Transportation management

[Transportation](#)

In the past, transportation management was a tactical concern – a necessary cost of conducting business, which does not have much impact on profit margins. Today, rising fuel prices and increased pressures for improved service have made transportation management a strategic issue. Companies have to meet and exceed customer expections if they are to be the preferred service and goods provider. A transportation management system (TMS) is an end- to -end software solution that is a part of supply chain management concerning transportation operations. It includes planning and optimization, execution, business intelligence, and freight payment.

In addition, it also supports additional services, such as bid optimization, network modeling, yard management, benchmarking, and dock scheduling. Inbound and outbound networks too are supported on a global basis, typically helping companies to move freight from origin to destination cost effectively. In this essay, I will be using Sargento Foods as acase study. The focus of the essay will be on analysing the existing TMS solution adopted by the firm, identifying their areas of weaknesses and recommending strategies that will help to improve the transportation system to better suit the evolving needs of Sargento Foods.

Background information Sargento Foods Inc. is afamily-owned business, employing approximately 1, 300 people at four Wisconsin facilities, one in Washington, and one in South Dakota. They are one of the largest converters of cheese in the United States, offering a variety of cheese products marketed through four business divisions: Consumer Products Division, FoodService Division, Food Ingredients Division and Culinary Solutions. Inadequacies of its existing system before the switch to Sterling TMS:

Sargento was managing their distribution and logistics with a hosted TMS solution which was not able to meet their operational requirements.

When Sargento Foods planned orders into shipments, the previous solution did not consider the cost, service or contractual commitments to carriers. It was not able to accurately allocate transportation costs at the order level. For example, accessorial costs were not being allocated. Recognizing the limitations of their current system, Sargento realised the need for a solution that would meet their current operational needs, as well as any changes they may face in the future. Solution adopted by Sargento Foods

Sargento and identified IBM to be their provider and went live with Sterling Transportation Management System (Sterling TMS) in 2006, delivered on cloud, integrating with 30 carriers, shipping approximately 3, 000 orders per month, and transporting 24 million pounds of Sargento products on average per month. Sterling TMS works with Sargento's existing supply chain applications as well as IBM® Sterling Information Broker®, allowing them to improve logistics efficiency and customer satisfaction.

Customers are placing orders via EDI, which are then fed into Sargento's SAP ERP system. SAP feeds inbound purchase orders to Sterling TMS as well as Sargento's Warehouse Management System. Sargento uses Sterling TMS for shipment planning, execution and freight payment. They are now able to track the performance of their carriers, allowing them to identify areas where they can eliminate costs. They are also utilizing the system for visibility purposes and can now accurately allocate transportation costs to their customers.

With Sterling TMS they can clearly identify where their shipments are throughout the process and confirm the right rates for the right shipments. They are also using freight payment on the back end after the shipment is completed. Key benefits: As Sterling TMS system is delivered on cloud, this results in fewer IT resource requirements, no upgrade costs, configuration instead of installation, faster and easier connectivity, and lower total cost of ownership using a system that ps the entire process of Planning, Execution, settlement and Performance analysis.

On time delivery Sargento Food's on time delivery has always been 99%. With the implementation of Sterling TMS, on time delivery has improved. Lower cost with the implementation of Sterling TMS, Sargento has been able to lower the cost of product shipped per pound by 15 percent. through more efficient planning, clear identification of carrier costs and formalized contracts within Sterling TMS. 60 percent administrative cost savings by automating freight payment Sargento improved operational efficiencies by eliminating manual processes and non-value added services.

In the past, if a carrier charged Sargento an incorrect transportation cost, Sargento did not have the visibility to correct these charges prior to being invoiced for them. Sargento would calculate the rates, but were often invoiced using a different rate. As a result, Sargento had a difficult time reconciling payments. Since the implementation of Sterling TMS, each carrier has a contract in the Contract Management Module of the system where their rates are locked and paid accordingly with no discrepancies.

Not only has the system helped Sargento manage costs, the automation has reduced the manpower required to reconcile payments from 15 hours per

week to six hours per week resulting in a 60 percent reduction in administrative costs for freight payment. Improved allocation of costs Accruals are done as soon as the product is loaded at the distribution center. The billing information is fed to thefinancedepartment and the accrual of transportation costs is done in real-time. Accessorials that occur during delivery are captured as part of the invoicing process and are also allocated down to the order level.

This helps to ensure the real cost of freight is captured for each customer. With Sterling TMS they are now able to evaluate charges during the year to better determine what the customer charges should be the following year, taking in to account the back end fees that each customer was accumulating. This allows Sargento to accurately allocate costs back to their customers and helps ensure Sargento remains profitable. Reduced LTL shipments by 60 percent Prior to the implementation of IBM Sterling TMS, Sargento was doing 10 percent of their shipments via Less than TruckLoad (LTL).

With the visibility provided by IBM Sterling TMS, they are able to convert more of their shipments into Full TruckLoads (FTL), with only 4 percent now being shipped as LTL. With enhanced planning capabilities, Sargento can now plan multi-stop and multi-pickup routes consolidating on average four different customer orders per shipment, for optimal execution and further cost savings. Recommendations to improve transportation management system: Improve on missing functionalities and international carrier network There is no perfect transportation management system in the market.

While IBM sterling TMS is a comprehensive solution, however it does have its own inadequacies due to its missing key functional pieces(fleet management, multileg international shipment planning/optimization and execution, and multicarrier parcel management). To improve on this, it could partner up with other providers whose strengths complement and make up for its missing functionalities to provide a more comprehensive one stop solution for clients like Sargento Foods. Sterling TMS' strength lies only in its North American carrier network and its functionality is incomplete for the most complex users.

The lack of a comparable international carrier network holds it back in complex global TMS management which could affect clients i. e Sargento Foods should the the needs of the latter evolve with increasing complexity, requiring a complex global TMS management. Sterling TMS would have been more competitive in the marketplace if it can replicate the scale of its carrier network in international markets. Special carrier mobile application Sterling TMS gives its carriers the ability to update shipment status and tender requests using mobile devices.

Since the power of a TMS is directly proportional to the expertise of its users, vehicle operators should be trained so that they possess the skills to extract the maximum value out of the TMS solution. TMS to addsocial mediacapabilities. The communities of carriers, shippers, 3PLs, suppliers and customers who are involved in transportation process can be connected via different mediums like facebook, twitter and alsogoogle+ by sending short messages and updating the status information. Dropbox can be used for sharing invoices and carrier credential documents. Siri for TMS.

Since voice recognition is in use in the warehouse management, Sterling TMS too can also make use of this voice functionality rather than manual execution to conduct a search faster. However at present there is still room for improvement in voice search yielding precise results. Tapping into big data Beyond merely tendering the system, Sterling TMS can also further develop systems that utilise " big data" that is collected during the transportation process and stored in the TMS by imbedding business intelligence into TMS so as to analyse the data to identify key trends in the market in order to make informed business decisions.

Business Intelligence Business Intelligence helps to understand transportation expenditure and allow causes of negative trends in costs and performance to be identified so that corrective actions can be taken and enable the opportunity costs between service and cost trade-offs of different transportation strategies and tactics to be evaluated. Sterling TMS makes use of performance dashboards which is useful but does not provide Sargento with any insight on how its performance compares against industry peers or the broader market. The data only reveals information at hat instant in time and is not embedded within the TMS, which limits the ability for users to leverage it. 3PLs and SaaS providers are in the best position to provide this missing link as they have a built-in network of shippers, carriers, and other trading partners that execute millions of transportation transactions annually through their operating platforms. Therefore, Sterling TMS hey can use all of this network data—such as rates, carrier performance, and transit times to develop a " transportation index" that gives companies visibility to market-level trends.

They can then embed this index information within their TMS application and BI dashboard as LeanLogistics did with its " LeanDex Transportation Index''. CH Robinson and Transplace too are exploring ways to leverage their network data and TMS business intelligence dashboards in a similar way. Similarly Sterling TMS can tap on business intelligence to provide more value add to clients like Sargento Foods. TMS vendors will go beyond execution In its 2011 Transportation Management Report, research firm Capgemini Consulting outlined the various components that make up the execution side —as opposed to the planning aspect—of a typical TMS. One of the biggest trends we're seeing right now are TMS that are trying to be more than just execution systems," says Chris Caplice, executive director at Massachusetts Institute ofTechnology's Center for Transportation and Logistics. " Basically, a TMS gathers the information on a load to be tendered and matches that data to a historical routing guide. Then it communicates to a carrier and manages the ensuingcommunicationprocess" " The more advanced TMS is going beyond that and tapping into other information services and utilizing that data to help the shipper make the best possible decisions. If Sterling TMS can be connected directly into a market data benchmarking service that funnels data back to the system, this will positioning Sterling TMS to serve as more than just an execution feed. Customised software Transportation management systems offered by vendors like Sterling IBM should offer a flexible configuration that adapts to company's unique strategies, network constraints and variables so that it is designed according to a company's specific circumstances. With so many constraints and variables, transportation issues can't be solved with a cookie cutter software that is generally used for all companies.

Software designed should be personally customised for individual companies or may be customizable by users. The transportation management system should support a wide range of mathematical approaches, allowing the company to view the problem holistically and then constantly modify those approaches based on its current needs and requirements as the variables change. However, the cost of this may be higher and customisation would require the technical team in Sargento Foods to work togther with the software provider to come up with a custom made software specifically designed for Sargento Foods.

Also the assumption would be that employees of Sargento Foods would have the technical expertise to handle to complexities of the software. Instead this would increase the cost of implementation. While on demand solution (self service) is currently very popular and is functionality-driven; with the ability to deliver on all processes – from sourcing to planning to execution to costs auditing to reporting & analysis yet Only a few Transportation Management systems have the ability to execute with some functional depth in all areas.

Therefore Sargento Foods would probably need to take into consideration whether IBM Sterling TMS has the ability and versatility to execute across all diverse functions through continuous review of KPIs and performance reviews as well as whether they are able to continuously meet performance targets. As circumstances and economic conditions are in a continual state of flux, a system that may be applicable now may beoutdated very soon unless continual updates and improvements to the systems are made.

Sterling TMS has to continually invest in its TMS solution to ensure that it stays ahead of its competitors. Sargento Foods should also constantly

monitor and tune its strategies to address changes in its networks, supply chain, market and customer demands and adapt its strategies to capitalize on market opportunities. Rather than just letting Sterling TMS solver run unattended, Sargento Foods must always look for ways to drive more value for their business by discussing with Sterling TMS should it outgrow its system.

Managed TMS Some companies have discovered that investing in SaaS-based TMS reaped initial savings, but subsequent returns were not as rosy. The next stage in the development of TMS solutions, " is software plus consulting services, using a 3PL model. Should Sargento Foods adopt this new model,, it will be able to tap on the external expertise from the dedicated teams employed by a TMS provider often stationed permanently on-site and acting as an extension of the client's staff.

These individuals act as quasi-employees of Sargento Foods, Their relationship with Sargento Foods is ongoing and team members represent the client firm in various capacities. For instance , they are involved in customer meetings providing routine analyses and expert advice. The advantage of this is that the service provider(of the Managed TMS) has planners that do not have to go through a planning period before becoming effective as opposed to the traditional 3PL and secondly shippers like Sargento Foods do not have to worry about degradation in their planning capabilities if a key employee leaves the company.

Some customers recognize that in Managed TMS they have a partner that can provide a totally integrated transportation management program—from brokerage through to execution and optimization in a one- stop solution.

Sargento FOods may consider managed TMS solution and outsourcing its transportation management and operations to a dedicated team from a service provide. this would perhaps more effectively optimise the usage of its TMS solution. Conclusion In conclusion, Sargento Foods would better manage its transportation were the above mentioned functions adopted. For instance, improving on missing unctionalities and international carrier network; using special carrier mobile application and social media capabilities; Siri for TMS, taping into big data, using business intelligence and analytics; going beyond execution and tapping into other information services, utilizing that data to help the shipper make the best possible decision; peronally customising software design for Sargento Foods; constantly monitoring and tuning its strategies to address changes in its networks, supply chain, market and customer demands and adapt its strategies to capitalize on market opportunities.

Rather than just letting Sterling TMS solver run unattended, Sargento Foods must always look for ways to drive more value for their business by discussing with Sterling TMS should it outgrow its system. Subsequently it could consider switching to managed TMS should it require expertise from supply chain and transportation management to better optimise its operations.