



Transite

Transportation Management Solutions

**Transportation and Logistics:
Integrating Transportation into Your Supply Chain**

December 2009

Integrating Transportation into Your Supply Chain

In this whitepaper, we look at the importance of taking a macro view of transportation management in the context of supply chain management. We draw upon the inputs within Transite, but also from two experts who have deep experience into the benefits and methodologies of integrating transportation into the corporate supply chain practice.

We offer special thanks to:

Dr. Robert Handfield, Bank of America University Distinguished Professor of Supply Chain Management, North Carolina State University and Editor Emeritus of the Journal of Operations Management

Charlie Bernard who recently retired from Caterpillar Inc after more than 30 years of service where he spent more than 12 years in leadership positions within their logistics and supply chain management functions. His experience also includes senior roles within product and purchasing management.

The Current Situation

There is much current talk about the importance and necessity of integrating the transportation function into the Supply Chain. It seems that, while there is much agreement on the value such integration would bring to an organization, there is much more discussion than action. With all of the talk, how many really do it?

“Not many,” said Dr. Robert Handfield, Bank of America University Distinguished Professor of Supply Chain Management, North Carolina State University and Editor Emeritus of the Journal of Operations Management. “There’s a big difference between knowing what it takes to intelligently integrate transportation into a company’s supply chain practice, and actually doing it. And, it’s significant money that’s being wasted.”

Let’s look at some current numbers:

- Overall inbound, production-related and outbound transportation is often the 3rd highest expense on a company’s P & L
- While logistics can comprise 15% of product total cost, money spent on transportation is 50% of a company’s logistic costs¹
- U.S. companies spend over \$750 billion on transportation & logistics
- Most companies overspend by 20% due to poor transportation decisions

¹The CFO’s Guide to Transportation Spend Management, ACR Advisory Group, April 2008

Because of the recent and severe economic downturn, there's a growing realization of the high volume of money being wasted associated with transportation expenses--inbound, outbound and "plant-to-plant". Equally, there's been increased recognition on the impact that transportation pricing and service can have on sales and customer relationships.

Why it is Like This

As companies look to more tightly integrate transportation into their supply chain practice, daunting challenges become apparent. Best-practice solutions are not just software solutions. They are a combination of processes, technologies, building cooperation and coordinating independent internal functions and the personalities of people. These challenges can intimidate companies and deter them from fully committing to transportation integration. But the fact of the matter is that transportation is much too vital to a company's bottom line to be over looked.

Charlie Bernard, a supply chain consultant and former VP of Supply Chain at Caterpillar Inc. said, "If you look at the three broad functional areas of a traditional supply chain-- Product Management, Supplier Management, Operations / Supply Chain Management--transportation is a critical function in each one."

Caterpillar, commonly known for their heavy machinery, is a forerunner of supply chain management with more than 80 years of supply chain and logistics practices. The company has a dedicated business unit, Caterpillar Logistic, with more 100 facilities in more than 23 countries. Recently, they have collaborated with Ford Motor Company and SAP to develop a Service Parts Management solution which incorporates world-class process knowledge and intellectual property to deliver a fully integrated state-of-the-art solution linking planning and execution, optimizing performance across a range of industries.

"For starters, most organizations today have 'siloe'd' reporting structures, said Bernard. "So, transportation is viewed as a line item of accountability within a particular function of the supply chain. Transportation must be viewed horizontally, across the entire organization so that the full transportation function can be seen. All three functional areas must work together in supply chain planning and execution".

"Also, entire segments of the transportation industry use almost no electronic commerce," said Bernard. "This makes it almost impossible to make efficient business decisions and difficult to share information across different parts of the supply chain."

What Can Be Done: The Optimized Organization

An obvious benefit of integrating transportation is you are able to lower the cost for inbound shipping, saving you money and reducing the cost of goods sold. This benefit is also derived in the building of products that require plant-to-plant moves in the manufacturing process.

However, one of the largest and less apparent benefits of transportation integration and management is found in outbound shipping. Because customers are typically charged for shipping and handling,

there is often less scrutiny, yet companies can turn a sizeable, consistent profit in this area. Modern transportation management systems which reliably identify “least cost shipping practices” enable shippers to contribute healthy profits as the result of the difference between minimized outbound freight costs and what customers pay for shipping. Sales and customer relationships benefit in that a company has greater breadth and clearer visibility to accurate freight costs on the transaction level.

According to Dr. Handfield, there are five levels of integration (listed on final page, Appendix 1)

“Most companies are on the first or second level,” said Handfield. “It takes a corporate commitment to get to the fifth level but this is where companies get a full view of their supply chain—the ability to track your product from beginning to end, letting them to troubleshoot problem areas as they happen. This information is not only useful to the head of Supply Chain, but almost every function within the company.”

In the chart listed in Appendix 1, one can see both the benefits derived from the increasing levels of sophistication, and the involvement of other functions.

The benefits are immense. The challenges are daunting. It seems overwhelming.

Technology, process management and people are critical. Once a company has decided to make the commitment to integrate transportation into their supply chain, here are some tips to help make this transition a successful one:

- **Take it step by step.** Instead of taking one giant leap to implement an entire plan, take it one step at a time. Prioritize steps based on business needs and other factors. This step-by-step approach reduces risk and initial shock and also makes the transition much smoother. If done correctly, it can even pay for itself when the savings acquired in the first step can pay for the second step, and so on.
- **Combine processes and people with technology.** Technology can only take you so far. It is crucial that you implement the correct processes and have key employees and functions onboard with the approach.
- **Create Team Thinking and embrace change:** “Psychology” is as important as getting the right tools and processes. Create a project environment where everyone is working toward the common goal. It’s also important to bring in not only the internal (various parts of your business) but the necessary and important external (different parts of your supply chain) sectors of your business.
- **Don’t Reinvent the Wheel:** Talk with people, companies, and industry experts etc. who have experiences. This step can save time, energy and money.

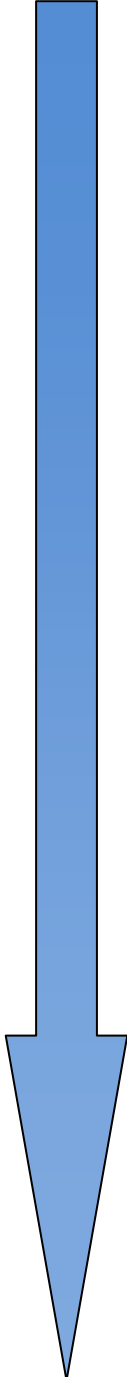
Integrating transportation into your supply chain may seem like a daunting task. By taking advantage of modern transportation management solutions significant approaches can be initiated to take on the challenge.

Here are some immediate steps:

- **Inbound Freight:** When working with suppliers, work with them to separate the cost of goods from freight. This provides visibility of the actual cost of freight so transportation management practices can be applied to reduce inbound shipping costs. Ultimately, companies achieve this reduction by not paying the up-charged shipping costs and directing suppliers to use the least cost transportation method as determined by your own company's carrier agreements, not the vendor's.
- **Outbound Freight:** First, get rid of the static routing guide and use actual cost instead of simple parameters such as weight & mode. You will be greatly surprised at the savings, not only within the LTL mode, but also between modes. Secondly, look for ways to optimize your transportation practices to lower transportation costs. Other examples include opening rate negotiations with more carriers, and optimizing orders to same customer while continuing to meet agreed upon levels of service. Such practices offer the ability to make more money in "prepay and add" applications where transportation costs to the customer should consistently be viewed as a profit center.
- **Generate and Surface Quality Data to See Financial Impact of Inbound and Outbound Freight:** Data is critical in the generation of meaningful financial reports. This puts emphasis into detailed electronic transactions, the appropriate technologies, and smooth integration into the financial reporting system. Immediately, a company will be able to view: the financial impact of cost of transportation (inbound and outbound) into cost of goods sold, ability to meet customer-driven service levels, and more.
- **Empower Customer Service:** Strengthen customer services by enabling them to see accurate transportation price information. This delivers real-time accuracy while eliminating guesses, estimates or call-backs. The transaction can be closed faster and shipping profitability is maintained at a desired margin.

In closing, constantly negotiating with and between carriers to get the lowest prices does not offer a sustainable competitive advantage particularly if competitors can get the same deals, *and* if integrated inbound and outbound transportation management practices are ineffective. Companies are wasting millions of dollars by not effectively integrating transportation into their supply chain. It's hard work but companies who successfully do the work will not only get a better transportation management function, but will likely get fresh perspectives into their supply chain management practice, and ultimately a stronger competitive edge.

Appendix 1, Dr. Handfield’s Five Levels of Integration



1	Ad hoc	<ul style="list-style-type: none"> ▪ Physical distribution and shipping process not defined. ▪ Performance metrics for carrier selection and transportation costs do not exist ▪ Transportation costs bundled in COGS or as overhead, with no visibility of total cost. ▪ Criteria for carrier selection not defined and performed differently throughout the organization. ▪ No visibility of shipments en route or at final destination.
2	Defined	<ul style="list-style-type: none"> ▪ Internal process for shipping and carrier selection defined and documented. ▪ Shipping process not implemented consistently across the enterprise. ▪ Companywide policy for shipping not consistently followed. ▪ Internal needs of various departments and entities begin to be determined. ▪ Manual tracking systems in place with multiple provider portals.
3	Managed	<ul style="list-style-type: none"> ▪ Policies and processes for shipping defined and implemented. ▪ Goals and needs of carrier selection process are assessed internally by all involved and decisions are made. ▪ Cross functional teams develop guidelines and metrics for assessing potential partners, reviewing performance metrics, and assessing improvements. ▪ External partners are contacted and integrated into transportation processes. ▪ Some visibility of tracking shipments.
4	Leveraged	<ul style="list-style-type: none"> ▪ Aligned transportation strategy agreed to across all business units with single portal for access. ▪ A continuous improvement plan to meet goals and objectives involves transportation providers to generate ideas and provide real-time feedback on channel cost savings opportunities. ▪ External processes are managed and measured and suppliers are evaluated on recognized measures. ▪ Transportation providers awarded business based on documented performance measures. ▪ Continuous improvement processes and measures are developed but not in consistent, widespread use.
5	Optimized	<ul style="list-style-type: none"> ▪ Customer marketing channels aligned with all transportation providers and decision-making process documented ▪ Upstream and downstream supply chain members are involved in scheduling shipment process. ▪ Carriers and customers collaboration in transportation channel cost optimization. ▪ Complete visibility and tracking of all shipments en route and arrival at final destination. ▪ Continuous improvement and feedback from customers is incorporated in the shipping process.