



What TMS system is right for you?

A great TMS solution for one shipper may completely miss the mark for another. Find out what you need to know about features, scope and cost/benefit.



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As economic indicators improve, there is growing interest among shippers and buyers of transportation services to restart some of their infrastructural systems improvement projects that had been postponed due to cost-cutting. Improving inbound transportation practices is a major focus and one that often requires an effective TMS (Transportation Management System). A typical question is simply “What TMS should I buy?”

In general, shippers (or any buyers of transportation services) are having a difficult time finding reliable, objective information about TMS vendors and the nature of their products. Web searches and Web site visits do uncover a wealth of alternatives, but since Web sites are heavily marketing- and sales-oriented, shippers are often

not sure they are looking at information relevant to themselves.

Each shipper has unique products, client locations, handling requirements and distribution schedule needs. Business profiles also include factors such as production facility or distribution centre locations, as well as planned new lines of business and partnerships. Outsourcing – in part or entirely – to 3PL partners is another common and complicating business scenario. Until these business profile characteristics are fully understood, no informed TMS selection decision is possible. A great TMS solution for one shipper may completely miss the mark for another when it comes to features, scope and cost/benefit.

Recently, Dan Goodwill and Associates conducted a survey in response to the growing interest among shippers to start the TMS investigation process. The objective was to catalogue a number of shipper-oriented TMS vendors plus an outline of their product offering in an impartial, non-ranking manner. The result is a baseline of vendor and TMS facts which, coupled with an objective profile regarding a shipper’s business needs, will permit a more timely and confident move from the “Where should I start?” phase to the “Let’s call the appropriate vendors” step.

The survey focused on:

- Current TMS vendor contact information
- Size, location, any particular industry focus or specialty, etc.
- Carrier management and compliance functionality
- Shipment planning and execution capabilities
- Monitoring and reporting
- Specific hardware or software requirements
- Deployment architecture (Web, SaaS, stand-alone, etc.)
- Hosting options
- Pricing ranges and structures
- Version releases and user groups

The survey methodology started with a search of Web sites, publications and industry contacts to develop a list of TMS vendors to contact. Examining Web sites revealed that simply pulling information from these sources would not provide a complete and objective picture, since all of them contained strong marketing messages designed to promote buying interest. Several vendors acknowledged that their Web sites do not contain comprehensive, objective information about their TMS products.

To address the shortcomings of Web sites as “fact” sources, the

survey involved personal or phone interviews with each vendor, employing a structured questionnaire of 142 questions spanning 18 topic categories.

Thirteen vendors representing 14 different TMS products were contacted and interviewed directly. Several other vendors did not respond in time (none actually refused to participate) and they will be included in subsequent annual survey updates.

The following vendors/products were included in the survey: Agile Elite (Agile Network), CanLogix (Kewill’s Clippership), Descartes TM, Scancode, High Jump, Lean Logistics, Logility, MercuryGate, NuLogX, ODATA, One Network, Precision Software, RedPrairie, and Varsity.

Overall, the interviewed vendors representing 14 TMS products averaged 17 years of experience in the industry with the oldest being 35 years and the newest six years. The number of client installations ranged from a low of four for a fairly new entrant in this market to one vendor with more than 600. The median number of client installations was 125. In terms of geographic scope, 75% of the TMS products were global in scope and all were suitable for North American transportation management – none were limited to just Canada or the US.

TMS vendors acknowledged that merger and acquisition activities have played a strong role in business growth, concentration of skills and expertise as well as technology convergence. All but three of the vendors have been involved in M&A activities.

Vendors generally attempt to develop TMS products that are suitable for shippers involved with a wide range of carriers, client industries, products and modes. However, they do not all have the same level of experience across the spectrum. Survey responses showed that most have experience in the common industries and products such as auto parts, CPG (Consumer Packaged Goods), pharmaceuticals, etc. Refrigerated goods, oilfield and worksite delivery material is more specialized among the TMS vendors. Liquid and dry bulk capabilities and experience was most rare.

Specifically, industry experience among the TMS products showed the following distribution:

- Auto parts 79%
- CPG 100%
- Refrigerated goods 57%
- Pharmaceutical 93%
- Fresh food 64%
- Dry, packaged food 71%
- Office supplies 86%
- Liquid bulk 36%
- Dry bulk 29%
- Oil field 43%
- Worksite delivery, etc. 43%
- Flat Bed – equip, etc. 57%
- Chemicals, paint, hazardous 79%
- Consumer electronics 100%

Of the 142 questions asked in each interview, 59 focused specifically on TMS application functionality. The objective was to obtain capability profiles with respect to detailed shipment management functionality like carrier maintenance and selection, rates and services by carrier, shipment consolidation and optimization, freight charge “mark-up” by client, shipment tracking and visibility, standard and non-standard EDI capabilities, etc. These basics and many others are covered in different ways by 90-100% of the TMS products.

Additionally, the survey examined advanced functionality like more complex load planning, proactive exception alert notifications, freight bill payment and additional carrier details such as insurance and authorization. Fifty to 90% of the TMS products included some of these more advanced capabilities and often did so using a range of techniques and interfaces. As functionality gets more complex and specific, it is increasingly important for the shipper to have a solid grasp of its own preferred processes and methodologies.

Less than 50% of the TMS solutions support integrated postings to Load Boards (posting and removing load tenders) or Freight RFP bid management. With this in mind, it is most important for a shipper to have an objective understanding of its needs and business plans in order to determine which available functionality is critical, good-to-have or not important before selecting a TMS solution.

A majority of products support freight bill payment as well as appropriate postings to financial applications. However, for those shippers desiring all payments to be processed through their stand-alone financial systems, 100% of the TMS products (including those with payment capabilities) do support integration with external payment processing and financial applications. This is important since many shippers will have a financial management and reporting solution already in place and do not need or want another one.

Product and packaging characteristics, shipment sizes, schedules and distances all tend to influence distribution choices regarding mode and equipment. TMS products do not all offer equal expertise and capabilities across all modes. Although common modes are very well represented by most, some are not supported at all by a few of the solutions. The survey found the following distribution:

LTL	TL	RAIL	INTERMODAL	DRAYAGE	AIR	OCEAN	COURIER, PARCEL
93%	93%	71%	79%	64%	93%	86%	93%

While 93% claim to have courier shipping functionality, it is important to look closely at this capability if it is important or significant to your shipping strategy. Courier compliance is complex and fast-changing and several TMS solutions rely on third-party “compliance engines” rather than build and maintain their own. Either approach can be perfectly effective – just look closely if your business requirements analysis has highlighted the need for courier shipping as cost and schedules for rate and service updates may vary widely among the TMS vendors.

The shipper’s organizational complexity is an area most TMS products support well. Multi-site, multiple divisions and companies as well as multiple weight metrics (pounds and kilos) and languages were supported by 93 to 100% of the products. Multiple currencies are slightly less at 86% while 79% of the products support multiple sales taxes.

Deployment models were interesting – less than half (six) of the vendors offered both hosted and purchased options. Just one third were only available as purchased software, while one fifth were only available as SaaS or hosted solutions.

With SaaS (Software-as-a-Service) becoming more common, the term is often confused with “hosted” or “Web-based.” Hosting may simply mean running the purchased application on equipment not owned by the shipper and if the TMS vendor does not offer this hosting service (several do not), then it can often be accomplished using a third-party hosting provider or ASP (Application Service Provider), thus saving the shipper from significant internal IT infrastructure and overhead cost. Purchased software TMS solutions can generally be supported by an ASP.

Sixty-four percent of the vendors claim to offer SaaS deployed TMS solutions. However, the SaaS variations should be investigated

and evaluated: “multi-tenant” SaaS means all shippers use the same application. The multi-tenant deployment model is the ultimate SaaS deployment objective as it provides the fastest deployment and lowest cost, but for some TMS products, this can result in severe flexibility limits such as no customized screens and limited (or no) custom process logic, etc.

Shippers attracted to the SaaS alternative by the prospect of quick implementation and low cost per transaction, should be certain that they do not need unique functional flexibility and feature control. The SaaS model is evolving to include powerful set-up tools and shipper-specific workflow configuration, but they are not all there yet. Once again, a shipper’s needs must be clear before choosing a deployment model that is right for the business.

With respect to pricing, the underlying metrics have evolved over the last few years to become more “value”-based rather than using metrics such as the number of users, which is used by just over 30% of the vendors. The majority of TMS products (purchased or SaaS) base the price on factors like annual transportation spend, shipment count, etc. Transaction or access counts are also sometimes used in combination with the value measures. Price per unit of measure or general price ranges were not openly shared, however, one vendor simply provides a price chart scaled by shipper size and volume.

Among vendors providing purchased software solutions, price ranges were very wide. Two vendors had purchase price ranges from \$100K to \$1 Million. These two were also extremely robust regarding functionality and capacity. Fifty percent estimated purchase costs as low as \$50K to a high of \$500K, and two vendors

were around \$50K+, but these two had low planning and complexity capabilities.

Price ranges among SaaS vendors were also very broad. One vendor has clients paying as low as \$1,500 and up to \$120K per month reflecting the wide variation in underlying volume metrics. However, one vendor did quote a flat rate of \$2.70 per shipment (subject to monthly minimum).

Note that implementation consulting, training and support costs are determined separately regardless of the purchase/deployment model selected. Total Cost of Ownership (TCO) must include these as well as any integration, infrastructure and staffing costs implied by a particular deployment choice. Annual maintenance typically only applies to purchased software solutions and those vendors quote an average of 18% (low of 15%, high of 23%) of the purchase price. Some levels of support can cost as much as 50% of the purchase price.

In summary, the Shipper Focused TMS survey confirmed that numerous TMS vendors collectively exhibit solid industry experience spanning diverse carrier management, shipment management and functionality capabilities. It also confirmed that there is diversity among the TMS products in terms of deployment, flexibility and specialized capabilities such as shipment optimization, advanced management reporting and dashboards, etc.

The most important differentiator between the available TMS products is the shipper itself, in terms of its specific needs. The TMS choices are certainly not all equally suitable, but starting from a careful inventory of a shipper’s carrier management and shipment management requirements, a suitable TMS selection is possible and likely.

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