The transportation management system market continues to grow across the globe. The challenges in transportation around scarce capacity, higher costs and more demanding customers are increasing the need for technology. Supply chain leaders should use this research to evaluate the TMS marketplace.

Market Definition/Description

Multimodal domestic transportation management systems (TMSs) are a subset of the global TMS market. 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 Systems: Core Capabilities” and “Gartner’s Model for Holistic Multimodal Transportation Systems: Extended Capabilities.”)

This Magic Quadrant specifically focuses on holistic multimodal domestic TMSs for use by shippers (such as manufacturers, retailers, distributors and wholesalers) or non-asset-based, third-party logistics (3PL) organizations. “Holistic,” in this context, means a TMS that incorporates all basic capabilities, as defined by Gartner, for a TMS, and “domestic” refers to movements within a region, mainly through domestic modes of transportation.

The primary emphasis of this Magic Quadrant is on systems that support for-hire transportation management operations. This is where users employ transportation companies across a variety of shipping modes, including over the road, private/dedicated fleet, small package, rail and intermodal. Global companies and companies that import products from different regions also use air and ocean as a main transport mode, which are part of the international TMSs, but are, in some cases, covered by the multimodal domestic TMS vendors.

TMS suites can include all transportation management functions across multiple modes (depending on the level of complexity — see Note 1), such as strategic planning, strategic freight sourcing and procurement, planning and execution, visibility and performance management, and freight payment and audit capabilities. TMSs provide support for multiple modes of transportation, adding deeper support for modes such as small package or parcel shipping, private fleet planning and execution, intermodal, and rail. TMSs embrace global logistics functions and features and continue to broaden their capabilities through partnerships with visibility vendors, carrier networks and freight marketplaces.
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 specified inclusion criteria (see the Inclusion and Exclusion Criteria section). Public cloud has become the dominant delivery mechanism for TMS solutions. Almost all growth in the TMS space comes from cloud TMS offerings. Gartner notices far less new investment in on-premises applications. The number of TMS end-user companies that have started transitioning their TMS solutions from on-premises to the cloud also continues to grow, either through switching vendors or switching platforms within the same vendor. Established TMS vendors are transitioning their products to SaaS to defend their market share against fast-growing cloud-native vendors. Cloud-native vendors are incorporating emerging technologies to deliver real-time transportation visibility and transportation mobility, increasing the value added by TMS SaaS.

Multiple subcomponents make up comprehensive multimodal TMS solutions. In this Magic Quadrant, we evaluate the vendors’ offerings, considering the following basic product capabilities:

- **General:**
  - Inbound, intercompany and outbound freight
  - Globalization for international deployment (e.g., language, currency, local rules and geographic data)
  - Technology architecture, adaptability, flexibility, usability and deployment options

- **Rate and contract management:**
  - Freight sourcing and bid optimization
  - Freight rating and contract management
  - Integration to freight-matching platforms

- **Operational planning:**
  - Freight order management
  - Operational transportation planning and optimization
  - Carrier assignment optimization and collaboration opportunity management
  - Rail and intermodal shipment planning and execution

- **Execution:**
  - Transportation execution and carrier communication/collaboration
To differentiate between the different TMSs, we also consider more advanced capabilities, although these are not required to qualify for the Magic Quadrant:

- **Event management**

- **Real-time visibility (or partnerships with visibility platforms)**

- **Settlement:**
  - Freight audit, payment and settlement
  - Freight customer billing

- **Analytics:**
  - Traditional analytics and performance management based on business intelligence solutions
  - Configurable scorecards and management dashboards
  - Advanced analytics based on AI providing diagnostic and predictive analytics

- **Other:**
  - Convergence with other supply chain functions and solutions (such as WMS, YMS and SCP)
  - Trading partner network/community (e.g., carrier, supplier and customer)
  - Mobility

To differentiate between the different TMSs, we also consider more advanced capabilities, although these are not required to qualify for the Magic Quadrant:

- **Strategic and tactical planning:**
  - Strategic planning
  - Tactical planning (forward-looking scenario analysis and planning)

- **Fleet routing and dispatching:**
  - Asset- or fleet-based routing, scheduling and dispatching
  - Final-mile optimization
  - Driver planning

- **Operational planning:**
This research focuses on non-asset-based shipping enterprises (i.e., shippers and 3PL companies). However, the research also includes solutions that can support private fleet transportation or systems that can support asset-based, for-hire carriers in addition to supporting shippers. It does not focus on specialized solutions targeted only at private fleets, asset-based transportation companies 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, order management, and payroll), 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, for hire over the road, dedicated fleet, rail, intermodal and others. Vehicle routing and scheduling solutions for companies with fleets are covered in Gartner’s “Market Guide for Vehicle Routing and Scheduling.” Additionally, although parcel solutions can be included in a multimodal TMS, stand-alone parcel manifesting solutions are not included in this research. For that coverage, see Gartner’s “Market Guide for Multicarrier Parcel Management Solutions.”

Market Size and Vendors

Gartner continues to see the TMS market grow at an accelerated rate. Factors such as the need to reduce costs; improve internal productivity, efficiency and customer service; increase visibility; and make better use of capacity are driving the growth of the market through 2022. The Americas regions will continue to lead the global TMS market in volume of implementations, followed by EMEA and then Asia/Pacific (APAC).

By 2022, spend on TMS applications will be $1.94 billion, accounting for 31% of the $6.2 billion supply chain execution (SCE) market. This growth will be driven by the replacement of on-premises software with SaaS applications. SaaS will account for 65% of the TMS market by 2022, up from 37% in 2017.

The TMS market continues to be highly fragmented due to the presence of a large number of vendors in the U.S. and Europe, mainly. Gartner has identified a growing number of new vendors in the market, including in Asia, which is an emerging but fast-growing market for TMS.
“Asia/Pacific Context: 'Magic Quadrant for Transportation Management Systems’”). In many cases, these TMS solutions are focused on specific capabilities, industries, company types or regions.

The overall TMS market covered in this research breaks down into four types of vendors — application megasuite vendors, supply chain management (SCM) suite vendors, specialist TMS vendors and TMS services vendors:

- **Application megasuite vendors** offer broad portfolios of applications across most application categories (for example, back-office financials, supply chain management [SCM], logistics, CRM and product life cycle management [PLM]). Sample vendors include Oracle and SAP.

- **SCM suite vendors** offer a portfolio of applications focused primarily on SCM, including aspects of logistics, but not other functional areas such as financials or human capital management. Although these vendors might offer a variety of SCM solutions, they do not necessarily offer an integrated platform (although some do). Sample vendors include BluJay, E2open (Cloud Logistics), JDA and Manhattan Associates.

- **Specialist TMS vendors** are independent software vendors (ISVs) that focus primarily or exclusively on holistic TMS, although they might offer some additional capabilities. Sample vendors include 3Gtms, 3T Logistics, inet-logistics, Kuebix and MercuryGate.

- **TMS services vendors** offer the TMS technology, but they can also provide the services to run the day-to-day transportation management, while the shipper maintains and controls key relationships with its carriers and customers. Some of the SCM suite vendors (such as BluJay) and specialist TMS vendors (such as Kuebix) also offer this service, but are still primarily technology vendors. Sample vendors include C.H. Robinson (TMC) and Transplace.

For this Magic Quadrant, we focused on vendors that qualified according to the Magic Quadrant qualification criteria. Gartner also has a Magic Quadrant contextualization note that focuses on small and midsize business (SMB) vendors (see "Midmarket Context: 'Magic Quadrant for Transportation Management Systems’") and will expand this to research covering the different regions.

**Magic Quadrant**

*Figure 1. Magic Quadrant for Transportation Management Systems*
Vendor Strengths and Cautions

3Gtms

3Gtms is a U.S.-based TMS vendor (headquartered in Shelton, Connecticut), founded in 2013 by some of the management team behind Global Logistics Technologies (G-Log). 3Gtms’ TMS solution, 3G-TM, includes many of the core capabilities, such as procurement/bid optimization, route planning and optimization, visibility, and settlement. 3Gtms has continued its investment in developing 3G-TM in 2018, adding new capabilities and features to its offering. These include advance planning and rating (with features such as continuous pool optimization, carrier capacity management or chargeable weight accessorial by freight class), international freight capabilities (multicurrency and time zone management) or brokerage (rate index integration).
3Gtms has a partnership with Trimble (TMW Systems) to provide capabilities for companies dealing with third-party carriers as well as private fleets. Additionally, 3Gtms has developed the 3Gtms Integration Hub, which is leveraged by its customers to integrate the 3G-TM with other applications such as ERP or WMS systems, or other vendors, shippers or carriers in an easy, templatized way. 3Gtms primarily serves the North American market with about 80 customers and has other customers across Europe, Australia and New Zealand. 3Gtms is mainly active in the 3PL, consumer products, food service and logistics service provider (LSP) industries. The solution is best-suited for Level 2, 3 and 4 companies that have no international shipping.

Strengths

- Capabilities, such as continuous pool optimization and recently released interleaved multistop loads, allow the user to plan and execute many different types of routes, such as backhauls, shuttle runs or petal routes. These capabilities are performed while considering whether the truck is loaded or empty.

- 3Gtms’ partnership with high-caliber companies in the areas of vehicle routing and visibility (such as Trimble [TMW Systems], FourKites and Descartes [MacroPoint]) provides clients with advanced capabilities across areas in which the TMS alone might not be enough.

- Quick implementation times, self-configurability, system flexibility and the ease of integration to other platforms are some of the characteristics that customers praise the most when using 3G-TM.

Cautions

- The international capabilities for the air and ocean transportation modes are very limited in 3G-TM. Although the vendor is planning to deliver some of these features in 2019, it is very likely that, in this area, it will not be enough to catch up with other TMS represented in this research.

- Although 3Gtms has doubled its revenue and customer base in the U.S. in the last year, it is still relatively small in Europe and the rest of the world.

- Although 3Gtms has established connectivity with most LTL carriers in the U.S. through its partnership with project44, the total carrier network of 3G-TM is still limited. Additional direct carrier integration through API is at the customer’s expense.

3T Logistics

3T Logistics is a U.K.-based supply chain software provider that operates as a fourth-party logistics (4PL) provider and offers solutions for transportation such as TMS and VRS. 3T Logistics’ Event TMS platform is a modular, cloud-based TMS that offers a mix of Saas to managed solutions. Carrier onboarding remains one of 3T Logistics’ key strategies. Its Connect module allows direct communication with carriers to accept or reject jobs, manage assigned orders, and upload documents such as PODs or invoices. 3T Event offers transportation execution and planning optimization capabilities for complex transportation operations where
multiple legs, consolidation and deconsolidation points or different mode of transportation and currencies are required. The system also provides routing and scheduling capabilities for those organizations that own their own fleets. 3T Logistics has continued to grow its customer base, not only within Europe, but also in North America, Asia and Australia/New Zealand. The vendor has a strong presence in the aftermarket, automotive, construction, retail and packaging industries. It targets organizations with $1.5 million to $100 million in freight spend within all levels of complexity — Levels 1 to 3 as cloud solutions and Levels 3 to 5 as hosted solutions.

**Strengths**

- 3T Logistics’ Event offers a good usability, providing detailed information in an organized and intuitive manner in its cloud version. Implementation wizards with templatized setup options, commands like drag and drop, graphical dashboards and maps, and a notification functionality based on SignalR technology (same as Facebook or Instagram) make 3T Logistics’ Event a user-friendly TMS.

- 3T Logistics experience as 4PL, and its collaboration with the universities of Nottingham and Warwick, has helped the further development of its optimization capabilities. Additionally, this TMS solution can integrate with the client’s ERP systems, taking SKU-level information and preserving it through the whole transportation execution and settlement process.

- 3T Logistics offers two to three hours of audit consultancy prior to TMS implementation to help define the potential customer benefits as well as calculate the TMS project ROI, based on a set of 101 predefined and measured scenarios. Its experience as a 4PL organization brings firsthand logistics experience to identify areas of improvement within transportation operations.

**Cautions**

- Although 3T Logistics’ Event carrier network has increased, it remains small compared to other vendors. The lack of technological partnerships prior to 2019 is something that has limited its capabilities around carrier networks and visibility. 3T Logistics’ strategy includes establishing new technological partnerships during the coming year.

- 3T Logistics continues to expand internationally, but most of its customer base resides in Europe. Its presence in North America and Asia is fairly small at the moment, although the company is strengthening its partnerships with local providers to increase its presence and support.

**BluJay**

Headquartered in Manchester, U.K., BluJay offers a broad range of logistics products besides its TMS application (Transportation Management). Solutions such as Control Tower, Transportation Management for Forwarders, MobileSTAR (mobility solutions), Warehouse Management or multicarrier parcel management are only some of the supply chain software solutions within BluJay’s catalog. BluJay’s strategy is to enable customers to optimize their
supply chains within the context of a global trade network (GTN), allowing them to select from a portfolio of core execution applications augmented by value-added capabilities offered within a "service library." BluJay's Transportation Management offers a carrier network with more than 25,000 carriers preonboarded, as well as direct electronic data interchange (EDI) connection to vessel carriers, plus the integration to ocean portals through INTTRA. BluJay has put its focus on shippers in industries such as consumer packaged goods, food and beverage, retail and logistic service providers, although it serves many others. The BluJay TMS is most often used by large shippers, as well as midsize shippers with less than $100 million in annual freight spend. The BluJay Transportation GTN is most often used in Level 2 and Level 3 transportation operations.

Strengths

- BluJay Transportation Management continues to improve its TMS core capabilities with new feature enhancements across all modes of transportation, analytics and a further integration within its Global Trade Network platform. Additionally, more carriers have been added to its already extensive carrier network (especially in the U.S.).

- BluJay has redefined the user interface of its TMS to provide a more intuitive interface when using other BluJay applications, such as Control Tower, Yard Management, multicarrier parcel management or Customs Management.

- BluJay is one of the few TMS technology vendors that also includes a managed TMS within its SCE solution portfolio. Its superusers not only provide expertise in logistics operations to their clients, but they also participate internally in the system development by identifying new use cases and areas to improve based on customer feedback.

Cautions

- Although BluJay continues to expand its transportation technology footprint, the TMS is still lagging other leading TMSs in terms of rail planning, multileg international planning and execution, and transportation modeling.

- Some BluJay Transportation Management end users have reported having some issues during the implementation of the TMS, as the vendor did not spend as much time as desired on-site.

C.H. Robinson (TMC)

Based in Eden Prairie, Minnesota, C.H. Robinson (CHR) is best known for its freight brokerage services. However, it expanded its offerings to include TMS as a managed service in 1999. This was done, in part, by leveraging the technology that was being used for its own operations as well as TMS plus managed services. TMC is a division of CHR that offers a self-service TMS, Navisphere, as well as a managed service offering called Managed TMS. CHR continues to invest in its Navisphere TMS and platform, leading to a set of modular products that can be deployed in each region of the globe. In 2018, Navisphere Vision was introduced as the visibility
solution that can be used with the Navisphere TMS or as a stand-alone solution. TMC also introduced a new product for ocean transportation, and CHR started a collaboration with AscendTMS carrier logistics management software to provide free TMS to CHR’s carriers. TMC has a total of six control towers spread between North America (two), South America, Europe (two) and Asia. TMC customers are spread across industries. However, they have a strong focus on industrial, CPG, food and beverage, and automotive organizations. TMC continues to grow its customer base in Asia and Europe, but the majority of the vendor’s customers are in North America. TMC is most often used in up to Level 3 transportation operations, but it might scale to Level 4 and 5 operations.

Strengths

- TMC’s managed service, Managed TMS, provides organizations looking to outsource capabilities with a solution that has support from a deep and experienced staff of nearly 1,400 individuals focused on TMS. This depth is a distinct advantage when compared with other managed solutions.

- With more than 73,000 carriers onboarded globally within its TMS, across all modes, TMC provides one of the largest carrier networks of any TMS provider.

- Customer references indicated a high-level of satisfaction with the TMC’s capabilities in the areas of simplicity and user interface, sourcing and bid management, rail planning and execution, and freight audit and payment.

Cautions

- TMC has previously focused on midsize to large shippers, but has shifted its focus to concentrate on large, multinational shippers. It also leverages Freightview, acquired in January 2015, to support small and midsize shippers.

- Although customer references indicated lower satisfaction with TMC’s capabilities in visibility and event management, the newly introduced Navisphere Vision product may help improve performance in this area.

- Customer references indicated lower satisfaction with TMC’s capabilities in private fleet routing and scheduling, and in both basic and advanced planning.

E2open (Cloud Logistics)

E2open is headquartered in Austin, Texas, employing roughly 1,600 people, and holding 19 offices in the U.S., Europe and Asia. E2open has made eight acquisitions in the last three years: Terra Technology, Orchestro, Steelwedge, Zyme, Birch Worldwide, Entomo, Cloud Logistics and INTTRA. With the acquisition of Cloud Logistics, E2open expanded its logistics footprint with transportation management systems. E2open offers a suite of end-to-end SCM solutions that connect internal and external ecosystems/global trading networks to help companies of any industry plan, source, make, deliver/return and shape the channel response. This includes visibility, optimization and collaboration for any maturity stage, across any horizon, and with the
depth and breadth of supply chain functions. The TMS is branded as E2open TMS for larger enterprises and existing E2open clients, whereas the Cloud Logistics TMS brand is marketed toward the mid and lower end of the market. A key difference is that clients using the E2open TMS utilize the more advanced capabilities of E2open. These include networking, forecasting and convergence, which have been integrated into the E2open TMS. The TMS has one of the cleanest and easiest-to-understand UIs. It comes the closest to what contemporary users expect in modern mobile and web-based applications. The TMS is a cloud-based (multitenant) TMS that focuses primarily on execution, collaboration and business intelligence. It offers one of the most user-friendly and fastest-to-implement TMS solutions in the enterprise market. The TMS has been mainly active in the manufacturing, retail and 3PL industries. The Cloud Logistics solution is most suitable for Levels 2 and 3 shippers and 3PL companies. E2open’s TMS can go up to Level 4.

Strengths

- E2open (Cloud Logistics) has one of the most user-friendly TMS solutions in the enterprise market. The solution continues to receive high ratings based on customer feedback in the TMS customer surveys.

- E2open (Cloud Logistics) offers fast implementations in the TMS market, with an average implementation timeline of four to eight weeks. The E2open TMS version with added capabilities is too recent to provide any customer references at this point.

- E2open (Cloud Logistics) offers one of the lowest total cost of ownership (TCO) solutions of the vendors in this Magic Quadrant, as well as for the cost of implementation.

Cautions

- Cloud Logistics was one of the smaller vendors in this TMS Magic Quadrant (in both revenue and number of customers). With its acquisition by E2open, the input of added sales resources (going from two to 30 TMS sales resources) and added capabilities, faster growth within the E2open customer base and outside the customer base is expected.

- E2open (Cloud Logistics) focused mainly on domestic transportation (over the road [OTR] and intermodal). The customers that implemented the Cloud Logistics solution did not have access to rail, ocean, air or parcel. This is being added through the E2open acquisition.

- Cloud Logistics’ customer base outside of North America was smaller, with clients in Europe, Asia and South Africa. E2open, as a large global player with international presence, plans to create a bigger international presence of the TMS solution.

inet-logistics

Inet-logistics (inet) is a logistics software company that is headquartered in Dornbirn, Austria, and it has been part of the Alpega group since 2017. Inet’s TMS is part of the product portfolio of Alpega, together with other logistics applications such as Transwide, Teleroute, 123cargo and TenderEasy. In 2018, Alpega secured usage rights and future options for the 4flow vista
optimization and network modeling technologies. Inet TMS is a multitenant SaaS solution that offers strategic transportation planning and execution for complex transportation networks. Although inet-logistics’ customer base and growth are mainly located in Europe, it has continued to grow in other regions like Asia and North America, which now account for about one-third of its total customer base. Inet-logistics has a strong presence in the automotive, discrete manufacturing and the logistics service providers industries. Its TMS solution is a modular TMS that offers multimode, multileg transportation capabilities for domestic and international transportation. Inet-logistics’ implementation partner, 4flow, brings implementation expertise to provide an advanced optimization in complex operation workflows. Inet TMS is used by a wide range of companies, from small to large, with the majority of its customer base above $50 million on annual freight spend and with Level 3 to Level 5 transportation operations.

Strengths

- Inet’s TMS integrates with more than 70,000 carriers in Europe, and it is expanding its carrier network across different geographies and modes of transportation through the Alpega carrier network.

- Inet-logistics has a good understanding of and large expertise in the automotive industry, as well as the complex and sophisticated outbound, inbound and aftermarket logistics operations associated with it.

- In 2018, the vendor secured usage rights and future options to commercialize and further develop internally the freight-planning engine, 4flow vista, property of its partner 4flow. This deal ensures that inet-logistics will have access to a transportation planning optimizer.

Cautions

- Inet’s TMS is a solution most often used by organizations with a large annual freight spend bill and complex transportation operations. Despite being a SaaS modular solution, it does not seem to have traction from smaller shippers.

- Although it is now part of Alpega, the TMS and other solutions are not part of the same platform. The vendor has, in its roadmap for 2019, the integration between the solutions such as inet’s TMS and TenderEasy.

JDA

JDA continues to be the largest independent SCM suite vendor at around $1.2 billion in sales and more than 4,000 customers. It offers a broad catalog of SCM solution suites that includes WMSs, TMSs, supply chain planning, merchandising, workforce management and retail planning. In 2018, JDA released its Luminate offering, which is JDA’s next generation set of capabilities, including predictive capabilities around transportation visibility and capacity. JDA also acquired Blue Yonder in 2018, providing AI capabilities to automate business processes or what JDA calls Autonomous Supply Chain capabilities. This acquisition also provides JDA access to an additional 120 data scientists. Furthermore, JDA announced a partnership with EY
in 2018 to help its clients with their supply chain strategies and digital transformation initiatives. JDA’s TMS historically focused on larger shippers, with over half of its customers having a freight spend larger than $250 million and 95% having more than $100 million. In 2018, JDA selected Microsoft Azure to provide cloud solutions. TMS Express provides a simpler solution to smaller customers in an 11-week project timeline. JDA continues to offer its solution on-premises as well as via traditional cloud. JDA continues to lead the TMS vendors from an innovation perspective. JDA’s TMS is most often used in Level 4 and Level 5 transportation operations, mainly in the consumer products, retail and 3PL industries.

Strengths

- The JDA TMS continues to offer a solution, with the breadth, depth, and adaptability demanded by complex and sophisticated TMS users. Tactical and operational planning and optimization are its core competencies, and its TMS continues to have one of the most sophisticated planning engines.
- JDA’s TMS is a true global offering for companies considering a global TMS implementation. It supports real-time dynamic, optimized, multileg routing versus the more typical, itinerary-based approaches of many other TMSs.
- JDA continues to be a leading innovator across TMS vendors, enhancing its offering with features such as continuous optimization and predictive capabilities around transportation visibility and capacity.

Cautions

- Ninety-five percent of JDA’s TMS customers are still large, complex shippers or 3PL companies with annual freight spending of greater than $100 million. The new public cloud solution (on the Azure platform), together with an accelerated implementation methodology, plans to increase JDA’s presence in the TMS midmarket.
- JDA’s carrier network trails some other vendors. However, JDA continues to expand its network through partnerships such as project44.
- Total cost of ownership remains high compared with many others. Implementation times are higher than those for the average TMS solution. This is partly due to the complexity of the customer’s needs. The TMS Express plans to provide a shorter timeline and lower TCO for simpler shippers.

Kuebix

Based in Maynard, Massachusetts, Kuebix was founded in 2008. The TMS was built on the Salesforce platform to allow clients to quickly implement the core TMS. Kuebix continues to focus on the SMB and enterprise customer markets by using separate sales teams. While Kuebix’s customer base has grown to more than 16,000, primarily driven by its free TMS and used by small self-serve customers, its customer base continues to be mostly based in North America. Kuebix does have several large enterprise customers in Europe and Asia, and
manufacturing, industrial and retail make up the largest customer segments. Kuebix’s customer base continues to be primarily made up of small shippers, with 58% having $25 million or less freight under management (FUM). That said, Kuebix continues to see an increase (in terms of revenue) within medium and large enterprise customers. This drives the development of the application, such as new functionality for spot quotes called Community Load Match, as well as complementary solutions such as YMS. Kuebix continues to offer a managed service program to businesses looking to partially or fully outsource transportation management. Kuebix is mainly active in the grocery, food and beverage, chemical, retail, manufacturing, and distribution industries. The solution is mainly focused on Level 1 to Level 3 transportation operations.

Strengths

- Kuebix continues to be one of the leaders in terms of implementation time for vendors in the Magic Quadrant. The true-cloud-based multitenant solution built on the Salesforce platform allows clients to easily expand the TMS capabilities as their needs change.

- Customer references indicated that Kuebix was one of the leading vendors in terms of responsiveness, support and meeting obligations.

- Kuebix continues to be a leader in terms of overall total cost of ownership and overall return on investment (ROI), as confirmed by the customer references.

Cautions

- Kuebix continues to grow its customer base quickly. However, only 3% of its customer base is large shippers, the same percentage as a year ago. Customer perception is that it is only focused on small shippers, and that may be an obstacle to overcome.

- Although the Kuebix customer base has grown rapidly, much of that growth has been driven by customers using its free TMS product. A much smaller number of customers are using capabilities such as load consolidation and optimization.

- Customer reference data indicated lower-than-average satisfaction with parcel carrier rate shopping and manifesting.

Manhattan Associates

Manhattan Associates (Manhattan), with headquarters in Atlanta, Georgia, is the second largest independent SCM vendor and offers a broad suite of SCM solutions that includes WMS, transportation management, distributed order management (DOM), supply chain planning and supplier enablement. In the case of its open system platform, it offers all of the above capabilities on a single technical platform. All functional capabilities share a UI, data model and common tools, such as a rule engine, across the suite. Manhattan Associates has deep roots in logistics that go back more than 25 years to the Logistics.com era. In 2018, Manhattan significantly invested in TMS talent, marketing, strategy, partnerships and technology. The Manhattan TMS solution is preintegrated with other Manhattan SCE applications (e.g., WMS, YMS and DOM) and provides capabilities to support domicile-based fleet, including dispatch
and telematics integration. The vendor offers TMS capabilities for shippers and carriers. Manhattan’s TMS is mainly used in the retail, grocery, wholesale distribution and manufacturing industries. Manhattan’s TMS offering is best-suited to Level 3 to Level 4 transportation operations, but it can be used in up to Level 5 operations in certain situations.

**Strengths**

- Manhattan’s TMS has functional breadth and depth for North American operational and tactical planning, execution, settlement, and freight sourcing/bid optimization. The vendor’s fleet capabilities include deep last-mile vehicle routing and scheduling (VRS) that it refers to as high-density routing, which can compete with stand-alone VRS offerings.

- Manhattan’s TMS is well-suited to the needs of retail, particularly grocery, whereby the goal is to integrate inbound and outbound movements, simultaneously optimizing both for-hire and private fleet transportation. At the same time, Manhattan continues to expand its solution into other industries (50% of the customer base is outside of retail).

- The vendor continues to offer one of the most compelling SCE convergence visions. It is built on a unique and differentiated common SCE/logistics platform that includes WMS, YMS, TMS, DOM and supply chain planning (SCP).

**Cautions**

- Manhattan continues to be one of the smallest vendors in the Magic Quadrant based on number of customers, but the customers it serves are large companies. This is not a result of the solution’s quality and capabilities, but, rather, the company’s overall sales and marketing focus and priority. In 2018, Manhattan increased its sales and marketing efforts around TMS.

- Manhattan’s TMS customer base is mainly made up of North America and Latin America. The vendor has introduced new international capabilities that, with the increased sales effort, should result in further internationalization from 2019 forward.

- Manhattan’s TCO remains high compared with many other offerings. Manhattan has been seen to be more aggressively priced in recent deals and has put a lot of focus on reducing implementation times with its rapid implementation deployment model.

**MercuryGate**

Based in Cary, North Carolina, MercuryGate is a specialized TMS vendor founded in 2000. Focus has remained on its TMS product, and its customer base has grown to about 380. In August 2018, MercuryGate was acquired by Summit Partners, a Boston-based venture capital firm. The majority of MercuryGate’s customers are based in North America. International growth has been slow, although customers in Western Europe were added in 2018. Although the TMS has the capability to support larger enterprise clients, more than 60% of its customers are classified as small or medium shippers. MercuryGate’s customer base is primarily composed of 3PL and brokerage services, making up more than half of its customers. Within the shipper segment, it has notable customer bases in retail, wholesale distribution and industrial/construction...
machinery. MercuryGate is most often implemented in Level 1 to Level 3 transportation operations.

**Strengths**

- As a specialized TMS vendor, MercuryGate’s sole focus is on its TMS product. This dedicated focus has led to product enhancements and modules that align to its varied customer base of 3PLs, brokers and shippers.

- With more than half of its customers being a 3PL or a broker, MercuryGate has established itself as one of the leading TMS solutions for these market sectors.

- Customer references indicated a high-level of satisfaction with MercuryGates’s capabilities in the areas of carrier rating and contract management, sourcing and bid management, and transportation modeling.

**Cautions**

- Despite adding customers in regions other than North America in 2018, MercuryGate continues to lag behind the Magic Quadrant leaders in exploiting the growth potential of European and Asian markets.

- As a specialized TMS vendor, MercuryGate has not shown a strategy or vision to provide additional supply chain execution products. It has maintained its approach of transactional convergence with applications offered by application suite vendors.

- Some customer references indicated low levels of satisfaction with implementation and deployment costs, which is similar to the responses from references in two previously published Magic Quadrants. In addition, customer references indicated MercuryGate had the lowest satisfaction scores for responsiveness and meeting obligations.

**Oracle**

Oracle, based in Redwood Shores, California, is the largest TMS vendor in terms of revenue and continues to expand its global customer base at a fast rate. The Oracle Transportation Management (OTM) Cloud customer base is evenly divided between North America and the other regions with Asia/Pacific and Latin America accounting for 40% of the new customers in 2018. Oracle continues to add new TMS customers across vertical industries at a greater rate than its competition. Oracle’s cloud offering for TMS has been attractive for both large enterprises, as well as the midmarket, where it has been able to become very competitive on pricing and speed of implementation. It has broad coverage across all industries and has sales in the last two years across 22 distinct industries. Industrial manufacturing, natural resources, automotive, consumer goods, high tech and logistics service providers are some of the leading industries OTM serves. Oracle has the most global customer base and ecosystem of implementation partners. Historically, OTM was best-suited for Level 4 to Level 5 transportation operations, but, with Oracle’s cloud offering, OTM also fits into Level 2 and Level 3 operations.
Strengths

- With customers across all continents and all industries, it has the largest global reach of any of the TMS vendors. In the last year, its customer growth in Asia/Pacific and Latin America combined equaled the customer growth in North America.

- OTM Cloud has the versatility to support complex transportation requirements of the most sophisticated transportation organizations as well as scale down to smaller, less complex and less sophisticated shippers. The implementation methodologies developed by its solution integrator partners allow much faster implementations. All this has materially reduced OTM’s overall TCO for new clients implementing OTM Cloud.

- Oracle continues to invest in its ecosystem of solution partners. Besides having the largest global ecosystem of solution integrators, it has continued to expand its partner landscape for visibility, freight marketplaces, maps and small parcels.

Cautions

- Oracle is still lacking some of the capabilities that are increasingly being demanded by its larger customers, shippers and/or 3PLs, such as transportation modeling and brokerage. Strategic Network Design and planning, as well as Tactical planning, is on the roadmap for 2019.

- Customers rated Oracle service and support rather low (bottom 20% tier), based on customer surveys we received for the TMS vendors in this report.

SAP

SAP, with headquarters in Walldorf, Germany, continues to see strong growth and adoption of its transportation management tool, SAP TM, across the global SAP ERP installed base. SAP offers two versions of its SAP TM. SAP TM NetWeaver is seamlessly interfaced with SAP’s ERP and related SCM offerings. SAP TM S/4HANA is provided on the same S/4HANA platform as the other SAP modules, leveraging common master data and transactions. Clients can take advantage of advanced analytics leveraging HANA so that they can interrogate production data while analyzing trends and operations as part of SAP’s Intelligent Suite. SAP TM has diversified geographically with 40% of its revenue coming from Europe, 40% from the Americas and 20% for Asia/Pacific and the rest of the world. SAP TM also continues to expand across industries. SAP TM is mainly active in the consumer products, petrochemicals, retail, industrial and construction machinery, and 3PL industries. The solution is best-suited for Level 3 to Level 4 transportation operations that currently operate SAP ERP and related applications, but it can scale to Level 5 transportation operations.

Strengths

- SAP continues to sell SAP TM mainly to its ERP customer base, which is very large and explains SAP’s substantial growth in transportation management. SAP TM for S/4HANA provides SAP clients a uniform platform across the SCM landscape.
SAP’s strength is its substantial global presence, as well as its large and growing global ecosystem of customers, technology, implementation and consulting partners. In 2018, SAP added several visibility platforms as partners, including Blume Global, FourKites, project44, Synfioo, ClearMetal and Shippeo.

SAP continues to invest in its TM solution, adding capabilities such as real-time embedded analytics, global track and trace, and cloud collaboration with the SAP Logistics Business Network.

Cautions

- SAP continues to be deployed mainly on-premises, in a single tenant cloud or hosted. SAP lacks a public cloud option for TM but is working on a multitenant public cloud version of SAP TM in line with the demands from the end-user market.

- SAP’s trading partner (carrier) community and connectivity strategies still lag some of the other leaders. Through the SAP Logistics Business Network as well as recent partnerships, SAP is making strides in this area.

- Although SAP has made improvements in its overall TCO, its implementation costs and internal support toward SAP TM continue to be higher than for most other vendors. Customers also showed dissatisfaction with the ease of deployment as well as the quality and availability of end-user training in the customer surveys for this Magic Quadrant.

Transplace

Based in Frisco, Texas, Transplace is a 3PL that also offers an internally developed TMS supplemented by value-added services (e.g., operations-centric human capital). Transplace also offers its TMS as a self-service technology only. Transplace offers a multitenant cloud TMS that spans the core functionality of planning, execution and settlement across all modes with strong analytics and performance management. Transplace was acquired by TPG Capital in 2017. Transplace has been aggressive with respect to acquisitions, including the announcement in October 2018 of its acquisition of Yusen Logistics’ intermodal and freight brokerage group. The Transplace TMS supports various industries. However, it continues to have a strong focus and customer base within CPG, food and beverage, and chemical and industrial manufacturing. Transplace provides TMS solutions for small to large shippers and provides international services through its partnership with WiseTech Global. Transplace is most often used for Level 3 to Level 4 transportation operations and companies that need additional services. Transplace also provides customizable solutions for complex customers that don’t find a fit with a standard TMS.

Strengths

- Customer references indicated a high level of satisfaction with Transplace, with regard to market knowledge, relationships and meeting obligations.
We review and adjust our inclusion criteria for Magic Quadrants as markets change. As a result of these adjustments, the mix of vendors in any Magic Quadrant may change over time. A vendor's appearance in a Magic Quadrant 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**
No vendors were added this year.

**Dropped**
No vendors were dropped this year.

### Inclusion and Exclusion Criteria

To be included in this year’s TMS Magic Quadrant, a vendor must offer:

- **A holistic multimodal TMS offering**: This must be a credible, holistic multimodal TMS product with numerous live customers, and the vendor must have a vision for next-generation multimodal transportation. The TMS must include at least sourcing, multimodal planning/optimization, execution/tendering, audit/payment, visibility and performance management. We 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 TMS suite. We do not consider stand-alone solutions in these areas.

- **TMS market presence**:
  - TMS software is sold and used by the buyer, independent of other services offered by the vendor.
  - The vendor must meet one of the following:
Due to end-user demand for evaluations of other significant vendors’ TMS offerings, we also consider inclusion of TMS vendors that meet one of the following criteria, even if the offering does not meet the initial TMS-specific criteria:

■ **Major enterprise software vendor**: The vendor must offer its own, multimodal transportation planning and execution solution, and have greater than $500 million in enterprise applications software license revenue and greater than $75 million in SCM (e.g., warehousing, planning, transportation) software license revenue in 2017. This is because many end users are interested in the TMS offerings of the major application suite vendors. The vendor must have sold at least 10 new named TMS customers in the past 12 months, as well as have at least 25 live TMS customers.
We do not include other stand-alone transportation-related software applications, such as fleet-based routing and scheduling solutions, multicarrier parcel manifesting, global logistics or global visibility solutions, freight forwarding, or carrier-centric TMSs in this Magic Quadrant.

**Key Criteria**

All solutions in this Magic Quadrant support basic Level 2 and Level 3 (see Note 1) transportation operations for over-the-road transportation. Distinguishing characteristics will be:

- **Major SCM suite vendor**: The vendor must offer its own, multimodal transportation planning and execution solution and have at least $75 million in total company revenue with at least $20 million in SCM software license revenue in 2017. This is because many customers with significant investments in SCM suites would like to evaluate the capabilities of an integrated TMS product. The vendor must have sold at least 10 new named TMS customers in the past 12 months, as well as have at least 25 live TMS customers.

- **Unique and compelling market position in a specific vertical industry or geography**: The vendor must have a unique, compelling and differentiated market position in a specific vertical industry or geography, where this differentiation is important to buyers. New customer win rates, vendors appearing in Gartner client inquiries in these industries or geographies, explicit vendor focus in these industries or geographies, client references, and the vendor’s reputation in the industry or geography are considered. The vendor must also meet the revenue and number-of-customer criteria.

- **Breadth of the TMS**, not just planning, execution and settlement, but also system-of-innovation capabilities, such as tactical planning, fleet management, multicarrier parcel management, 3D load design and supply chain execution (SCE) convergence

- **Depth of the TMS**, as demonstrated by live references in Level 3 and above transportation environments, holistically using the breadth of the vendor’s TMS application (Particular emphasis is placed on the ability of vendors to handle the most complex planning scenarios because this ability distinguishes the offerings at the highest level of requirements.)

- **Usability and adaptability**, with particular emphasis on a vendor’s current and future UI strategies

- **Global go-to-market strategy and offering**, with strong emphasis on a vendor’s strength in the largest current TMS markets of North America, Europe and, to a lesser extent, Asia/Pacific

- **Partner ecosystem** and project/implementation consulting capacity and quality

- **Vision, thought leadership, roadmap and track record** beyond basic over-the-road multimodal TMS

- **A compelling SCE convergence strategy** — that is, both the breadth of TMS and the ability to support end-to-end business processes through an SCE platform
Several TMS vendors did not meet Gartner’s inclusion criteria for this Magic Quadrant. Although these vendors did not qualify for this research, they may offer a TMS solution that would be well-suited to the needs of a specific company.

**Notable Mentions**

Some vendors with emerging or reasonably capable, but less proven or incomplete, holistic multimodal TMSs did not qualify for this year’s Magic Quadrant. However, this does not mean that these solutions might not be viable or preferable alternatives for some customers. To ensure that this research is consumable and understandable for our clients, we limit participation in this Magic Quadrant to vendors that demonstrate current strengths in the market in several dimensions.

There are several reasons why a vendor might not have qualified. 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. In some cases, Gartner qualifies the vendor’s solution as a different solution than how Gartner qualifies a holistic multimodal domestic TMS (see “How to Select the TMS, Provider and Solution Best Suited for Your Strategic Capabilities”). These reasons alone should not prohibit users from considering these vendors if, for example, they are strong in principally one geography — or if that criterion fits the needs of a given user. 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 the vendor from this research:

- **Generix Group**: Headquartered in France, Generix Group (Generix) provides a portfolio of SCM solutions, such as transportation management and replenishment management, in addition to warehouse management. The Generix TMS is a core product in the collaborative Supply Chain Hub suite of products that Generix offers. It partners with PTV Group to offer Route Optimiser. Generix has 54 TMS customers with implementations in 39 countries, the majority of which are in Europe. Generix acquired a majority stake in Canada-based software vendor Sologlobe in October 2016 and, as of October 2018, is the single shareholder. The company used that acquisition to enter the North American marketplace. Generix has a strong focus in the CPG, retail, 3PL and automotive industries. It targets companies with a freight spend over $15 million.

- **InMotion Global**: InMotion Global was founded in 2002. The vendor developed AscendTMS, a TMS that can be used from a web browser, thus avoiding the typical complex installations, configurations and setups. AscendTMS has become the largest-adopted TMS solution (in terms of number of customers), with more than 18,000 customers. AscendTMS also offers a free TMS solution for smaller carriers, freight brokers and shippers, with a premium subscription available, that offers additional functionality. Although it is focused more on simpler shippers, it provides load optimization and shipment planning through its partnership with Scientific Logistics. In 2018, AscendTMS created a partnership with C.H. Robinson to provide carriers access to all available C.H. Robinson loads. It also has partnerships with
Truckstop.com, DAT and TriumphPay. Although most of its clients have less than $50 million in freight under management (FUM), AscendTMS is also used by large, multibillion dollar businesses. Ninety-five percent of its customers are in North America, with the rest in Latin America and Europe.

- **ProcessWeaver:** ProcessWeaver, headquartered in Richardson, Texas, specializes in providing multirouter compliance global shipping software, or what Gartner refers to as multirouter parcel management. ProcessWeaver continues to expand its footprint and includes capabilities to support multiple modes (i.e., road, ocean, air, parcel and last mile). ProcessWeaver works with shippers as well as freight forwarders. It can provide planning through its partnership with ORTEC. ProcessWeaver offers, besides its stand-alone Xcarrier solution, a native solution in SAP (in SAP ECC, EWM and S/4HANA) and also offers TMS extensions to other ERP vendors, such as Oracle, Sage IT, Microsoft Dynamics and Infor. ProcessWeaver continues to expand internationally, including some less-serviced TMS markets, such as Africa, the Middle East and India. ProcessWeaver has a strong presence in discrete manufacturing, medical devices, high tech and consumer products.

- **Transporeon Group:** Transporeon Group (Transporeon), headquartered in Ulm, Germany, has provided TMS capabilities since 2000. Transporeon first built a comprehensive SaaS-based European shipper-carrier network with integrated TMS functionality. Over the years, the vendor has been adding incremental TMS business logic to its network to address the desires of its customers. It offers capabilities such as strategic transport sourcing, benchmarking, spot tendering, transport assignment (including rate management), dock scheduling, track and trace/visibility, electronic proof of delivery, freight invoice control, and analytics. Transporeon offers comprehensive visibility to shippers, carriers and even subcontractors, with end-to-end visibility strengthened by its partnership with Sixfold. In 2018, Transporeon merged with TIM CONSULT, an international consulting company for business logistics, adding market intelligence, freight rate benchmarking and access to big data applications to its portfolio. Transporeon continues to expand in Europe and in the U.S., Asia and Russia, currently with 2,000 shippers and more than 80,000 carriers integrated through its platform.

- **TMSfirst:** TMSfirst, headquartered in Houston, Texas, started offering its cloud TMS in 2014. TMSfirst is a web-based browser and app-ready logistics platform that links industrial and commercial companies with their logistics service providers. The TMS includes capabilities for shippers, 3PLs, brokers, private fleets and carriers. TMSfirst is focused on both the needs of the shipper as well as the carrier community or broker by providing equal weighting to all parties. It allows cost saving, transparent online handling of all workflows related to the transportation management process. TMSfirst has about 24 customers, of which 85% are in the midmarket segment, in all regions around the world. TMSfirst has customers across the 3PL, logistics service providers/carriers, petrochemical, industrial construction and machinery, brokerage, and wholesale distribution industries.

- **Transwide (part of Alpega):** Transwide, headquartered in Brussels, Belgium, with offices in Europe, North America (New York), Brazil (São Paulo) and Asia (Shanghai), was acquired by Castik Capital in 2017. It is part of the Alpega Group, together with inet, TenderEasy, and
freight marketplaces Teleroute, 123cargo (before BursaTransport) and Wtransnet, the leading freight exchange in Spain and Portugal acquired in 2018. Transwide connects more than 720 shippers and 3PLs to a network of more than 70,000 carriers via its SaaS offering. Transwide enables shippers and logistics providers to source, plan, execute, settle and analyze their transport operations. Transwide caters to large, midsize, and small shippers and logistics providers, and has deep domain expertise in primary material industries (i.e., chemicals, minerals, metals, paper, packaging, machinery, fast-moving consumer goods [FMCG] and agriculture).

- **Unifaun**: Unifaun was created in the summer of 2014 when the two leading companies within transport management in the Nordic market merged (Unifaun and Memnon Networks), creating the common company, Unifaun. Unifaun's TMS systems are used in around 80 countries, with a turnover of around €26 million in 2018. Unifaun is the leading transportation management solution in the Nordic market. With more than 20 years of experience, Unifaun provides innovative TM-systems, with the goal to simplify and improve for the transport buyer as well as for the carrier. Its goal is to provide a TMS with a low TCO and short implementation lead time. Unifaun TM-systems are mainly used in the manufacturing, retail and contract logistics industries. Seventy-five percent of its customer base is midsize companies.

- **vTradEx**: vTradEx, headquartered in Shanghai, China, is the leading local TMS and WMS provider in China. Its eLOG suite provides a set of cloud-based, web and mobile logistics management applications, including order management systems (OMSs), TMSs, VRS solutions and WMSs. vTradEx offers eLOG TMS and 56linked as a multitenant cloud TMS. Its TMS has strong capabilities in solving B2C last-mile delivery problems. The company also offers consulting, implementation, training and other services. The cloud TMS, which operates in China, is hosting more than 800 third-party logistics companies, more than 250,000 users and mobile drivers, and more than 100 shippers. It services both small and very large shippers, with 65% of its customers having a freight spend of more than $100 million. vTradEx is mainly present in the logistics service provider, 3PL, consumer packaged products, retail, automotive, high-tech and manufacturing industries. It has more than 500 TMS customers in Asia/Pacific, mainly in China, Japan, Malaysia, Singapore and Thailand.

### 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 favor 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”). They 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. Although there might be some viability concerns for some vendors, all other factors being equal, viability alone should not preclude users from considering these vendors.

- **Sales Execution/Pricing:** Until recently, sales execution and pricing were not significant differentiators in the TMS market. 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 multinational companies choosing global solutions or customers buying in select geographies.

- **Market 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 growth of a vendor’s client base are also important because they demonstrate the vendor’s ability to identify and satisfy the needs of customers.

- **Operations:** Operational competence is an 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 to not only sell and implement a solution but also help customers fully exploit their TMS investments is critical to long-term success.
Finally, a vendor’s management structure, experience, skill and expertise play significant roles in a vendor’s ability to harmonize its vision, strategy, tactics and actions.

### Table 1: Ability to Execute Evaluation Criteria

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Weighting</th>
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</thead>
<tbody>
<tr>
<td>Product or Service</td>
<td>High</td>
</tr>
<tr>
<td>Overall Viability</td>
<td>Medium</td>
</tr>
<tr>
<td>Sales Execution/Pricing</td>
<td>High</td>
</tr>
<tr>
<td>Market Responsiveness/Record</td>
<td>High</td>
</tr>
<tr>
<td>Marketing Execution</td>
<td>Low</td>
</tr>
<tr>
<td>Customer Experience</td>
<td>High</td>
</tr>
<tr>
<td>Operations</td>
<td>High</td>
</tr>
</tbody>
</table>

Source: Gartner (March 2019)

### 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:

- Although 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. SCE convergence refers to the growing need for supply chain organizations to do a better job of orchestrating and synchronizing processes, subprocesses and activities across supply chain functional domains (e.g., warehousing, transportation, fleet and yard).

- All qualifying solutions in this Magic Quadrant for TMS handle basic multimodal TMS planning execution and settlement. However, 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. These include areas such as 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 influences 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

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Understanding</td>
<td>High</td>
</tr>
<tr>
<td>Marketing Strategy</td>
<td>Medium</td>
</tr>
<tr>
<td>Sales Strategy</td>
<td>Medium</td>
</tr>
<tr>
<td>Offering (Product) Strategy</td>
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</tr>
<tr>
<td>Business Model</td>
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</tr>
<tr>
<td>Vertical/Industry Strategy</td>
<td>High</td>
</tr>
<tr>
<td>Innovation</td>
<td>High</td>
</tr>
<tr>
<td>Geographic Strategy</td>
<td>High</td>
</tr>
</tbody>
</table>

Source: Gartner (March 2019)

Quadrant Descriptions

Leaders

Leaders have a compelling vision and a reliable Ability to Execute. Leaders in the TMS market have a broad, deep and differentiated 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 to freight payment and audit functionality. Leaders should 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 or vehicles. They
are also adding functionality to address the unique needs of emerging markets. They are 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.

**Key Characteristics:**

- Reasonably broad and deep TMS offering
- Proven success in Level 3 and Level 4 transportation networks
- Participation in a high percentage of new deals
- A strong and consistent track record
- Consistent performance and vigorous client growth and retention
- Enduring visibility in the marketplace from both sales and marketing perspectives
- Proven ecosystem of partners
- Global scale

**Challengers**

Challengers offer reliable TMS solutions and have a historically reputable presence generally supporting moderately 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 they 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.

**Key Characteristics:**

- Capable, proven and mature TMS, with numerous live customers
- Consistent track record of successful implementation
- Offerings that are not as broad or as deep as TMS Leaders’ offerings
- Lacking or trailing in having a compelling SCE convergence strategy and capabilities

- Generally lacking the overall thought leadership, innovation or compelling visions of next-generation TMSs

- Not the same global scale as TMS Leaders

**Visionaries**

Visionaries have a compelling vision for achieving a differentiated position in the TMS market, possess 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 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. At a minimum, solutions in the Visionaries quadrant fall into one of two broad categories. They can be established TMS offerings that have yet to mature into leading positions in the market, or they can be innovative specialist vendors with unique and potentially disruptive views of where the market is going. These vendors can exhibit innovation in TMS products, services, or go-to-market and deployment strategies, but lack in other areas.

**Key Characteristics:**

- Coherent, compelling and innovative strategy that seeks to deliver a robust and vibrant offering to the market

- Thought leader in one or more TMS solution dimensions that tend to be on the leading edge of emerging concepts

- Yet to demonstrate an ability to handle a broad range of complex user requirements

- Execution gaps or lacks global scale

- Innovation in TMS products, services, go-to-market, vertical or deployment strategies

**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 many users, 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.

Key Characteristics:

- Focus primarily on a geography or vertical market
- Generally not a differentiated offering, although it can have some unique capabilities
- Not yet well-established and visible in the market
- Not a broad or deep TMS
- Market momentum and product or company viability that is possibly in question
- Lacking in SCE convergence

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, stand-alone parcel management, international logistics platforms, and carrier-centric TMS. (See “Market Guide for Vehicle Routing and Scheduling,” “Market Guide for Multicarrier Parcel Management Solutions,” “Hype Cycle for Supply Chain Execution Technologies, 2018” and “Warehousing and Fulfillment Applications and Technologies Vendor Guide.”)

This research focuses specifically on a holistic multimodal TMS in which 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. Furthermore, the emphasis in this research is on solutions that support primarily for-hire transportation, where shippers contract with carriers for freight movements. We do, however, consider whether certain solutions also support dedicated and private fleet transportation as one of many modes supported by the applications, but we do not consider solutions that support only fleet planning and execution. Historically, TMS emphasis has been on over-the-road modes (FTL and LTL), but now a wide variety of shippers routinely use multiple shipping modes. (See “Gartner’s Model for Holistic Multimodal Transportation Management Systems: Core Capabilities” and “Gartner’s Model for Holistic Multimodal Transportation Management Systems: Extended Capabilities.”) All TMS applications covered in this research do an acceptable job of planning and executing basic over-the-road moves. However, market and transportation economic and business conditions are driving companies to use more modes and more complex routing scenarios, which places more importance on a TMS’s ability to handle complex multimode planning scenarios.

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, and their ability to deploy outside North America and provide 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.

**Market Overview**

TMS vendors continue to invest in expanding the breadth and depth of their TMS suites as well as their global footprint. 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 over-the-road planning, execution, track and trace, and settlement, and they 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. These include tactical (forward-looking) planning and optimization, freight procurement, load design, asset-based/fleet-based routing and scheduling, appointment scheduling, multileg/multimodal international shipping, intermodal and rail, multicarrier parcel management, and performance management. Furthermore, a few have expanded the scope of their TMSs to support global deployments and international logistics.

The evolutionary expansion of the depth and breadth of TMS offerings improves the value proposition for TMSs. Enhancements in freight procurement, analytics, 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. This value is beyond the traditional boundaries of better load planning and electronic freight tendering. During the past several years, Gartner has seen notable investments in areas. These include 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 companies.

**Evidence**

The following were used to collect information about the vendors and their TMS offerings:

- **Vendor presentations and demonstrations to the Gartner analyst team**: Specifically, to support this research, each vendor is allotted time to present information about its company and solutions. Each vendor is allotted the same amount of time for this research, but Gartner also conducts interactions with vendors throughout the year as part of normal and ongoing relationships with user and vendor clients.

- **Research and data collection**: Each vendor is also asked to respond to and fill out a survey that investigates, in more detail, factual information about its company and TMS offering. Also as part of this exercise, Gartner requests that each vendor provide at least six, or more, TMS customer references not previously provided to Gartner. We look for customer


references that demonstrate the areas of functionality and customer experience in which the vendors believe they are differentiated.


Note 1
The Five Levels of TMS Complexity

At Level 1 and Level 2, there is no real planning, whereas from Level 3 to Level 5, the robustness and complexity of the planning requirements increase from level to level. At Level 5, the complexity shifts to the international scope of operations and deals with the added needs of running a global freight operation. TMS solutions share many characteristics, but there are distinct differences across the strata of TMS. These can be broken down into five system levels — from the simplest to the most sophisticated and advanced.

Level 1 (Fragmented)

Level 1 TMS solutions offer limited transportation capabilities, normally as minimal additions to the order management and fulfillment capabilities of ERP applications. Level 1 TMS applications are rudimentary, mostly manual TMS capabilities, such as simple mode and carrier selection at order entry time. Many ERP solutions provide a place to select a carrier for a specific order from a fixed routing guide, a list or as specified by the customer. Some also offer minimal mode selection based on high-level rules, such as delivery promise date, which helps determine if an order goes parcel/next day or less than truckload. Normally, these solutions support a fraction of an enterprise’s transportation activities. The remainder are typically supported manually.

Level 2 (Execution-Centric)

This level introduces more transportation-specific functionality, focusing primarily on the execution aspects of over-the-road transportation — tendering shipments to carriers — and, in some cases, providing limited and rudimentary planning capabilities. Level 2 TMS provides more dynamic selection of modes and carriers while focusing on improving the shipment-tendering process. However, Level 2 TMS typically supports a minimal number of modes (for example, truckload and less than truckload), and most are regionally specific (for example, the U.S.). The basic systems provide some electronic data interchange (EDI) tendering. More robust solutions add carrier portals, whereby email messages or web forms are used to electronically tender to non-EDI-capable carriers.

Level 3 (Expanded Footprint)

Level 3 TMS solutions expand the functionality by adding better operational planning, visibility (track and trace), some freight rating and carrier contract management, audit and pay, and some freight analytics. These solutions are closer to providing a closed-loop TMS (plan, execute, monitor, settle), with somewhat more sophisticated planning engines, and more options for consolidating shipments and selecting the best carrier. At this level, we see improved
operational planning for a single direction (for example, outbound or inbound) and more modes (for example, parcel, less than truckload, truckload, air, intermodal, rail and ocean). We also see minimal support to identify backhauls and round trips, more robust load consolidation, and better carrier selection.

Level 4 (Advanced Planning)

This level introduces increasingly sophisticated transportation planning features focused on improving mode selection, load consolidation, routing and carrier selection. It also allows for the simultaneous consideration of inbound, intraenterprise and outbound shipments in a single planning and execution environment. Level 4 TMS has more robust options and greater levels of inherent model sophistication and flexibility. These systems are aimed at constructing transportation plans that exploit more opportunities to combine loads, build round trips, build continuous moves or exploit advanced concepts (such as pool and floating pool-point distribution) to further reduce costs while meeting service objectives. These systems are often used to centralize transportation planning with the most advanced shippers, creating a shared-service organization spanning functional areas, business units and geographies. Breadth continues to expand. These types of Level 4 solutions also expand the footprint by adding capabilities such as freight procurement, bid optimization, forecasting, tactical freight capacity planning and more robust performance management.

Level 5 (Globalization)

The previous levels focus on domestic/regional transportation, whereas the emphasis at this level shifts to global transportation/logistics operations. Level 5 operations are usually the most complex and sophisticated. This is because these organizations need to support multileg shipments that typically span multiple countries, multiple modes of transportation, multiple parties involved in a shipment and shipments with long cycle times. Level 5 TMSs are designed to handle the complexities and special needs of a global transportation operation. At a minimum, these systems must be globalized to support multiple languages, currencies, geographies (road networks) and other international features, such as date formats and postal codes. More important is the need to support global transportation requirements, such as multileg shipments, international documentation and additional modes, such as ocean and international air shipments.

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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