Supply Chain Thought Leadership Series

SupplyChainDigest™

The 10 Keys to Global Logistics Excellence

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The Global Supply Chain – You Better be Good

Globalization of the world economy and our supply chains has advanced at an almost unbelievable speed. Growth in world trade, and corresponding cargo container movements, continues to substantially exceed overall economic growth, meaning that trade volumes are doubling every 5-7 years.

Being part of this global economy is high on the priority list of most companies today, whether it is to capitalize on global sourcing opportunities to reduce costs and assets, take advantage of private labeling strategies, or tap into the surging business and consumer markets of China, India and other developing markets.

Yes, ***The World is Flat***, as Thomas Friedman of the New York Times wrote in his best selling book. What Friedman called "supply chaining" is fundamental to this leveling effect, as barriers to trade and interdependence are reduced across the globe. Supply chain managers are caught in the middle, with a changing decision environment and a lack of clear information to help guide the decision process.

What this says very simply is that for most product-based companies today, excellence at the global supply chain won't be just a desirable goal; it will in fact ***become a fundamental requirement for the business to succeed and prosper***. It's that important.

Let's look at one real world example. A billion dollar division of a Fortune 200 industrial company had succeeded for decades making glass-related products for automotive, aerospace and other industries. Its success was in large part based on exploitation of its manufacturing advantages: proprietary production processes, significant investment in assets, and its position as the low cost producer – at least in North America.

But recently, due to the increased ease of global sourcing, manufacturing quality improvements overseas, and a reduction in glass-related tariffs, its market dynamics have changed substantially. In just a few short years, the company is moving from using nearly 100% in-house production to being almost entirely reliant on offshore sources (using both its own plants and those of contract vendors). As a result, its huge domestic production asset base is largely being shuttered. Its manufacturing cost advantages are gone, and the company's competitive

advantage based on traditional production expertise and engineering is also quickly eroding.

Does this manufacturer need to be great at the global supply chain to succeed? The answer is obviously Yes. What's equally clear is that many if not most companies are very early in this globalization journey, and are facing vexing challenges to the smooth and cost-efficient flow of goods across the globe. Even those companies that are well down the global supply chain curve are finding that after getting the basics down, they encounter a whole new set of opportunities and challenges in achieving operations excellence on a global scale.

Given this situation, global logistics and trade management are becoming board level concerns. It's therefore critical that supply chain and global logistics organizations put in place the people, processes and technology required to deliver world class cost and service performance.

Time and Distance

Thomas Friedman is right, fundamental changes across many areas of business, politics and the supply chain have "flattened" the world and led to an explosion of trade and global sourcing. Yet, as global logistics professionals know only too well, it is still a long way from Shanghai to Peoria, especially when the product being moved will have to go through numerous steps from manufacturing to delivery, involving multiple governments, companies and third party service providers.

It's pretty simple, really: going global means adding time and distance to your supply chain. Those two factors add cost, complexity, and frequently risk.

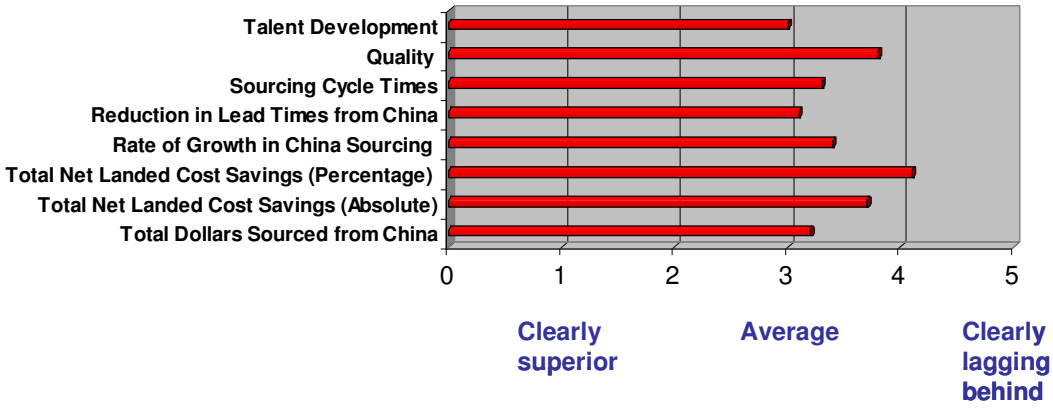
Many companies early in their offshoring evolution find that managing this new set of skills and capability requirements is extremely challenging. Often, savings expected from the global sourcing initiatives fail to materialize, at least in part.

SCDigest, for example, recently profiled a consumer hardware company that illustrates this reality[1]. Under pressure from major big box retailers for lower prices, the company is in the process of moving much of its manufacturing capacity to China and other low cost country sources.

To this point, however, the expected savings from offshoring have not materialized. The company is just starting to analyze the factors, with no clear answers yet, other than a belief that there were many "hidden" costs that were not fully anticipated.

This is a scenario that we hear on a consistent basis. In fact, a recent survey from McKinsey and the U.S. Chamber of Commerce of Western companies importing product from China found that ***the majority*** of respondents believed they were behind their competitors in such areas as total landed cost savings from offshoring, on-time delivery, and other key supply chain metrics (see illustration below)[2]. Considering that generally companies tend to over rate their performance versus others, this data is a powerful statement of the challenges of doing global supply chain well.

How Does Your Company's Performance in China Compare With That Of Your Competitors ?



Source: McKinsey/American Chamber of Commerce

A majority of companies believe they are executing Chinese outsourcing strategies less effectively than the competition

Where Do the Lost Savings Go?

Why do so many companies have problems achieving the level of savings they expected from offshoring and global sourcing initiatives? At the highest level, the challenges can be categorized in two inter-related areas:

1. The potential savings were simply over-estimated: When calculating the expected cost of globally sourced products, companies frequently miscalculate or fail to consider a number of cost elements. For example, the company may have made assumptions about the total transport costs to move the product from Asia to the home country that prove to be too low, or the company may find that it badly underestimated the amount of buffer inventory stock it needs to hold due to the lengthening of the supply chain. As a result, the company is trying to hit a total cost savings target that was not achievable from the start.

2. The company cannot yet execute a global supply chain well: In this situation, the company has in fact well-estimated a realistic total supply chain cost, but much of the savings slips away through problems in execution.

These execution issues often simply derive from a lack of experience and global logistics skill sets, but the complexity of global logistics can create execution challenges even for more seasoned organizations. In addition, the general lack of strong technology support for the global supply chain versus other functions in

the company often compounds the execution challenges.

Some of the specific areas where we frequently see challenges in global logistics execution include:

- Sub-optimal sourcing results due to inadequate total cost data
- High overhead costs to manage the global sourcing and logistics function
- High inventories and lost sales as companies struggle to match supply and demand in the long supply chain
- High costs for expedited freight
- High levels of inbound lead-time variability
- Reactive rather than proactive logistics management
- Disconnect between inbound international movements and domestic transportation operations

Part of the challenge is that there is a long learning curve simply to fully understand the rules of this new global game. The daunting array of programs and regulations that must be managed just to keep compliant with governmental requirements alone takes a substantial effort on the part of importers and exporters. This is especially true for those lacking one of the available tools for managing so called "denied party screening," producing compliant documentation and other paperwork, managing duties and tariffs, etc.

But it goes much beyond just the regulatory aspects. Understanding these complex physical product flows, and most importantly the hand-offs between each step and node in the supply chain, is critical. When

Global Logistics and Trade Management Requires Learning the Rules of a New Game

expanded across multiple sourcing relationships, third parties and transportation lanes, it becomes a daunting challenge for the company to manage these logistics flows effectively.

Even those companies that have developed significant experience and capabilities with global logistics find that achieving true excellence is ***as much a journey as a goal***. Few of these more experienced companies, for example, have fully optimized total international and domestic inbound flows, achieved the full level of supply chain visibility they desire, or have the agility they would like to make near real-time decisions that can improve cost and service.

But global logistics leaders are getting closer to the level of capabilities that lead to operational excellence, and which we believe provide strong competitive advantage.

The Ten Capabilities of Global Logistics Leaders

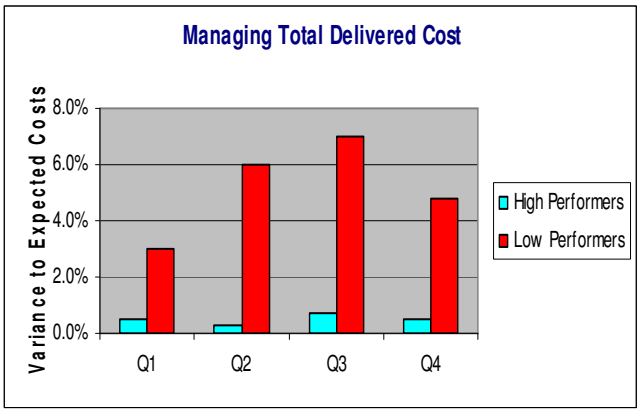
While "best practice" in this comparatively new discipline is being redefined on a continuous basis, Supply Chain Digest has identified 10 capabilities, encompassing processes, skill sets and technology, that companies striving to achieve global logistics excellence must develop. They are detailed below.

At the end of this report, we also offer a ***Global Logistics Capabilities Diagnostic*** tool that enables you to compare your current capabilities in each of these 10 areas across three advancing levels of maturity. We are confident you will find it valuable as a mechanism to identify areas in which you are operating strongly, as well as areas that need additional attention and support.

1. Total Delivered Cost Management

Total Delivered Cost Management involves the ability to analyze and predict the total supply chain costs from the source of supply to its final point of distribution. It includes the capability to roll up both international and domestic logistics costs by product and delivery route, plus the ability to accurately calculate all the applicable duty, tariffs and other customs-related costs while factoring in any preferential trade agreements. More advanced capabilities would include the ability to model and estimate inventory levels and total carrying costs.

This level of capabilities, empowered by automated "total cost software engines," is simply required to make optimal sourcing and logistics decisions, and to ensure that execution is aligned with upstream sourcing decisions. One key metric: how accurate are the actual delivered costs versus expectations? Many companies experience high levels of variance, while capability leaders have relatively trivial variances month to month.



Leader in Delivered Cost Management Have Small Actual-to-Budget Variance, While Low Performers Are Hit with Unanticipated Costs

2. Global Logistics Process Automation

In general, few companies have well automated global logistics processes. As a result, there are still many manual steps in most organizations. Logistics personnel commonly spend too much time on low value activities needed to get the freight to move, and not enough time on developing better plans and approaches to drive continuous improvement.

At the most basic level, we often hear companies refer to this as the "ocean booking" problem – the laborious process of simply identifying and transacting international moves.

But it is also much more than that. The reality is that global logistics execution is simply much more complex than domestic transportation. Execution requires dozens of links; by many estimates, there can be as many as 25-30 hand-off points within a complex global move, involving multiple parties with greatly varying levels of technology.

> **The ultimate goal in global logistics execution: "one touch" information flow for all activities.**

Importers and exporters do, however, have control of their own technology decisions. For a variety of reasons, automation of global logistics planning and execution processes is well behind most other areas of supply chain and logistics management. In some cases, existing ERP or logistics systems simply have not been architected to well-support offshoring strategies and global logistics requirements, leaving companies at a dead end.

Global logistics leaders have deployed technology that greatly automates many of these manual booking processes, managing global transportation carriers, rates, and execution in a single environment.

The ultimate goal in global logistics execution: "one touch" information flow for all activities.

3. End-to-End Visibility

In the last 24 months, global supply chain visibility and event notification have gone from being somewhat vague concepts to emerging as key

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operational goals of nearly every company that does business globally.

What is global supply chain visibility? It starts with the ability to answer very basic questions: ***Where is it? When will it arrive? Is the expected date different from the planned date?***

Event management/notification plays a key role, since the amount of data generated means that the only manageable approach is to have systems that proactively identify exceptions to the plan. In their most basic form, visibility tools enable a company to define a schedule for all of the activities within a particular move, with configurable tolerances. If an activity or milestone is not completed within the scheduled time, or no information is received when expected, an alert is sent via any of numerous mechanisms (email, page, etc.) notifying both the impacted party (e.g. the importer) and others (e.g., a freight forwarder) of the problem.

Visibility systems should make it easy to find and drill down on information from many points of reference, such as the purchase order number, SKU, freight bill, etc. Users should then be able to easily see the related information. Visibility systems should also facilitate the development of ***"role specific" system configurations*** to meet the

information needs of managers in transportation, purchasing, inventory management, and other areas of the business.

In a global logistics visibility system, the timeliness and accuracy of information is critical. While there is no magic bullet that can solve all the data quality issues, global logistics leaders are using a variety of mechanisms, such as direct EDI integration with ocean carriers, and web portals for other service providers, to achieve high levels of near real-time visibility, data timeliness and accuracy. Leaders are also monitoring incoming data for potential quality issues, such as "syntax" errors or missing information.

Facilities and touch points under direct or indirect control should also utilize bar code scanning (and perhaps soon RFID) to generate status updates on shipments and inventory, improving both data accuracy and timeliness.

By deploying a robust, real-time visibility system, a company like high tech giant Cisco is able to operate a totally outsourced global supply chain with a relatively small corporate staff, and manage performance as if the functions were all handled internally.

> **Global logistic leaders reduce the time and cost of inbound processing by enabling their suppliers to produce ASNs and properly label the goods.**

At the advanced end of global supply chain capabilities, companies are taking event notification to the next level. For example, they are look at potential shipping delays not only from a pure logistics perspective, but also in the context of how the delay might impact production inventory levels, or merchandising or promotional plans.

While all exceptions need to be monitored, some are more important than others in terms of the impact on the rest of the organization. Looking across areas to understand the impact will reduce overhead costs and better align logistics with the business.

Global logistics execution is complex – it requires an advanced "traffic control" capability in the form of real-time visibility to avoid congestion and ensure the smooth flow of goods.

4. Supplier Portals and ASN Capabilities

Integration with offshore suppliers can be challenging, but it is essential to managing the global supply chain. Even companies that have achieved significant visibility for goods moving from foreign ports to domestic plants and distribution centers are often frustrated by the lack of visibility to the actual status of orders in the offshore factories.

In addition, the ability to receive timely, accurate Advance Ship Notices (ASNs) from overseas suppliers is critical for both effective inventory planning and to streamline the inbound flow of goods.

Most companies today are not well integrated with overseas suppliers, and many still receive information about what is on incoming shipments via fax or other manual methods. Problems with the accuracy of that

information means that not until the container is actually opened can what was shipped be completely determined.

Many process, language, and relationship barriers exist when trying to better integrate offshore suppliers. Nonetheless, the availability today of web-based supplier portal technology to improve integration and visibility with overseas (as well as domestic) suppliers means the opportunity to address these issues has never been easier.

Many companies are providing suppliers with web-based tools that enable them to execute a growing list of processes, including:

- Purchase order acceptance
- Production status updates
- Quality checking
- Compliant bar code labeling of items and cartons
- Shipment routing
- ASN generation

In the future, this will likely include capabilities to support encoding of RFID tags as well.

Global logistic leaders reduce the time and cost of inbound processing by enabling their suppliers to produce ASNs and properly label the goods. They also minimize inventory and stocks outs through better visibility to actual order status at offshore production sites.

5. Total Product Identification and Regulatory Compliance

Supply chain security concerns are growing, and are certain to increase. This is true both internal to companies as well in response to efforts led by national governments. In the U.S., a variety of mandatory and voluntary programs, such as import and export restrictions, Customs-Trade

> **Global logistics leaders embrace a mindset that recognizes security and regulatory trends and how they will impact their ability to move product.**

Partnership Against Terrorism (C-TPAT), Operation Safe Commerce, and many others place an increasingly difficult array of burdens in the execution of global logistics.

Not managing these requirements well leads to a series of real and potential problems:

- Fines or other penalties for a failure to comply
- Delays in the movement of goods inbound and outbound from a variety of causes, including problems with appropriate documentation and delays inherent for those not participating in programs like C-TPAT
- Risk to the company's brands should any problem with supply chain security emerge

One executive at a major specialty retailer recently had this to say: "***We are aggressive participants in all aspects of regulatory compliance*** and non-mandatory programs that can help us ensure the smooth flow of

goods. I don't think many mid-sized shippers realize the challenges they are going to have getting the goods into the country before long if they have not made the same level of commitment, and it is going to cause them some pain."

Global logistics leaders are taking an increasingly aggressive approach to security, both to improve the flow of goods in the short term as well as protecting themselves from the impact of external threats and potential problems.

Technology provides some of the answer here, and will increasingly do so, especially as we enable complete track and trace and other capabilities through RFID-based systems. Software that manages denied party screening and other regulatory requirements is already being used by hundreds of companies, and we expect adoption to continue rapidly in others.

Global logistic leaders also embrace a mindset that recognizes the security and regulatory trends and how they will impact their ability to move product. A growing number of companies understand the need for a level of "insurance" that may not have an immediate payback, but which ultimately delivers huge value by protecting the company and its brands.

Savvy companies will be at the head of the line for both required and voluntary compliance, and in making investment in developing highly secure supply chains.

6. Dynamic Routing

Many international logistics flows tend to be fairly static after they are designed. A shipment from say Hong Kong to a distribution center in Dallas will use the same carriers into the same inbound port for movement on a consistent mode further inland. That is beginning to change, however, for reasons related to both cost and agility/risk mitigation.

Global logistics leaders are starting to develop more dynamic routing capabilities that will allow them to "rate shop" for the most effective combination of carriers, routes and third parties such as freight forwarders that will meet delivery constraints, in a fashion more consistent with how domestic transportation is managed.

An even bigger driver of dynamic routing might be the increased supply chain agility it will provide. For example, should a given inbound delivery be cross docked from an inbound DC to a series of regional outbound DCs, or would direct delivery to a store or customer be the better choice for some of the inventory? While there are many variables to consider before executing this specific inbound strategy, there are many scenarios where having the flexibility to dynamically determine inbound or outbound routings will be beneficial.

This may be especially true in the area of mitigating risk. For example, if the labor strife on west coast ports was to repeat itself, the ability to quickly and accurately determine the transportation alternatives and costs would be extremely valuable.

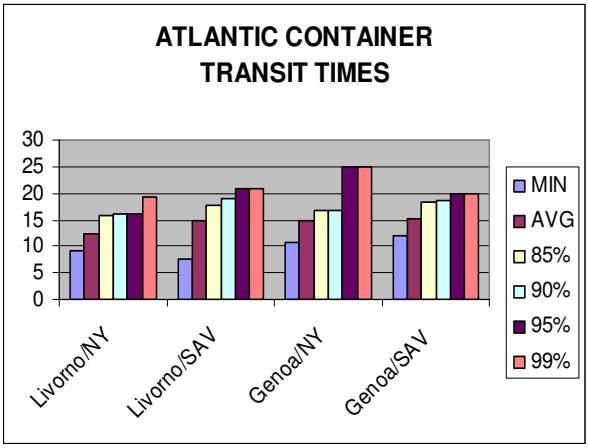
Consider another scenario: a component supplier in Asia supplying North American production plants has a major problem, immediately reducing available output. The supplier in Easter Europe that produces for plants in that region can meet the need, but how will the product move, and at what cost?

With supply chain agility and risk mitigation at the top of most Chief Supply Chain Officer's priorities, having dynamic routing capabilities for global movements will be an increasingly common attribute of supply chain leaders.

7. Variability Management

Variability is the Achilles Heel of long supply chains. As reported in Supply Chain Digest, preliminary work by The Logistics Institute at Georgia Tech, for example, showed there is a significant level of variability in international logistics moves, with a tremendous impact on inventory levels and customer service (see illustration).

For example, in the data shown in the chart, while the average transit time from a supplier in Livorno, Italy to the port of New York was only about 12 days, it took four additional days of lead time, or a total of 16 days, to reach a level in which 90% of all shipments were received, and even higher for a 99% confidence level. Even at 16 days, that's a swing of 33% in extra lead time versus the "average," greatly contributing to uncertainty, risk, and required inventory buffers.



International Shipments Inbound or Outbound are Subject to Considerable Variability in Delivery Times

Global logistics leaders use supply chain data and performance management systems to better understand both the level of supply variability and the root causes of that flux. They work hard to shrink total delivery lead times and the range of those lead time windows that are used by inventory planners to determine safety stock levels and purchase order timing. Reducing the variability by even 1-2 days can drive millions of dollars in inventory savings and reduce lost sales due to stock outs.

Variability is the Achilles Heel of long supply chains.

The capability to understand and improve the long-term performance of both suppliers and logistics service providers in terms of cycle times, timeliness, quality and accuracy is central to time compression, planning effectiveness, and risk reduction.

8. Integrated International and Domestic Workflow

Until just recently, most companies were forced to manage the combined international and subsequent domestic moves really as separate processes from both a planning and execution perspective.

There has been both an organizational element to this split, as well as technology limitations. Functional boundaries within organizations, for example, contribute to this lack of integration between international and domestic movements.

Until very recently, the availability of appropriate software has also been lacking. Transportation Management System (TMS) suppliers have had plenty to invest in just to improve their capabilities for domestic transportation management. There is also a large technical challenge of developing a software solution capable of modeling a complete, multi-leg, multi-modal international inbound through domestic routes. Until the past few years, the demand for this type of comprehensive solution has also been limited. All of which means there really weren't solutions available capable of end-to-end optimization.

As a result, companies were forced to treat the international and domestic elements as separate point-to-point moves. This created extra effort, contributed to a somewhat siloed approach to international and domestic logistics, and eliminated opportunities for reducing cost by a more complete optimization.

> **Logistics leaders are deploying technology that enables them to have a single "work space" that contains both functionality and data across the full international planning and execution lifecycle.**

This is changing rapidly, driven by customer demand. While TMS vendors still have some work to do to fully link international and domestic planning and execution, workable solutions do now exist, and we expect rapid improvement over the next 24 months.

In concert with these technology improvements and better internal understanding of the opportunities, we expect the concept of the centralized transportation management, well established in many companies on the domestic side, to expand along with the technology to embrace the full spectrum of global and domestic transportation requirements. The technology to do so is increasingly available.

9. Integrated Planning and Execution Platform

One of the challenges of global logistics is that the information that decision-makers need tends to be in multiple places, and is hard to access. While related to process automation and supply chain visibility, we believe logistics leaders are deploying technology that enables them to have a single "work space" that contains both functionality and data across the full international planning and execution lifecycle.

This integrated workspace is anchored by the operational skill to secure and maintain the information backbone with the diverse data structures that are needed by the various global logistics processes.

Data becomes real-time for scheduling, in-transit visibility and performance measures of carriers. Transportation planners have a full picture of the total delivered costs of the integrated domestic and international legs.

Many organizations still rely on manual systems to manage international freight movement, even on the execution side, as we have discussed above.

As they advance into a more integrated environment, a globally-enabled transportation management system serves as the information backbone to the organization. Access to common applications and data provides for an integrated workspace for all stakeholders of product goods delivery. This means they have easy access to such information as:

- Carrier and cost information, such as rates, capacities, contract commitments, etc.
- Movement schedules and shipment details
- Related data, including costs, appointments, in-transit status available to all
- Performance measures and reporting

Global logistics leaders are taking this even further by providing even more dynamic information and decision-support tools.

Data becomes real-time for scheduling, in-transit visibility and performance measures of carriers. Transportation planners have a full picture of the total delivered costs of the integrated domestic and international legs.

The powerful result***: end-to-end, optimized global logistics control and cost minimization.***

10. Financial Supply Chain Management

It is often said that supply chain management is about the management of materials, information and cash. The reality is that in most companies and most supply chain processes, the "cash" element of this definition is not really connected.

In global logistics, however, the "financial supply chain" can be much more directly linked with the physical and information flows. Letters of Credit, financial settlement processes, and other financial related capabilities must often be mastered to expand the network of potential trading partners on both the buy and sell sides, as well as to ensure the timely flow of goods is not interrupted by issues with financial flows and related documentation.

While many companies have developed internal skill sets around these capabilities, we are beginning to see solutions from software vendors that provide financial supply chain capabilities and services, generally associated with modules for generating import and export documentation.

Leveraging these capabilities, international product movements can be designed to minimize tax and tariff implications and take advantage of trade preferential agreements with foreign countries. Global logistics decisions are then made based on greater consideration of the financial supply chain impact. Ultimately, transportation planning and execution functions are tightly linked with automated financial approval and settlement tasks.

A more advanced area of Financial Supply Chain Management relates to development of a "tax efficient supply chain." While beyond the scope of this report, total tax liability can be significantly impacted by the country from which a product is sourced, where and when value is added to the product, the physical flow of the goods, and who takes ownership when. As the total impact can be substantial, supply chain leaders will consider tax implications in the design and execution of their global supply chain strategies.

> **Even sophisticated companies that have more global supply chain experience and were early adopters have only automated a small fraction of their global trade operations.**

Global logistics leaders will closely link the movement of cash and excellence in the Financial Supply Chain to expand trading partner relationships, maximize profitability, and ensure the flow of goods is not disrupted.

The Lack of Global Logistics Technology Enablement

While not every one of these 10 capabilities may be appropriate for every company's situation, we believe that together they provide a solid framework for developing a strategic plan for building out process capabilities and technology support across global logistics planning and execution. By evaluating your current capabilities and improvement plans against this framework, it will help to identify areas for improvement and to prioritize investment in people, process and technology.

There is simply no question that for most companies, technology enablement of global supply chain and logistics processes is well behind other areas of the enterprise and supply chain operations themselves.

As analyst Dwight Klappich at Gartner recently wrote, "Even sophisticated companies that have more global supply chain experience and were early adopters have only automated a small fraction of their global trade operations."[3]

There are a variety of reasons for this. The growth of offshoring happened so quickly, relative to most business trends, that many companies were knee-deep in the strategy and execution before they could really assess technology needs.

Similarly, the seeming potential of substantial cost reductions from moving to low cost country sourcing alone seemed attractive enough that many companies simply assumed the benefits could be achieved through the

sourcing decisions alone. As we have tried to make clear in this paper, however, the reality is that challenges of estimating and achieving the right level of savings leaves many companies less than fully satisfied with their global sourcing strategies. Many look to improved technology enablement to drive increased performance.

The software solutions available to help support these processes are also relatively new in many respects, at least compared to other areas of the supply chain. Known by a number of different names (Global Trade Management, Global Commerce Management, International Trade Logistics, Global Transportation), some of the pieces, such as denied party screening and import/export documentation, have been around for a number of years, though are still lacking in complete maturity. Other global logistics technology areas, such as visibility and transportation management that covers both international through domestic execution, have arrived more recently. The fact that these solutions are newer is no doubt also a factor in the relatively low level of technology enablement to date.

> **Until fairly recently there were few robust technology tools to support global logistics processes**.

Nonetheless, significant strides are being made in many areas of global logistics software, with many vendors now able to offer relatively comprehensive suites of solutions that address many if not most process requirements.

It does take a different kind of software to do global well. Respected IT commentator Eric Keller recently wrote that although "it's a foregone conclusion that manufacturers will continue their relentless push to offshore manufacturing…it doesn't appear companies have rethought the IT portfolios." He further observes that "Unless companies that are offshoring make major changes [to their IT solutions stack], they will run into quality, compliance and logistics problems sooner rather than later."[4]

Supply Chain Digest thinks Keller is right on.

The reality also is that today most companies that have acquired global logistics technology have done so to meet an immediate pain point or requirement. This means that the technology has often been adopted on a "point" basis, rather than by considering the full spectrum of current and future needs, and developing a master plan for enablement of the global supply chain process.

Solving immediate needs will always take precedence, but Supply Chain Digest believes it is important to take a step back and identify what kinds of capabilities are likely to be needed over time to achieve your goals for global logistics efficiency, effectiveness, cost and service.

Summary

For most industries and for many companies, the ability to achieve and sustain global supply chain excellence will be a substantial determinant of their overall corporate success.

For a variety of reasons, companies have moved into global sourcing and exporting programs without fully understanding the complexity of the planning and execution requirements, and with insufficient technology support.

To a large degree, this is understandable. You have to walk before you can run. However, it is also clear that for too many companies this scenario results in much higher costs than expected, significantly reducing or even eliminating the estimated benefits of global strategies.

It is also clear that in an area that is much more complex than domestic logistics activities, technology support for global logistics is at an immature stage for all but a small number of companies. This lack of technology support contributes strongly to the challenges in controlling costs and executing effectively.

In fairness, until fairly recently there were few robust technology tools to support global logistics processes. Most of those available were designed to solve very specific problems, rather than providing a more comprehensive set of solutions.

Today, that has changed significantly. While there is still room for continued advancement in global logistics and trade management solutions, there are systems available right now that can automate and improve a significant portion of the global logistics challenge. The robustness and functionality of the software is consistently improving, in tandem with the growing customer demand for global logistics solutions.

As always, the result is dependent on the mix of people, process and technology. Implementing more advanced systems will only address part of the challenge, but we see a growing gap in the technology capabilities between global logistics leaders and the laggards that will have a strong impact on relative supply chain performance.

We encourage you to use our diagnostic in Appendix A to assess your current capabilities, and to help chart a course for improvement along our 10 dimensions of capability.

It's pretty simple in the end: your company's market success depends on global supply chain excellence.

We recommend you gain a greater understanding of what the leaders are achieving, and what capabilities you need to achieve peak performance. Assess your current strengths and weaknesses, using our Diagnostic as one useful tool in the process. Then develop a strategic master plan for the global supply chain that will deliver industry-leading performance, or at minimum operational parity.

When it comes to the global supply chain, you better be good.

Sponsor Perspective: *RedPrairie*

As you can see, the international logistics process can introduce significant cost and risk within the supply chain. Without firm management of the individual process steps, supply chain delivery costs can climb unexpectedly.

Companies wishing to establish global supply chain processes need to take steps to build their own internal competencies and infrastructure to achieve well managed and cost effective global distribution. Making use of industry leading Transportation and Global Trade Management Solutions will help to create a controlled and well managed process infrastructure that can deliver cost reductions and efficiencies in global supply chain delivery.

Best of Breed companies are aggressive about managing the details of Global Trade Management and International Trade Logistics. They put into place systems, such as that provided by RedPrairie, to create a controlled workflow across the individual steps of international logistics.

For over 30 years, RedPrairie has enabled leading global companies to create competitive advantage through supply chain excellence. Our Global Trade Management (GTM) solution provides comprehensive tools for moving goods safely and economically across borders and through international trade lanes.

RedPrairie provides industry-tailored solutions for diverse markets, including consumer goods, retail, food and beverage, building products, high tech / electronics, third party logistics, industrial / wholesale, automotive and service parts, and pharmaceuticals.

For additional information on how to successfully advance your global logistics strategies, call 1.877.733-7724, email info@RedPrairie.com, or access www.RedPrairie.com

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Appendix A - Global Logistics Capabilities Diagnostic

This diagnostic provides a tool to gauge your Global Logistics capabilities in comparison to other companies and against your potential for improvement in capability and results. It can be used to develop a prioritized roadmap for enhancement in people, process and technology.

Your Level: For each capability, enter 0 if you aren't even at Manual Level, 3 for Manual, 7 for Basic Competence Level capabilities, and 10 for Leadership Level capabilities

The Diagnostic starts on the following page. Scoring indicators are provided at the end.

The development of the Global Logistics Capabilities Diagnostic was sponsored by RedPrairie.

Section A

	Total Delivered Cost Management	Global Logistics Process Automation
Score Yourself	**Level I: Manual/ Lagging**	
☐ 0 ☐ 3 ☐ 7 ☐ 10	"One off" analyses that manually estimate the total logistics costs of different sourcing alternatives - estimates that typically remain static. **Characteristics:** ▪ Rule of thumb cost estimates ▪ Infrequent revision of cost basis ▪ Partial coverage of possible cost sources	Little systems support for global logistics planning and execution processes. Significant reliance on spreadsheets and other "improvised" technology tools. **Characteristics:** ▪ Dependence on freight forwarder to handle ▪ Phone call & fax booking procedures ▪ Booking is case by case, not a repeatable process
	Level II: Basic Competence	
☐ 0 ☐ 3 ☐ 7 ☐ 10	Systemic approach to delivered cost analysis, using a database of carrier rates, customs, duties, tariffs, etc. **Characteristics:** ▪ Spreadsheet-calculated costing ▪ Cost basis regularly updated ▪ Versions of cost elements maintained	Technology that solves the basic "ocean booking" problem and automates the routine tasks of global logistics execution. **Characteristics:** ▪ Cross ocean shipper rate shopping ▪ Paperwork submission integrated into booking workflow ▪ Uploaded transit schedules
	Typical Results of Improvement to Level II	
	Improved sourcing decisions from more accurate data and the ability to compare more alternatives, ability to estimate transport cost as cost of goods sold with reasonable accuracy.	Increased administrative efficiency and reduction in time from when a movement is planned to when it is booked.
	Level III: Global Logistics Leadership	
☐ 0 ☐ 3 ☐ 7 ☐ 10	Comprehensive, dynamic calculator of total delivered costs using detailed, highly accurate data across numerous cost categories, including the cost of inventory. ▪ System calculated costing ▪ Dynamically updated rate tables ▪ Costs include both domestic and international movement components	Integrated ocean booking workflow including: ▪ Automated paperwork submission ▪ EDI booking transactions (tender/response) ▪ Automated rate shopping ▪ Optimized domestic planning to international movement planning for best port of exit/entry ▪ Determination based on cost and service
	Typical Results of Improvement to Level III	
	Best decisions with regard to lowest total cost sourcing options. Negligible differences between expected total global logistics costs and actuals, precise cost of transport accounting.	Better tactical deployment of day-to-day shipping to gain cost and transit time optimization. Automation of manual booking and paperwork activities.

Section B

	End-to-End Visibility	Supplier Portals and ASN Capabilities
Score Yourself	**Level I: Manual/ Lagging**	
☐ 0 ☐ 3 ☐ 7 ☐ 10	Production and shipment status based largely on faxes, phone calls and emails.	Little or no real systemic integration with offshore suppliers. Inbound supplier transit management not a part of the equation.
	Level II: Basic Competence	
☐ 0 ☐ 3 ☐ 7 ☐ 10	"E-visibility" via EDI and web integration with carriers, forwarders, customs offices and other service providers.	Web portals that provide some level of visibility, the ability to generate ASNs, and print bar code labels. ▪ Shippers post freight movement requests and/or detail ▪ ASN notices delivered
	Typical Results of Improvement to Level II	
	Ability to quickly answer the "where is it" question? Some ability to proactively identify issues and take corrective action.	Improved visibility, and streamlined receiving processes that can reduce inbound logistics costs by as much as 30%.
	Level III: Global Logistics Leadership	
☐ 0 ☐ 3 ☐ 7 ☐ 10	Proactive event management, based on defined milestones by lane and comprehensive global scheduling. Very advanced users integrate logistics event management into other systems, such as inventory planning or promotions calendars, to better understand the impact of logistics delays.	Portals that support workflow for end-to-end supply chain processes, including: ▪ Purchase order management ▪ Production status updates ▪ QA sampling by local agents ▪ Online coordination of routing/scheduling end to end
	Typical Results of Improvement to Level III	
	Further reductions in inventory and out-of-stocks through a more proactive resolution to issues. In an advanced case, a better understanding of what issues really impact financial performance.	Lower sourcing overhead, error reduction, decreases in lead time variability, and reduced problems with receiving out-of-spec product. Reduction of manual efforts for scheduling and appointment coordination.

Section C

	Total Product Identification and Regulatory Compliance	Dynamic Routing
Score Yourself	**Level I: Manual/ Lagging**	
☐ 0 ☐ 3 ☐ 7 ☐ 10	Heavy reliance on in-house experts to classify goods and process compliance conformance (HSC coding, customs, denied party checks, etc.). Limited use of bar codes/RFID to track product and container movements. Manual processes for ensuring buy/sell sources pass regulatory checks.	Totally static route definitions. Manual evaluation of transit alternatives. High dependence on freight forwarders. No optimization between ocean and domestic legs.
	Level II: Basic Competence	
☐ 0 ☐ 3 ☐ 7 ☐ 10	Some use of automatic identification tools to mandatory and voluntary regulatory programs. Basic installed or on-line tools for product classification, compliance checks, denied party screening.	Some systems-based capability to change inbound or outbound global routings based on changing cost dynamics or supply chain disruptions. ▪ On-line transit schedules for planning alternatives ▪ Basic cost basis routing optimization ▪ Consideration of multiple carrier alternatives based on best cost/delivery
	Typical Results of Improvement to Level II	
	Systemized approach to identify products and ensure conformance to regulatory and export rules. Minimized labor for these tasks.	Reduced supply chain risk. System modeled rates/lanes give realistic view of cost/service advantages between shipping alternatives. Opportunistic reduction in costs or improvements in service based on environmental/market changes.
	Level III: Global Logistics Leadership	
☐ 0 ☐ 3 ☐ 7 ☐ 10	▪ Online systems for product classifications and compliance checks, at each process stage (order acceptance, shipment execution) ▪ Generation of appropriate customs/duty/shipping export paperwork ▪ Automated document submission ▪ RFID and sensor-based container tracking ▪ Proactive knowledge pursuit of emerging regulatory and security programs ▪ Detailed inventory genealogy maintained as product crosses borders ▪ Participation in "green lane" programs for expedited paperwork approval	▪ Systematized modeling of shipping alternatives with dynamic visibility to rates, schedules, capacities, and contract agreements ▪ Ability to easily identify opportunities for routing changes to reduce cost or lead times ▪ Ability to quickly assess the times and costs of alternative routings in case of major supply chain disruptions ▪ Optimization of domestic to ocean movement for best overall cost/service alternative selection
	Typical Results of Improvement to Level III	
	Reduced supply chain risk. Better control, plus conformance/compliance automation result in less violations/exceptions of government regulations. Significantly reduced time spent in paperwork processing, approval cycles and overall transit time. Preferential treatment in the case of supply chain disruptions. Ability to react rapidly to inventory or security issues.	Improved decision-making for day-to-day shipment scheduling, reduced risk, lower freight costs, and improved service. Ability to react quickly and provide cost and time effective alternatives when transit exceptions occur.

Section D

	Variability Management	Integrated International and Domestic Workflow
Score Yourself	**Level I: Manual/ Lagging**	
☐ 0 ☐ 3 ☐ 7 ☐ 10	Little systemic understanding of global lead time variability. **Characteristics:** ▪ Manual transit schedules ▪ No carrier communication of transit exceptions ▪ Appointments manually set into paper calendars ▪ Lack of precise lead-time components results in the existence of "extra time" buffers in schedule ▪ Plan based on worst case delivery	Domestic and international logistics teams are organized independently using separate manual systems. **Characteristics:** ▪ Manual coordination, if any ▪ Phone, fax carrier coordination ▪ No evaluation of cost impact between independent domestic and international routing decisions
	Level II: Basic Competence	
☐ 0 ☐ 3 ☐ 7 ☐ 10	Measurements of schedule variability exists by lane, with defined lead time ranges available to buyers, marketers and inventory planners; generally with variability ranges of a few days per lane. **Characteristics:** ▪ Availability of most current schedules on-line ▪ Appointment tracking systematized ▪ On-line visibility to exceptions allows recovery replanning	Tight integration of international planning and execution processes and teams, using a common transportation management system. **Characteristics:** ▪ Cross visibility to international and domestic leg planning ▪ Ability to cost the aggregated journey ▪ Planners united to common measurements
	Typical Results of Improvement to Level II	
	More precision in goods flow schedules results in lower inventory levels and fewer out-of-stocks. Customer service improves with ability to manage in-transit exceptions more effectively.	Reduction in total logistics costs through a more holistic approach to process and carrier/mode coordination across international and domestic moves.
	Level III: Global Logistics Leadership	
☐ 0 ☐ 3 ☐ 7 ☐ 10	Root cause analysis of variability through use of analytic applications. **Characteristics:** ▪ Dynamically updated transit schedules ▪ On-line appointment capture ▪ Coordinated domestic/international legs w/minimal drayage buffering ▪ Leverage “green lane” processing	Global approach to transportation process management. Capability to model and optimize a full multi-leg, multi-mode movement from international origins to final domestic delivery.
	Typical Results of Improvement to Level III	
	Continuous improvement in lead time variability. Reductions in overall transit times and buffered inventory carrying levels and costs. Customer satisfaction improved with reliable delivery schedules.	Proliferation of logistics "best practice" across geographic regions, as appropriate. Lowest total logistics/freight costs.

Section E

	Integrated Planning and Execution Platform	Financial Supply Chain Management
Score Yourself	**Level I: Manual / Lagging**	
☐ 0 ☐ 3 ☐ 7 ☐ 10	Information sources critical to transportation planning are paper based and widely distributed across the organization. Information commonly out of date or difficult to retrieve.	The assessment of carriers for insurance, letters of credit and the act of moving cash in support of the transportation delivery are manual processes.
	Level II: Basic Competence	
☐ 0 ☐ 3 ☐ 7 ☐ 10	An automated transportation management system serves as the information backbone to the organization. Access to common applications and data provides for an integrated workspace for all stakeholders of product goods delivery. ▪ Carrier details available to all including tariffs, capacities, contract commitments, etc. ▪ Movement schedules, shipment details on-line to all stakeholders ▪ Dynamic associated data including costs, appointments, in-transit status available to all ▪ Performance measures and reporting integrated into the system	Basic carrier checks are available on-line to validate carriers for appropriate insurance and other financial qualifications. Movement of letter of credit can be an automated function. Tracking of payments is accomplished but most likely there is little coordination between the transportation management system and the financial systems to provide online validation and verification.
	Typical Results of Improvement to Level II	
	The organization has a coordinated view to the transport delivery equation.	Basic automation of carrier approval processes reduces manual tasks. Financial events begin to be captured in a systematic fashion to provide audit trails and to be used in carrier assessment and determination of actual cost equation.
	Level III: Global Logistics Leadership	
☐ 0 ☐ 3 ☐ 7 ☐ 10	The informational ability of the transportation management system becomes much more dynamic. Data is real-time for scheduling, in-transit visibility and performance measures of carriers and delivery becomes dynamic. A full picture of the fully landed costs of the integrated domestic and international legs becomes available.	Product movements that are designed to minimize tax and tariff implications take advantage of trade preferential agreements with foreign countries and make transport delivery choice decisions based on financial supply chain considerations. Linkage of transportation planning and execution functions with automated financial approval and settlement tasks.
	Typical Results of Improvement to Level III	
	End-to-end, optimized global logistics control and cost minimization.	Advanced financial supply chain management can improve margins by several points.

Diagnostic Scoring

As indicated in each section, assign your company a level of capability based on the characteristics provided.

If you do not believe that you have even yet achieved the Manual Level, assign a score of 0. Otherwise, assign a score of 3 for Manual, 7 for Basic Competence, and 10 for Leadership Level.

Score Ranking:

- **0 to 40 points:** Your company is significantly behind the average company in terms of global logistics capabilities
- **40-60 points:** Your company is probably about average for the market today, though many are rapidly adding capabilities
- **60-80 points:** Your company is well ahead of most other companies, and you are delivering major benefits to your lines of business and shareholders
- **80-100 points:** You are a global logistics leader; probably fewer than 5% of companies fall into this category, and we do not believe any could currently score a perfect 100.

The diagnostic gives you a good idea of your capability position vis-à-vis both other companies and against your potential for improvement in both capability and result. It can be used to develop a prioritized roadmap for improvement in people, process and technology.

End Notes

1. **"Supply Chain 2006 – a Case Study"**; Supply Chain Digest, June 1, 2006; http://www.scdigest.com/assets/FirstThoughts/06-06-01.cfm
2. **"The Challenges in Chinese Procurement";** McKinsey Quarterly, 2006 Special Edition; http://www.mckinseyquarterly.com
3. **"Client Issues for Global Trade Management"**; Dwight Klappich, Gartner Group; Sept. 12, 2005
4. **"Why are Enterprise Engines Running in Reverse?"**; Erik Keller, in Manufacturing Business Technology; January, 2005; http://www.mbtmag.com/current_issues/2005/jan/col2.asp