA's TMS is competitive at the high end of the market.
- JDA lacks a large ecosystem of system integration and consulting partners focused on TMS, but it does have a few strong partners.
- Manugistics and RedPrairie TMS users should plan on a platform change within the next five years, so users should start developing migration strategies.
- The vendor is aggressively pushing cloud as a deployment option, but this is primarily akin to a business process outsourcing/hosting approach and not pure multitenant SaaS TMS, so it might not be appropriate for all users.

LeanLogistics

LeanLogistics, based in Holland, Michigan, is a provider of multitenant SaaS TMS solutions and managed TMS services. It is owned by Brambles, a large, financially strong, Australia-headquartered organization with global operations. LeanLogistics is best positioned to exploit TMS growth in the small or midsize business (SMB) market, but it is not limited to this market segment. As an example of its competency in the SMB area, the vendor has developed a formal partnership with, and a predefined integration layer for, NetSuite, a leading provider of SaaS ERP targeting the SMB market.

Strengths

- LeanLogistics offers a robust and stable SaaS TMS that addresses core multimodal TMS requirements (planning, execution, visibility and freight audit/payment).
- Some of the main benefits of the vendor's SaaS TMS are its network centrality (8,000 North American carriers), frequent upgrade cycles and built-in electronic data interchange (EDI) carrier connectivity.
- LeanLogistics has introduced a group of self-service capabilities, including freight sourcing, called LeanSource, which is a Web application that enables shippers to manage the entire RFP process over the Internet to solicit and develop contracts for carrier rates and capacity by lane.

- The vendor was one of the first to exploit the data it captures through managing a SaaS TMS. It offers benchmarking data, called LeanDex, to shippers and carriers that want to compare their lane-by-lane activities against a normalized index of data across the network.
- Customer satisfaction is strong, and customer references cite the vendor's transportation domain expertise as well as its TMS as key reasons for choosing LeanLogistics.
- The vendor can offer both SaaS TMS and transportation-managed services.

Cautions

- LeanLogistics' TMS lacks the overall breadth (parcel execution/manifesting, 3D load design and railcar management), depth and geographical scope of the leading TMS solutions.
- Annualized TMS customer growth met the vendor's expectations, but it trails the Magic Quadrant Leaders in this area.
- The vendor's TMS is best-suited for midsize shippers from a breadth and depth perspective, but the company is intent on moving upmarket, where it is less differentiated from TMS Leaders.
- Lean Logistics has been predominantly a North American TMS provider, but it is expanding internationally and has some customers in multiple regions (North America, Australia/New Zealand, South Africa and Europe).
- The vendor, while growing its international trading partner network, has not yet duplicated the size of the pre-onboarded, multitenant carrier network it has in North America in other parts of the world.
- The vendor lacks an SCE convergence vision and strategy.

Logility

Logility, which is headquartered in Atlanta, offers a broad portfolio of SCM applications, including TMS and supply chain planning (SCP). Although its TMS is mature and proven, it represents a small percentage of the vendor's total revenue, which is concentrated in SCP. Logility has a more than 30-year tenure in transportation, with solid domain expertise and a solid product, but it lacks the broad vision, global TMS presence and investments to move into the Leaders quadrant.

Strengths

- Logility offers a mature, proven and competitive North American-centric TMS solution that supports end-to-end processes, including load consolidation, mode/carrier selection, load tendering, tracking, and freight audit and payment.
- Customer intimacy is cited by references, along with customer support and domain expertise, as key strengths of the vendor. It has maintained a seasoned and knowledgeable team that has consistently been working on its TMS for decades.

- One of the vendor's functional strengths is its multimodal rating engine, which supports less than truckload (LTL), truckload, rail, intermodal, parcel, air and ocean shipping. This is coupled with its offering of industry databases covering LTL tariffs, transit times, service guides, rail routes, and parcel and air freight rates. The vendor also offers some unique tools and capabilities to help simplify rate maintenance.
- Logility's optimization engine, which employs a simultaneous solve process, is more sophisticated than that of many other TMSs.
- The vendor's TMS is proficient in the freight accounting process, and can handle freight accrual and freight allocation to line item, order and shipment via various methods.
- The vendor is unique in choosing to not embed any third-party software products inside its TMS solution, which makes it a clean, truly single-vendor solution.

Cautions

- Logility's TMS is targeted mainly at North American-based shippers, and the vendor has not demonstrated definitive strategies to expand sales and deployments internationally, although it continues to add international logistics capabilities.
- Logility does not offer a multitenant SaaS TMS with a pre-onboarded trading partner network. However, it can deliver its TMS in the cloud as a dedicated hosted single-tenant deployment model.
- The vendor does not offer full support for asset- or fleet-based planning and execution, or for complete multicarrier parcel manifesting, although it does support some ability to leverage its strong rating engine to support planning and execution capabilities, and consider fleet costs or parcel carrier rates during mode and carrier selection.
- Logility has not articulated a strategy for addressing SCE convergence or process consolidation between its TMS and other vendors' warehouse management system (WMS) and ERP solutions, but it does provide visibility and performance management across the Logility Voyager Solutions suite.

Manhattan Associates

Manhattan Associates, with headquarters in Atlanta, has deep roots in logistics that go back more than 20 years. During that time, the company has added many new capabilities to its portfolio, such as transportation management, distributed order management and SCP. Several years ago, it took what at the time seemed a significant risk by building a common business process platform, called Manhattan SCOPE (Supply Chain Optimization, Planning Through Execution), in which it converged all its solutions onto a common technical platform. The vendor offers TMS capabilities for both shippers and carriers. The vendor's TMS has historical roots in planning and optimization for truckload and LTL carriers with more than 100 carrier TMS clients.

Strengths

- Manhattan's TMS is approaching market-leading functional breadth and depth for North American operational planning; execution; settlement, freight sourcing, procurement and bid optimization; and fleet management — with multimodal planning and execution support across for-hire, fleet and parcel on a common platform.
- The vendor has integrated for-hire and fleet planning and execution, including deep last-mile routing and scheduling that it refers to as high-density routing.
- Manhattan's TMS is well-suited to the needs of retail, particularly grocery and related retail, where the goal is to integrate inbound and outbound movements, simultaneously optimizing both for-hire and private fleet transportation.
- The vendor provides a rich SCE convergence vision and current capabilities, built on a unique and differentiated common SCE/logistics platform that includes WMS, TMS, distributed order management, SCP and more. The vendor currently has demonstrable uses cases of SCE convergence between WMS, yard management and TMS.
- The release of its next-generation user interface improves navigation and usability.
- The vendor has a strong math and science team that has done some interesting work on tactical planning scenarios that exploit simulation combined with optimization.

Cautions

- Today, Manhattan's TMS is sold primarily in North America, and it has elected to selectively extend its TMS to the international market.
- Until recently, the vendor's TMS was not garnering the sales focus it deserved. The vendor selectively competes in stand-alone, TMS initiatives outside its customer base and core markets, so new customer sales and the number of live and referenceable customer implementations remain below those of the leading TMS vendors.
- While not exclusively a retail solution, the majority of its shipper customers are in these industries.
- The vendor's TMS is primarily focused on large shippers (with \$100 million or more in annual freight spend).
- List pricing can be higher than many other TMSs.
- Manhattan trails its competitors in cloud and carrier onboarding strategies and capabilities.

MercuryGate International

Cary, North Carolina-based MercuryGate International is a small and focused — but rapidly growing — TMS vendor. The founders have deep roots in logistics and transportation, and used their experience with modern Internet-based development platforms to rapidly bring to market a more-than-competitive TMS offering. The vendor has been growing its customer base at more than

double the industry average, and continues to operate profitably. The vendor is a financially sound and conservative company, generating new customers and profit percentages above industry averages.

Strengths

- MercuryGate's sole focus is on TMS. It has a credible TMS offering, with a rapidly growing number of shippers, 3PL companies, brokers and freight-forwarding customers.
- TCO and time to value are two of the vendor's notable strengths, with a starting price point that is well below TMS market averages.
- Its comprehensive multimodal TMS covers operational planning, execution and settlement (audit and payment), with a native, parcel-manifesting system that is integrated with multimodal TMS.
- The vendor has the ability to rapidly bring new functionality to market every eight weeks.
- There is solid support for the needs of 3PL companies and freight brokers, with most of its customers in this market, but the number of customers in the shipper space is growing rapidly.
- The TMS is primarily deployed as a multitenant SaaS with an application architecture that allows configuration and customization in the cloud; however, it can also offer on-premises implementation.

Cautions

- References cite resource issues and constraints due to MercuryGate's size and rapid growth. The vendor is looking to address this by adding internal consulting resources and building a partner network, but these constraints remain and customers should seek staffing assurances in agreements.
- MercuryGate lacks the breadth and depth of leading TMSs.
- Customer references say that the vendor's rapid development methodology and frequent updates stress the customer's ability to keep up-to-date with changes.
- The vendor is best suited for midsize shippers and 3PL companies, though it does have some larger, more sophisticated users.
- MercuryGate remains one of the smallest vendors in the TMS Magic Quadrant in terms of revenue and the number of employees. However, it is growing, is profitable, has no debt and has cash reserves, so long-term viability is a minimal concern for potential customers.
- Historically, the vendor's sales have primarily focused on North America, but it is expanding its logistics capabilities and sales reach internationally.
- The vendor's sole focus on transportation limits its ability to pursue SCE convergence, unless it was to partner with other ERP or WMS vendors that lack credible TMSs.

Oracle

Oracle, which is based in Redwood Shores, California, continues to enhance Oracle Transportation Management (OTM) by adding significant new functionality, expanding global capabilities and developing several strategic alliances. Oracle continues to maintain market momentum, growing its OTM customer base globally, expanding its marketing and sales presence, and growing its consulting capacity with internal and partner resources. Oracle has more new TMS customers than most of its competition. Gartner estimates that at least half, if not more, of OTM sales are outside Oracle's installed base and that one-third or more of its customers are international.

Strengths

- OTM is a functionally broad, deep and robust TMS that can scale to support the complex transportation requirements of sophisticated organizations.
- OTM has one of the most mature development teams, with R&D leadership and some team members working together for more than 20 years.
- OTM provides extensive rail capabilities, such as Rule 11, bulk commodity units of measure, order splitting, and intermodal and multicarrier routing and billing.
- OTM is well-suited to shippers or 3PL companies that want to manage transportation as a global shared service, in which freight is managed simultaneously across multiple business units and geographic locations.
- OTM provides differentiated in-line analytics. OTM has a strong, broad and mature ecosystem of third-party service providers.
- Oracle has taken a notable step beyond much of its competition with its next-generation user interface.

Cautions

- Given OTM's broad and deep functionality and high degree of flexibility, OTM is best-suited for sophisticated shippers and 3PL companies.
- Oracle's list price can be disproportionately high for large shippers; however, Gartner finds that market and list prices are not synonymous, so customers should work with Oracle on pricing.
- Oracle's partnership with E2open helps address community management, but the current trading partner community is small, but growing, so most customers still need to address some trading partner connectivity issues during implementation.
- There are several areas, such as multicarrier parcel manifesting (Kewill), and carrier community management (E2open), where buyers might elect to license solutions separately from partners, in addition to licensing OTM. However, users are not forced by Oracle to use these solutions, and users can build or use alternative solutions.
- The majority of OTM implementations are on-premises deployments, although Oracle and its partners can offer on-demand options for OTM.

- Oracle's recently added in-memory tactical planning solution, Oracle In-Memory Logistics Command Center, operates on Oracle Engineered Systems, so users should recognize that they may need to invest in additional infrastructure.

SAP

SAP Transportation Management (SAP TM) has been a work in progress for many years as SAP continues to build on its previous experience in transportation as part of its ERP and logistics execution system (LES) offerings, as well as its initial transportation planning application Transportation Planning/Vehicle Schedule (TP/VS). TM was built as a stand-alone product that exploits NetWeaver development tools and is seamlessly interfaced with SAP's ERP and related SCM offerings. While product maturity and the number of live customers continue to lag TMS leaders, SAP continues to invest in TM to serve its shipper and LSP clients. This research was based on SAP TM 8.0 and 9.0. While TM 9.1, which includes new capabilities such as for sourcing and rail planning and execution, was released during the latter stages of creating this research, at this time it is in ramp-up. Thus, it was not considered in this evaluation.

Strengths

- SAP can rely on the size of its ERP installed base of large, sophisticated manufacturing and distribution enterprises; its global presence and coverage for global sales and support; and its financial viability.
- Global TMS capabilities, particularly the execution side of multileg international shipments, are differentiated.
- SAP has a robust ability to deploy its TMS internationally. It is able to sell and implement SAP TM in areas where most TMS vendors lack capabilities, such as Latin America, the Middle East, Africa and the Asia/Pacific region.
- TM was built exploiting NetWeaver development tools such as the rule engine, which provides unique and powerful capabilities to adapt the TMS application.
- SAP TM was designed to support all modes (ocean, air, land and rail) for both shippers and LSPs. TM also includes capabilities specific to the planning and execution needs of freight forwarder operations.
- SAP's SCE convergence vision is extensive and noteworthy.

Cautions

- SAP has a modest number of live customers holistically and extensively using TM, and several customer references stated they have long rollout schedules.
- SAP sells its TMS almost exclusively to SAP ERP users, and it remains best-suited for customers committed to SAP ERP.

- SAP TM's capabilities lag those of leading TMS vendors in this Magic Quadrant in terms of breadth, depth and product maturity; however, it continues to invest in filling functional gaps.
- Customer references have indicated that implementation time and costs can be higher than those of alternative offerings. However, it now offers rapid deployment solutions to help address this problem when it comes to basic needs.
- SAP TM is a more complex product than many of its TMS competitors because TMS functionality can reside in multiple places — that is, in TM, ERP and stand-alone applications, such as railcar management and partner solutions. This was not a design flaw but an intentional strategy to protect the investments of ERP users.
- SAP has no multitenant SaaS TMS strategy, and its trading partner (carrier) connectivity strategy is nascent and unclear.
- SAP is building a noteworthy ecosystem of TM partners, but given the number of live customers, these partners should be appropriately vetted for TM experience and expertise.

TMW Systems

TMW Systems, with headquarters in Mayfield Heights, Ohio, is the leading supplier of solutions specifically targeting the carrier, broker, private fleet and asset-based 3PL companies, and transportation service sectors. TMW offers an extensive portfolio of solutions, from enterprise trucking software to planning and optimization and fleet maintenance management. TMW has more than 2,300 customers across its various product lines, with its strength and the majority of its customers primarily asset-based transportation and brokerage operations. Its shipper-centric multimodal capabilities are nascent, and it is building on its legacy products and customers to enter this market.

Strengths

- TMW has asset-based transportation operations (such as carriers, 3PL companies, brokers and private fleet operations) that also require for-hire, multimodal TMS.
- The vendor's broad portfolio of transportation solutions can support the carrier 3PL and brokerage order-to-cash process, as well as routing and scheduling.
- Its optimization and planning engine supports asset and for-hire carriers encompassing final-mile delivery.
- TMW has the largest carrier-centric customer base of any TMS.
- The vendor has a large number of existing customers using its asset-based solutions that might want a reasonable, but not differentiated, for-hire solution.

Cautions

- Its multimodal, non-asset-based TMS is not the vendor's focus, and the offering is nascent, is unproven and has a very small number of customers.

- TMW's product catalog has grown largely through acquisition, and it has a large fragmented portfolio of solutions across multiple technology platforms and architectures.
- The vendor's focus is North America.
- Its current emphasis is on over-the-road transportation and not on other modes, such as air, parcel and ocean.
- TMW's implementation capacity for multimodal is limited, given the recent unveiling of its product.

Transplace

Transplace, headquartered in Dallas, views itself as a 3PL provider, while Gartner considers it a transportation management service provider, with a strong internally developed TMS supplemented by value-added services (operations-centric human capital). Transplace will allow customers to only subscribe to its TMS, and a moderate (but growing) number of customers are doing so. Transplace's position in relation to its managed service competitors is influenced primarily by its strategic decision to focus exclusively on the North American transportation market.

Strengths

- Transplace offers TMS as a managed service supplementing cloud TMS technology, with operational services geared toward the needs of individual clients.
- Transplace offers a North American-centric SaaS multimodal TMS that spans the core TMS functionality of planning, execution and settlement, with strong analytics and performance management.
- Transplace exploits the experience and expertise of its people, and it has well-defined processes and methodologies that extend beyond just application implementation.
- The vendor offers low total cost of ownership (TCO) for its technology-only offering.
- The vendor provides customer intimacy, expertise, strong process methodologies and an array of supporting services.
- Transplace offers enhanced support for bulk commodity transportation management (notably, chemicals and associated products) through its acquisition of SCO Logistics.
- The vendor shows growth and competency in covering transportation requirements for Mexico (TMS/technology-only and/or 3PL/managed services).
- Transplace provides thought leadership and live examples of applied/operational collaborative logistics.

Cautions

- Transplace has a modest, but increasing, number of holistic TMS-only clients; however, it has increased its focus on competing in TMS-software-only deals.
- Its product focus is primarily on over-the-road transportation, rather than other modes such as rail (boxcar), ocean or air.
- Transplace's TMS supports only North American (U.S., Canada and Mexico) transportation requirements; however, it partners with other vendors for international shipping. The vendor's TMS is sufficient for complex and sophisticated over-the-road users, but it has not differentiated itself from the TMS Leaders, particularly in global logistics.
- Transplace is a service provider first and a technology provider second.
- It will likely continue to partner to fill gaps in its nondomestic offerings versus building or acquiring add-on components to support international transportation management requirements.

Vendors Added and Dropped

We review and adjust our inclusion criteria for Magic Quadrants and MarketScopes as markets change. As a result of these adjustments, the mix of vendors in any Magic Quadrant or MarketScope may change over time. A vendor's appearance in a Magic Quadrant or MarketScope one year and not the next does not necessarily indicate that we have changed our opinion of that vendor. It may be a reflection of a change in the market and, therefore, changed evaluation criteria, or of a change of focus by that vendor.

Added

None

Dropped

RedPrairie was dropped due to its merger with JDA Software and JDA's strategy to support a single go-forward TMS.

Notable Mentions

Some vendors with emerging or reasonably capable, but less proven or incomplete holistic multimodal TMSs did not qualify for this Magic Quadrant. However, this does not mean that these solutions might not be viable alternatives for some customers. To ensure that this research is consumable and understandable to our clients, we limit participation in this Magic Quadrant to vendors that demonstrate current strength in the market in several dimensions, including market momentum, geographical coverage, live customer references, and multimodal TMS product breadth and depth.

There are several reasons why a vendor might not have qualified. As stated in the qualification criteria outlined later in this report, a vendor might not have the proven product breadth and depth, sales momentum, growth in revenue, or international coverage specific to multimodal TMS necessary to qualify for this research. While this might affect viability, this reason alone should not prohibit users from considering these vendors if, for example, they fit a given user's requirements. Furthermore, for some potential customers, one of these vendors may have strengths that make it more appealing than other vendors in the Magic Quadrant— regardless of the characteristics that might have excluded it from this research:

- **ProcessWeaver:** Headquartered in Santa Clara, California, ProcessWeaver originally specialized in providing multicarrier compliance global shipping software, or what Gartner refers to as multicarrier parcel management. Over time, ProcessWeaver has expanded the footprint of its transportation offering to now include some multimodal TMS capabilities. Its strategy is to continue to move more into the multimodal TMS space, and it is enhancing its offerings to do so. For example, Gartner spoke to some vendor references that are doing some interesting work on inbound transportation management.
- **Kewill:** Chelmsford, Massachusetts-based Kewill, a Francisco Partners portfolio company, is a long-tenured vendor in various aspects of transportation and logistics management. The vendor's legacy was built as one of the premier providers of multicarrier parcel manifesting solutions, but it has expanded its solution portfolio, both organically and through acquisitions. Kewill's strengths continue to be in parcel management and freight forwarding solutions, but it has introduced a new platform offering called Kewill Move that looks to better position it into the broader multimodal TMS arena.

Inclusion and Exclusion Criteria

To be included in the Magic Quadrant for TMSs, a vendor must offer:

- **A TMS Offering:** This must be a credible, *holistic multimodal TMS* product with live customers, and the vendor must have a vision for shipper, non-asset-based 3PL- focused *multimodal transportation*. The TMS *must include* at least sourcing, multimodal planning/optimization, execution/tendering, audit/payment, visibility and performance management. We will evaluate vendor support for the following shipping modes — over-the-road, ocean, air, rail, intermodal, small package, and private and dedicated fleet, as long as these are part of a multimodal suite. We will not consider stand-alone solutions in these areas.
- **TMS Market Presence:**
 - TMS software is sold and used independently of other services offered by the vendor.
 - The vendor's previous fiscal year multimodal TMS license revenue (only license/ subscription and services associated with packaged TMS implementations) should be at least \$20 million, or at least \$10 million per year in hosted/SaaS TMS subscription revenue, with combined TMS license and services revenue greater than \$30 million, or subscription and services revenue greater than \$15 million for the previous fiscal year.

- **Current and Active TMS Customers:**
 - The vendor must have 20 live multimodal TMS customer references independently and holistically using the TMS solution being evaluated.
 - The vendor must have gained at least 10 new multimodal TMS customers in the previous 12 months.
 - The vendor must have implemented at least 10 new customers on this TMS version in the previous 12 months.
- **Global Presence:** The vendor must have TMS customer references in at least two of the following geographic regions: North America, Latin America, Western Europe, Eastern Europe, the Middle East and Africa, Asia/Pacific, and Japan.
- **Cross-Industry Presence:** The vendor has new and existing TMS customers in at least three industries (such as consumer goods and retail, wholesale distribution, high tech, oil and gas, aerospace and defense, automotive, chemicals, life sciences/medical devices, healthcare, and industrial products).

We do not include stand-alone fleet-based routing and scheduling solutions, multicarrier parcel manifesting, global logistics or global visibility solutions, freight forwarding, or carrier-centric TMS.

Evaluation Criteria

Ability to Execute

- **Product or Service:** TMS vendors' product breadth, depth and technology are highly rated components of their Ability to Execute, because the requirements for the most complex and sophisticated users in this market are so functionally intensive. We rate the vendors against their support of multiple subcomponents that make up a comprehensive TMS solution across planning/optimization, execution, track and trace/visibility, and performance management. Users with complex requirements and sophisticated operations focus intensely on the product, and will typically want solutions in or near the upper quadrants. Less sophisticated or less complex users might require less functional robustness (see "Consider 10 Critical Issues When Evaluating Transportation Management Systems" and "Apply an Architectural Framework to Stratify Holistic Multimodal Transportation Suites"), and could be satisfied with a wide variety of solutions.
- **Overall Viability:** Vendor and product viability and risk remain important criteria. Although viability is important, it should not overshadow product fit, vendor expertise, TCO, and service and support. Several of the vendors are small. Although there are some viability concerns, all other factors being equal, viability alone should not preclude users from considering these vendors.
- **Sales Execution/Pricing:** Sales execution and pricing were not significant differentiators in the TMS market until recently. As smaller shippers have entered the TMS market, affordability has become more important. Although functionality remains important, these organizations typically

demand less robust TMS capabilities, making price a more important evaluation criterion. Furthermore, because this is a global evaluation, the ability of a vendor to support global sales and go-to-market channels is becoming increasingly important. We consider vendor capabilities for supporting multinationals choosing global solutions or customers buying in select geographies.

- **Marketing Responsiveness/Record:** The TMS market continues to evolve rapidly, and TMS solutions must keep pace to remain relevant, which makes market responsiveness and track record very important. We assess the historical and current performance of vendors to add to and enhance their TMS solutions to keep up with the changing wants and needs of TMS users.
- **Marketing Execution:** Marketing execution, although important to market visibility, is not an important element of the overall evaluation process.
- **Customer Experience:** A TMS vendor's ability to use and exploit functionality to drive business value and provide a good customer experience is a critical element of a provider's Ability to Execute. We consider a vendor's track record with complex and sophisticated customers, client satisfaction with products and services, and how much TMS experience a vendor has. Although client satisfaction is always important, we also consider the nature of the relationship that vendors establish with clients, and whether these are tactical or strategic. The size and the growth of a vendor's client bases are also very important because it demonstrates the vendor's ability to identify and satisfy the needs of customers.
- **Operations:** Operational competence is a very important criterion, and it considers a vendor's ability to meet its goals, obligations and commitments on an ongoing basis. There are marked differences in capabilities across vendors, as confirmed by customer references. Vendor support, maintenance, business and technical consulting, and field operations are important parts of the TMS selection process. Factors include the quality of the organizational structure, as well as skills, experience, programs, systems and other vehicles that enable an organization to operate effectively and efficiently on an ongoing basis. As projects become more complex, a vendor's ability not only to sell and implement a solution but also to help customers fully exploit their TMS investments is critical to long-term success. Finally, a vendor's management structure, experience, skill and expertise play a significant role in a vendor's ability to harmonize its vision, strategy, tactics and actions.

Table 1. Ability to Execute Evaluation Criteria

Criteria	Weight
Product or Service	High
Overall Viability	Medium
Sales Execution/Pricing	Medium
Market Responsiveness/Record	High
Marketing Execution	Low
Customer Experience	High
Operations	High

Source: Gartner (February 2014)

Completeness of Vision

- **Market Understanding:** A demonstrated knowledge, proficiency and differentiated vision of the current and future transportation marketplace are critical considerations. Market understanding assesses the TMS vendor's ability to understand TMS buyers' wants and needs, and to translate them into products and services. Vendors that show the highest degree of vision listen to, anticipate and understand buyers' wants and needs, and can augment them with their own TMS visions. Vendors that simply respond to current market requirements without anticipating future requirements will likely be unsuccessful over the long term:
 - While having a focus on TMS vision is notable, a vendor's vision for broader SCE convergence is critical to moving to the right side of the Magic Quadrant, and this differentiates offerings. Because SCE convergence is an emerging best practice, we also consider vendor strategies to support this concept beyond basic data or transaction integration.
 - Since all qualifying solutions in this Magic Quadrant for TMS handle basic multimodal TMS planning execution and settlement, a distinguishing characteristic of vendors on the right side of the Magic Quadrant will be the breadth of the TMS and current and planned support for TMSs regarding innovation capabilities like tactical planning, sourcing/freight bid management, fleet routing and dispatch, multicarrier parcel management, 3D load design, SCE convergence, and mobility.
 - Vendors' domain expertise, technology vision and vision for the TMS of the future rank highly. We consider vendors' knowledge and vision for traditional shippers, LSPs, and domestic and international logistics. We also consider a vendor's vision for transportation process innovation, not simply process execution, which means demonstrating a

compelling vision for how transportation trends will influence transportation needs of the future.

- **Marketing Strategy and Sales Strategy:** Until recently, marketing strategy and sales strategy have had minimal impact on the TMS market. Today, although important, marketing strategy is not differentiated across vendors. Sales strategy is also minimally differentiated, although Gartner believes this will likely be critical for exploiting future growth in the SMB market, where channel strategies become more important.
- **Offering (Product) Strategy:** Offering (product) strategy is critical, and it refers to a TMS provider's approach to product development and delivery that emphasizes differentiation, functionality, technology, methodology and feature set as they map to current and future TMS requirements and technology evolutions. In addition, we consider a vendor's SCE convergence strategies for supporting end-to-end processes that span functional areas, such as order management, warehouse management, trade compliance, and manufacturing or hazardous materials safety. The vendor's understanding of these market changes, and its product strategies for successfully navigating these changes, significantly influence a vendor's Completeness of Vision.
- **Business Model and Vertical/Industry Strategy:** Vendors' business models (that is, the soundness and logic of providers' underlying business propositions) and vertical/industry strategies are important but not critical. However, this is changing and will become more important in the future. Most notably, a vendor's vision for global expansion and how it will address the nuances of key verticals will increasingly differentiate offerings in certain markets.
- **Innovation:** Innovation is a critical differentiator, and it is important for vendors to demonstrate the ability to support innovation by staying close to the most creative solutions or complicated problems in the market to drive pioneering functionality. Leaders and Visionaries will be the vendors on the forefront of change, while the majority of vendors will lag in adoption, often for years.
- **Geographic Strategy:** Geographic strategy looks at technology providers' strategies for directing resources, skills and offerings to meet the specific needs of global logistics in terms of a multigeography TMS (including multilanguage, multicurrency and geocoding), as well as complex, multileg international movements. This criterion also assesses vendors' abilities to support global transportation requirements beyond core TMS functionality, such as capabilities or partnerships to address trade compliance and trade document management.

Table 2. Completeness of Vision Evaluation Criteria

Evaluation Criteria	Weighting
Market Understanding	High
Marketing Strategy	Low
Sales Strategy	Medium
Offering (Product) Strategy	High
Business Model	Medium
Vertical/Industry Strategy	Medium
Innovation	High
Geographic Strategy	High

Source: Gartner (February 2014)

Quadrant Descriptions

Leaders

Leaders have a compelling vision and a reliable Ability to Execute. Leaders in the TMS market have broad, deep and formidable functionality that addresses a broad range of user requirements. These vendors have proven products and track records of customer success, and have demonstrated momentum in growing their market presence. Leading vendors support sophisticated and complex transportation strategies for large customers with substantial freight spending, as well as their ability to deploy their TMSs in smaller shippers. They also meet the needs of users throughout the transportation process, with offerings from tactical planning and procurement through to freight payment and audit functionality. Leaders also offer adaptable technical architectures that allow for rapid innovation, which is needed to stay ahead of market demands. Furthermore, Leaders must have an SCE convergence strategy, as well as real examples of converged processes supported by their offering.

Leaders are innovators with compelling strategies for addressing the ongoing market changes related to the emergence of new technologies; expanded model support, including the integration of dedicated and private fleet planning and execution; and support for global transportation operations. Leaders are extending the reach of TMS beyond traditional shippers to include LSPs and other styles of transportation, such as bulk commodities. They are also adding functionality to address the unique needs of emerging markets. They're out in front of the evolution of transportation management as an enterprise shared service. Leaders are also furthest ahead in supporting the transportation needs of multiple geographies, and adding capabilities to support the complex needs of multileg global logistics and transportation. Leaders listen to their customers but,

just as importantly, their customers look to them for thought leadership, and they establish symbiotic relationships.

Challengers

Challengers offer reliable TMS solutions and have a historically reputable presence supporting complex transportation requirements. However, Challengers trail Leaders in certain aspects of TMS, such as technology, functional breadth and support for business requirements of the most advanced TMS users. Moreover, Challengers lag in offering a captivating vision for the TMS of the future. Of particular note, Challengers might have very capable stand-alone TMSs; however, they lack an SCE convergence vision or strategy and due to the compelling strategic importance of this concept, they lack the characteristics to be a Leader. Challengers may have reasonable TMS functional breadth or depth, but may lack functionality in innovative areas, such as strategic or tactical planning, multileg international movements, TMS/WMS convergence, or dedicated/private fleet integration. Challengers are often followers that introduce emerging capabilities only after these capabilities have been established in the market by more-innovative vendors. In addition, Challengers lack a realistic vision or support for SCE convergence.

Visionaries

Visionaries have a compelling vision for achieving a differentiated position in the TMS market, possess an SCE convergence vision and capabilities, and are innovating beyond basic TMS capabilities. However, they lack certain characteristics in their Ability to Execute. Visionaries might have compelling product strategies, but they lack the market momentum, have too few live customers, have functional gaps in their TMSs or lack the market presence to move higher in their Ability to Execute.

Niche Players

All TMS solutions in this Magic Quadrant support core TMS capabilities of planning, execution and settlement across multiple for-hire modes of transportation (see "Gartner's Model for Holistic Multimodal Transportation Management Suites"), including vendors in the Niche Players quadrant. Niche Players are often functionally satisfactory for some users, such as asset-based carriers, non-North American shippers, smaller shippers, or companies with moderate transportation complexity or sophistication. Niche Players could well be the best choice for these types of users. However, these solutions lack the full depth, breadth or robustness of functionality demanded by the most complex and sophisticated TMS users, might have limited global presence, lack a persuasive vision for next-generation TMSs, or do not realistically support SCE convergence. These vendors might also lack the experience, number of clients, customer references or business viability of the leading vendors in the market. Yet, Niche Players are often viable or preferable for many TMS buyers.

Context

Gartner tracks multiple software application types that support the various needs of transportation operations, such as multimodal TMS, stand-alone fleet routing and scheduling (R&S), stand-alone parcel management, international logistics platforms, and carrier-centric TMS (see "Hype Cycle for Supply Chain Execution, 2013" and "Supply Chain Management Market and Vendor Guide, 2012"). This research focuses specifically on holistic multimodal TMS, where a company routinely uses multiple modes of shipping, such as full truckload (FTL), less than truckload (LTL), intermodal, rail, air, ocean, small package, and private or dedicated fleets. Historically, TMS emphasis has been on over-the-road modes (FTL and LTL; see "Gartner's Model for Holistic Multimodal Transportation Management Suites"), but now a wide variety of shippers routinely use multiple shipping modes. All the TMS applications covered in this research do an acceptable job of planning and executing over-the-road moves; however, market and transportation economic and business conditions are driving companies to use more modes, which places more importance on a TMS's ability to handle more than just over the road.

Gartner finds continued expansion in the sophistication, functional breadth and depth, and geographical scope of the TMS market. However, as shipper requirements grow, notable differences remain across TMSs in their ability to address the most complex requirements, the ability to deploy outside North America, and TMS native support for modes other than over the road. Furthermore, the challenges that user organizations have faced in orchestrating end-to-end processes have increased the importance of SCE convergence and the ability of logistics applications to integrate and work together across functional domains.

During 2013, the TMS market was again led by Oracle (with its OTM offering) and JDA Software, both of which continue to support some of the most complex TMS users, have broad and deep TMSs, and have compelling visions for next-generation TMSs. Oracle continues to generate strong sales growth globally. It also continues to expand the depth and breadth of its application footprint. Moreover, Gartner finds Oracle a finalist in a high percentage of complex TMS deals. For JDA, although new customer growth remains modest compared to some other TMSs, it is now routinely showing up in large complex deals, and it is in a persuasive position with its Tier 1 TMS cloud offering.

Several vendors continue to close the gap in terms of core over-the-road transportation functionality, and are gaining some traction in the TMS market, but none of these have differentiated themselves enough to move into a leadership position.

The gaps in core North American TMS planning, execution and settlement functionalities have narrowed across many vendors, but several continue to distinguish themselves with a more compelling TMS vision regarding functionality, technology and globalization. Multiple vendors are positioned as Challengers, Visionaries or Niche Players. For some customers, depending on the scope of their needs, these vendors could be suitable alternatives that are comparable to or more favorable than this year's Leaders.

Most current TMS vendors fail to exhibit consistent strategies or traction for the SMB segment, despite growing buyer demand. Additionally, only a select few vendors have demonstrable support for SCE convergence. LSPs and global shared services have become a strong market for TMSs, but

again only a few vendors have the multitenant architecture needed to effectively support this market.

Because of increased demand from TMS buyers, global capabilities are of growing importance and remain a key set of criteria in this year's TMS Magic Quadrant. Most vendors have strong North American-centric TMS products, but haven't yet added sufficient global capabilities (for example, multiple languages, currencies, geographic data or rules) or depth of functionality for complex, multileg and multimodal international logistics, nor have they shown a consistent ability to sell to and support global customers.

Support for global functionality distinguishes C.H. Robinson, inet-logistics, JDA Software, Oracle, MercuryGate International and SAP in this year's Magic Quadrant. However, so far, only Oracle, C.H. Robinson and SAP have broad global sales and support capabilities, while most vendors have limited TMS global sales and support reach. Some vendors, notably TMW Systems and Logility, remain focused only on the North American TMS market. Inet-logistics is unique in having built its TMS franchise first in Europe, and now it has expanded this to Asia, but has deferred moving sales into North America.

Gartner continues to see a change in demand for TMSs delivered in the cloud, with user attitudes shifting from cloud as an option to cloud as a preference. While in previous years, SaaS TMSs were limited to a select few TMS providers, most TMS providers now have some form of cloud deployment option, from private cloud/hosted to full multitenant SaaS. Although SaaS TMS demand is largely due to the lower upfront investment, we find growing recognition of the importance of prebuilt carrier networks inherent in multitenant SaaS TMSs. While SaaS-prevailing TMS vendors (for example, IBM, LeanLogistics and MercuryGate) continue to perform well in North America, these offerings are just now becoming viable for limited international deployments, and lack the overall functional breadth and depth of TMS leaders, and their carrier networks are largely North American-only. However, newer SaaS or managed service TMS providers, such as inet-logistics and C.H. Robinson, have emerged from the international logistics arena and bring unique domain expertise to SaaS TMS. Furthermore, some traditionally on-premises application vendors, such as JDA, Manhattan Associates and Oracle, offer cloud versions of their TMS applications; however, they have yet to gain market traction in cloud, mostly because of vendor sales and go-to-market strategies — not technical issues. Accordingly, a network-centric (SaaS) TMS offering has yet to gain the market traction or breadth of offering needed to become a market leader.

Gartner finds growing TMS interest from SMB shippers (those with less than \$50 million in annual freight spending), but the TCO, breadth, depth and flexibility of top-tier TMSs are beyond the scope or budgets of many SMB shippers. We believe that an SMB TMS market segment will emerge, where ease of use, simplicity, time to value and low cost of ownership are more important application characteristics. No SMB TMS leader has yet emerged, but some vendors, such as MercuryGate and LeanLogistics, have shown success in this space, and offer some interesting SMB characteristics and strategies.

Market Overview

TMS vendors continue to invest in expanding the breadth and depth of their TMS suites. During the past several years, vendors have expanded their TMS portfolios to the point where buyers focused on North American over-the-road transportation can source most of their needs from a single TMS vendor. At a minimum, all vendors in this Magic Quadrant support basic North American over-the-road planning, execution, track and trace, and settlement, and offer some multimodal capabilities. However, there are notable differences in the breadth and depth of various TMS offerings. Some vendors have expanded their product footprints to support other transportation functions, such as network design and optimization, freight procurement, load design, asset-based/fleet-based R&S, appointment scheduling, multileg/multimodal international shipping, intermodal and rail, multicarrier parcel management, and performance management. Additionally, a few have expanded the scope of their TMSs to support global deployments and international logistics. Depending on the wants and needs of individual enterprises, many TMSs are offered in a variety of deployment models (including traditional on-premises, SaaS and managed service).

The evolutionary expansion of the depth and breadth of TMS offerings improves the value proposition for TMSs. Enhancements in freight procurement, audit and payment and support for more modes of transportation (for example, intermodal, parcel, rail, air and private/dedicated fleets); visibility/event management (track and trace); and performance management have added to the value of TMSs beyond the traditional boundaries of better load planning and electronic freight tendering. During the past several years, Gartner has seen notable investments in areas such as the integration of asset-based and for-hire freight management on a single platform, improvements in the depth and flexibility of transportation performance management, continued expansion of capabilities to support global logistics, and more capabilities to support LSPs and 3PL.

A number of forces are affecting the TMS market and will likely shape it moving forward, including:

- Expanded support beyond just planning and mode selection are needed for multiple modes of transportation on a single platform, including truck, ocean, air, fleet and parcel/express. Although mode selection remains valuable, newer solutions support the entire functional flow of these additional modes of transportation, such as multicarrier parcel manifesting, rail management or fleet dispatching.
- Improving freight efficiency, as well as reducing outbound costs, is driving demand for the more robust logic that is needed to address concepts such as pool point or hub-and-spoke distribution; continuous moves; evolution from prepaid to collect on inbound; merge in-transit; flow-through distribution; and in the most forward-thinking organizations, "co-opetition," in which two or more shippers collaborate to gain efficiencies (see "Predicts 2011: Global Logistics Leadership a Strategic Imperative").
- Sustainability considerations, while most compelling in Europe and Australia, are driving TMS acquisitions and influencing TMS functional requirements. Sustainability needs are driving interest and growth in the use of hub-and-spoke distribution networks, 3D load design, and inclusion of carbon as a planning variable.
- While the primary focus of TMS remains operational planning, many sophisticated shippers now recognize the criticality of tactical, forward planning to help address not just today's needs but

to help them evaluate future conditions and needs. As a result, we have seen a select few vendors adding tactical planning capabilities to their TMS offerings.

- The SMB TMS market is expanding. Although large shippers gravitated to TMS leaders because of these solutions' ability to support highly complex functional requirements, smaller shippers do not typically require the most advanced functionality.
- Globalization, in terms of international TMS deployment and multileg, multimode international shipment support, is a bigger issue for buyers. Leading TMS vendors continue to invest in expanding global transportation capabilities.
- Demand for agility and flexibility is increasing the demand for applications that not only meet point-in-time requirements, but also have the architectural flexibility to adapt to the changing needs of the business without extraordinary costs.
- Enhanced usability and embedded analytics that support improved performance management will further enhance the value proposition by providing more users (and more-diverse users) with access to TMSs, delivering more usable information to make better decisions.
- The largest and most sophisticated shippers are moving to operate transportation as a global shared service, which demands the ability to support multiple tenants (for example, geographies, lines of business and functional organizations) within a single instance of the TMS. This model places particular emphasis on the TMS's ability to plan and execute tasks horizontally across the business, while maintaining the integrity of individual tenants.
- The need to better address end-to-end processes will motivate users to consider the importance of SCE convergence (see "Supply Chain Execution Convergence: Delivering on the End-to-End Process Promise"). While, in the near term, many TMS purchasing decisions will remain tactically focused on just improving freight operations alone, users should consider their longer-term need to synchronize processes across functional domains and how TMS vendors they are considering support this requirement.
- Community management is becoming a more important issue in TMSs, given the multienterprise nature of transportation. Although some vendors have built impressive North American over-the-road carrier communities pre-onboarded on their TMS platforms, support for other modes is spotty, and international networks are embryonic but largely unavailable.

Gartner Recommended Reading

Some documents may not be available as part of your current Gartner subscription.

"How Gartner Evaluates Vendors and Markets in Magic Quadrants and MarketScopes"

"Critical Issues to Consider When Evaluating Transportation Management Systems"

"Gartner's Model for Holistic Multimodal Transportation Management Suites"

"Hype Cycle for Supply Chain Execution, 2013"

"Supply Chain Management Market and Vendor Guide, 2012"

"Unify End-to End Logistics Processes With Supply Chain Execution Convergence"

Evaluation Criteria Definitions

Ability to Execute

Product/Service: Core goods and services offered by the vendor for the defined market. This includes current product/service capabilities, quality, feature sets, skills and so on, whether offered natively or through OEM agreements/partnerships as defined in the market definition and detailed in the subcriteria.

Overall Viability: Viability includes an assessment of the overall organization's financial health, the financial and practical success of the business unit, and the likelihood that the individual business unit will continue investing in the product, will continue offering the product and will advance the state of the art within the organization's portfolio of products.

Sales Execution/Pricing: The vendor's capabilities in all presales activities and the structure that supports them. This includes deal management, pricing and negotiation, presales support, and the overall effectiveness of the sales channel.

Market Responsiveness/Record: Ability to respond, change direction, be flexible and achieve competitive success as opportunities develop, competitors act, customer needs evolve and market dynamics change. This criterion also considers the vendor's history of responsiveness.

Marketing Execution: The clarity, quality, creativity and efficacy of programs designed to deliver the organization's message to influence the market, promote the brand and business, increase awareness of the products, and establish a positive identification with the product/brand and organization in the minds of buyers. This "mind share" can be driven by a combination of publicity, promotional initiatives, thought leadership, word of mouth and sales activities.

Customer Experience: Relationships, products and services/programs that enable clients to be successful with the products evaluated. Specifically, this includes the ways customers receive technical support or account support. This can also include ancillary tools, customer support programs (and the quality thereof), availability of user groups, service-level agreements and so on.

Operations: The ability of the organization to meet its goals and commitments. Factors include the quality of the organizational structure, including skills, experiences, programs, systems and other vehicles that enable the organization to operate effectively and efficiently on an ongoing basis.

Completeness of Vision

Market Understanding: Ability of the vendor to understand buyers' wants and needs and to translate those into products and services. Vendors that show the highest degree of vision listen to and understand buyers' wants and needs, and can shape or enhance those with their added vision.

Marketing Strategy: A clear, differentiated set of messages consistently communicated throughout the organization and externalized through the website, advertising, customer programs and positioning statements.

Sales Strategy: The strategy for selling products that uses the appropriate network of direct and indirect sales, marketing, service, and communication affiliates that extend the scope and depth of market reach, skills, expertise, technologies, services and the customer base.

Offering (Product) Strategy: The vendor's approach to product development and delivery that emphasizes differentiation, functionality, methodology and feature sets as they map to current and future requirements.

Business Model: The soundness and logic of the vendor's underlying business proposition.

Vertical/Industry Strategy: The vendor's strategy to direct resources, skills and offerings to meet the specific needs of individual market segments, including vertical markets.

Innovation: Direct, related, complementary and synergistic layouts of resources, expertise or capital for investment, consolidation, defensive or pre-emptive purposes.

Geographic Strategy: The vendor's strategy to direct resources, skills and offerings to meet the specific needs of geographies outside the "home" or native geography, either directly or through partners, channels and subsidiaries as appropriate for that geography and market.

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