



# The Supply Chain Digest Letter™

*This Month:  
Supply Chain Visibility*

## inside

The Visible Supply Chain ..... 1

The New Era of Perfect Logistics ..... 1

Supply Chain Visibility Thought-Leaders Discussion ..... 2

Solution Profile: Compliance Networks.. 3

Supply Chain Visibility Framework.....6&7

Solution Profile: Amber Road ..... 8

The Visibility Tool Kit.. 11

Solution Profile: Descartes Systems.... 12

### The Visible Supply Chain

Supply Chain Visibility - a term that seems to carry with it both the potential for tremendously improved supply chain performance, but, to an extent, also a level of vagueness and uncertainty. Most companies know what they have of it isn't enough, but their plans for making more progress are often less than crystal clear.

One could argue that the Supply Chain Visibility era started in the late 1990s, when Art Mesher, then an analyst at Gartner and now CEO of Descartes Systems, wrote a series of research notes on "The Three V's of Supply Chain," which were velocity, variability, --- and visibility.

From that point on, visibility has been at the forefront of supply chain issues, and improving the level of visibility has moved in the last 7-10 years to the top of the corporate supply chain priority list for the majority of companies.

Study after study, in fact, supports that contention. For example, a recent survey by the consultants at Capgemini is just one of many that have found that improving visibility is a very high supply chain priority, with respondents placing it third on the list of 2012 focus areas (see graphic on page 4).

Yet given all that are we really even sure what supply chain visibility means? Or what separates greatness from mediocrity? One thing that almost every expert seems to agree on is that supply chain visibility is very much like the proverbial onion: it has many layers that must be peeled back over time to reveal more and more data

*continued on page 4*

### The New Era of Perfect Logistics

A perhaps obviously but nevertheless important corollary to the substantial improvement in supply chain visibility that is occurring right now is this: with rising visibility comes rising control. And with rising control comes the ability to wring errors and delays out of the process.

This is especially true at the execution layers of the supply chain. While volatility in everything from demand to commodity prices will always play some havoc on planning and forecasting processes, when it comes to supply chain execution, visibility will enable companies to get very close to zero errors: in fact, Perfect Logistics.

*continued on page 13*

## Supply Chain Visibility Thought Leaders Discussion: The PO Lifecycle and ASNs in Consumer Goods to Retail Supply Chain

*SCDigest editor Dan Gilmore recently sat down with Greg Holder, CEO of Compliance Networks, to discuss supply chain visibility in the consumer goods to retail supply chain. This is an excerpt of the full interview, which is available on our web site for this SCDigest Letter ([www.scdigest.com/supply\\_chain\\_visibility.php](http://www.scdigest.com/supply_chain_visibility.php)).*

**Gilmore:** *What does visibility in the consumer goods to retail supply chain really mean to you?*

**Holder:** In one word to me, visibility means cash. Cash in cost avoidance, cash in expense savings, cash in inventory savings and cash in capital expenditure delay or avoidance. At this point if I were the audience I would ask; how can you say this? It is quite simple. Visibility allows people in the supply chain to see problems before they occur and take necessary steps to avoid the expense in real time.

Two drivers of this savings through visibility come from what we refer to as the PO Lifecycle and ASN (Inventory) Accuracy.

**Gilmore:** *Let's start with the PO Lifecycle.*

**Holder:** In its simplest form the PO Lifecycle refers to all of the supply chain events relating to a purchase order from creation to consumption either at a retail DC or retail store. Think about it this way. A retail buyer or replenishment system can create the most perfect order for the known needs at the time of creation.

This is the last time that order will be perfect. Too many things can go wrong for too many reasons – and often do. There are dozens of events that are a part of the PO Lifecycle, and you need visibility to all of them. It is an important part of reducing days in the inbound supply chain, which ultimately reduces investments in inventory.

**Gilmore:** *In the consumer goods to retail supply chain, the Advanced Ship Notice or ASN is really an essential building block of supply chain visibility, isn't it?*

**Holder:** The ASN is a very essential building block of supply chain visibility. For the uninitiated, ASN is an acronym for Advanced Shipment Notice and is essentially an electronic packing slip of a vendor

shipment. The idea is simple, as a vendor prepares a shipment from their location to a retail DC, they account for the items shipped, generally at the carton level, and transmit the carton labels, carton contents and some other data to the retailer in advance of shipping.

With this information, the retailer can do many things. In the perfect world they can use the information to staff DCs receiving departments and to cross-dock or fast track merchandise through the DC. In the event of a discrepancy to the purchase order they can attempt to resolve a problem before the shipment arrives at the DC causing a physical blockage or multiple handling. Inaccurate ASNs can cause significant inventory accuracy issues in the stores if not caught in an audit process somewhere in the inbound supply chain.

I don't think anyone knows the penetration of ASN in retail today but I think it is safe to say that for a technology that has been around for more than 30 years, the penetration is far too low.

**Gilmore:** *You speak of ASN accuracy as synonymous with inventory accuracy. Can you take a moment to explain that?*

**Holder:** Too many retailers that utilize ASNs assume that once a vendor becomes a certified ASN vendor, they can decrease or eliminate any detail audits for the accuracy of the ASN. Many times, when this is the case, the retailer blindly accepts the vendor ASN as the final word. They book the ASN data as inventory and will pay invoices based on the same data. This practice sounds bad enough but imagine what happens when the vendor carton contents do not match the vendor ASN. The receipt is wrong, the invoice payment is wrong and even more damaging the store inventory is wrong!

Based on our data for 2010 and 2011, 97% of the ASNs are correct at the item and quantity level. It does not

(Continued from Page 2): *Visibility Thought Leaders Discussion...*


sound bad until you consider the number of errors this can involve. This can have a significant impact on inventory and sales for both the retailer and the vendor. This concern for inventory accuracy led us to build our vendor classification system that uses ASN accuracy to determine audit penetration based on historical performance. This allows our customers to focus their efforts on the vendors with historical problems

**Gilmore:** *How does a retail compliance program support visibility?*

**Holder:** Ten million dollar question. From my perspective, ten years ago, I missed the value of what we, Compliance Networks, were trying to do. We set out to help retailers automate what is typically a manual vendor compliance process. We were thinking it would be great because our customers could save some payroll expense, increase charge identification by automating a manual process, and ultimately remove days from the inbound supply chain by eliminating a lot of the supply chain disruptions. I understood that in order to automate supply chain failures we needed a process to gather supply chain transactions from retailer and supplier execution systems, such as PO systems, WMS, etc.

With this data we could create sophisticated algorithms to interrogate the data and identify exceptions or violations to a retailer's requirements. What I did not understand at the time was the value of the supply chain data in terms of visibility to things like vendor performance and profitability, supply chain days, carrier performance, DC performance and even merchandising performance.

**Gilmore:** *You have built a visibility solution on top of your existing compliance management solution - tell us a bit about that.*

**Holder:** Over the years, as we have continued to add more data from different data silos we realize we have a pretty good picture of the retail supply chain. By layering in various information structures we end up with an environment for centralized access at various reporting levels for not only the vendor but for merchants, ship points and destinations, retailer department organizations, order types, etc. The list goes on and on and it is not just at a single structure but also at any combination of multiple structures down to the item level, if we need to go that deep. It is really an exciting thing. 

## Visibility Solution Profile

Compliance  
for Lean  
Supply Chain  
Networks

 Compliance  
Networks

When retailers need to rapidly improve profitability and merchandise flow they rely on Compliance Networks. Our solutions optimize supply chain execution of merchandising plans and support of retailers' goals.

Compliance Networks' vendor compliance, scorecarding, reporting, and supply chain visibility solutions will: recover and reduce supply chain costs, rapidly improve supply chain performance, and provide a granular Glass Supply Chain view of the entire PO Lifecycle.

### Key Customers:

Kohls, Sports Authority, Pep Boys, Burlington Coat Factory, Stein Mart, Tractor Supply Company and many more

### Website and Contact Info:

[www.compliancenetworks.com](http://www.compliancenetworks.com)

Phone: (877) 267-3671

Contact: Richard Wilhjelm

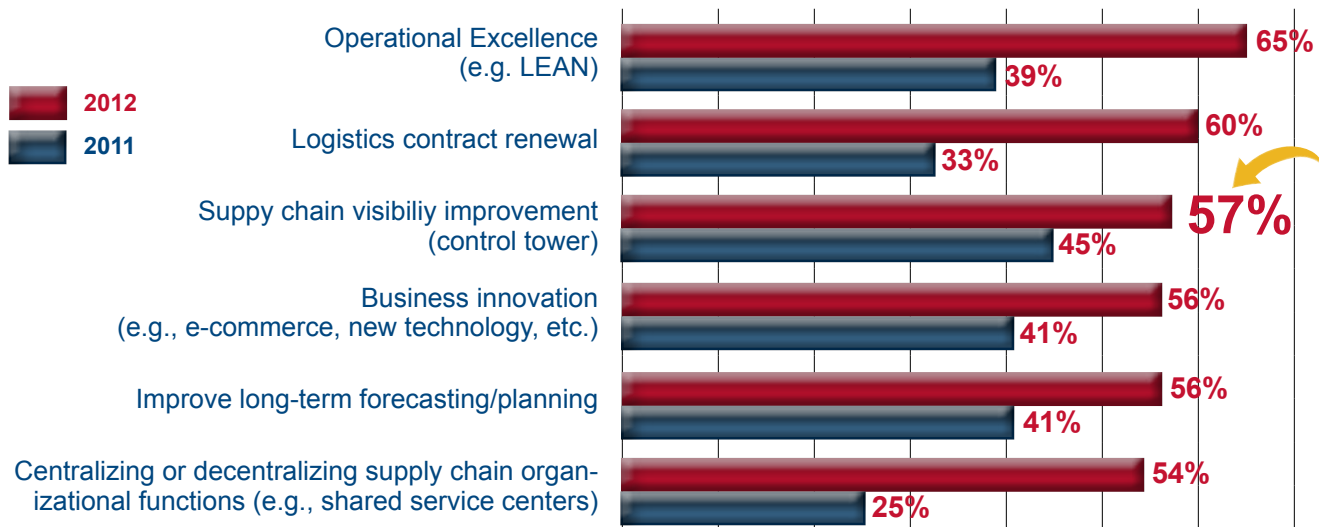
Email: [info@compliancenetworks.com](mailto:info@compliancenetworks.com)

### Featured Collateral

- CSCO Insights Reports: The Value of Vendor Compliance Optimization
- rCMS Solution Overview
- Case Study: Burlington Coat Factory

Available on the *SCDigest Resources Page* ([www.scdigest.com/Supply\\_Chain\\_Visibility.php](http://www.scdigest.com/Supply_Chain_Visibility.php)) or the *Compliance Networks web site*.

## Visibility Continues to Score Highly on Supply Chain Priority Lists



Source: Capgemini

(Continued from Page 1): The Visible Supply Chain

and insight to a company’s managers and executives. When progress is made, it at first appears this new level of visibility has solved many existing problems. But over time, that level of visibility seems insufficient, and the company must look to peel away another layer of the onion to address another set of challenges or opportunities.

Companies looking to improve supply chain visibility should embark on their efforts with the idea clearly in mind that supply chain visibility for now is a journey, not a destination. All you can basically do is to continue to move down the path - but that doesn’t mean that trek can’t be made without a clear plan.

In developing that plan, companies should also recognize that there really is no technology barrier at all today to achieving near 100% visibility to most of the important information in our supply chains, as we will discuss later in this report. The visible supply chain tool kit is here - companies just need to start building.

### Visibility Scope has Really Expanded in the Past Decade

When the quest for improved visibility started in the late 1990s, the needs back then generally focused around two basic and interconnected themes:

- Better visibility to goods in motion
- Better visibility to where inventory was positioned across a company’s network

The founder of one of the specialty vendors that arose at the time (a web-based global visibility application) said the idea came to him as a logistics manager at shoe retailer Stride Rite because he was tired of buyers constantly calling him with questions about “where’s my stuff?” as it moved from Asia to the US. Back then, no one really knew, though with enough phone calls you might get close.

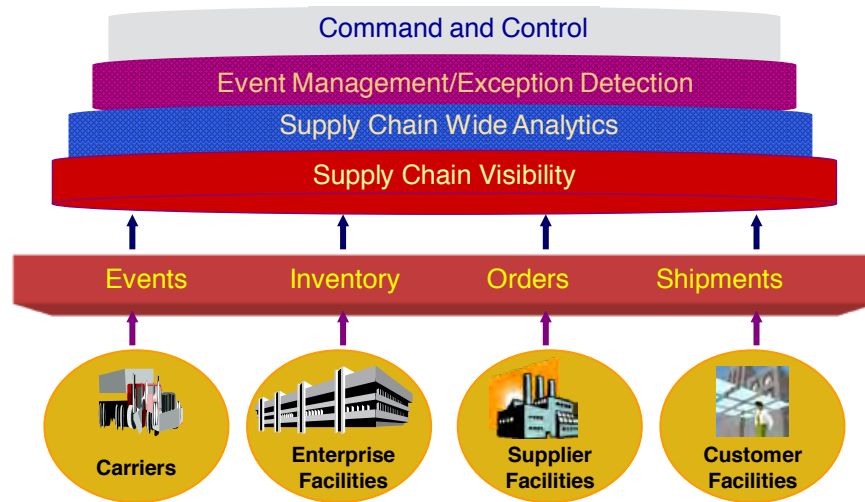
At the same time, relatively few companies in that era could see inventory at each node in their supply chain networks, and certainly were not able to do so in real time. The ability to get just that basic level of inventory visibility became the other part of the initial quest.

So, a visibility framework in those relatively early days looked something like that seen in the graphic on page 5. Visibility was viewed primarily as a logistics issue, concerned with inventory, orders and shipments. Another piece was the development of new “event management” technologies, which involve automatic identification of events that might impact inbound or outbound logistics execution (e.g., late shipment, cancelled order). In one way or another, “where’s my stuff?” was still the primary driver of the interest in visibility.

There was also, however, an important development along the way. As radio frequency identification (RFID) entered the supply chain landscape --- first with efforts at the MIT Auto ID Lab and then with Walmart’s initial and ultimately failed RFID “mandate” for its vendors --- it

*continued - page 5*

## Supply Chain Visibility Framework - 2005



*(Continued from Page 4): The Visible Supply Chain*

became clear a new vision was emerging. For the first time, a growing number of companies, especially in the consumer goods industry, were developing visions that it was really going to be possible to see every physical item in their supply chains in real or near real time.

While that initial push to have pallets and cases tagged with RFID chips in the consumer goods to retail sector has basically gone dormant (for now), the vision that this level of visibility could in fact be achieved remains, as do questions about what that would ultimately mean for supply chains.

### Expanded View of Visibility

Today, the concept of supply chain visibility has greatly expanded. On the following pages, we offer a model that companies may consider in developing visibility strategies and making investments. While in the end no one model can capture all the dimensions of visibility, and there are, as usual, differences by industry, this new framework does a good job of capturing the evolution in the scope of supply chain visibility today and its most important dimensions.

### Starting from the outer ring:

**Historical Performance/Scorecarding:** How a company's supply chain performed yesterday, last week, last month, or last quarter is an element of visibility. In addition to basic KPIs, that can involve trending and other types of analytics, as well as ad hoc queries. The term "business intelligence" or BI is often used for these increasingly sophisticated analysis

tools. The reality is that most companies have some combination of centralized scorecards based on a corporate data warehouse, as well as specialized BI tools in various supply chain functional areas (transportation, manufacturing, demand planning, etc.).

**Major Visibility Vectors:** We have identified eight major vectors of supply chain visibility:

- Demand Management
- Supply Management
- International Transportation
- Domestic Transportation
- Inventory
- Distribution
- Manufacturing
- Risk

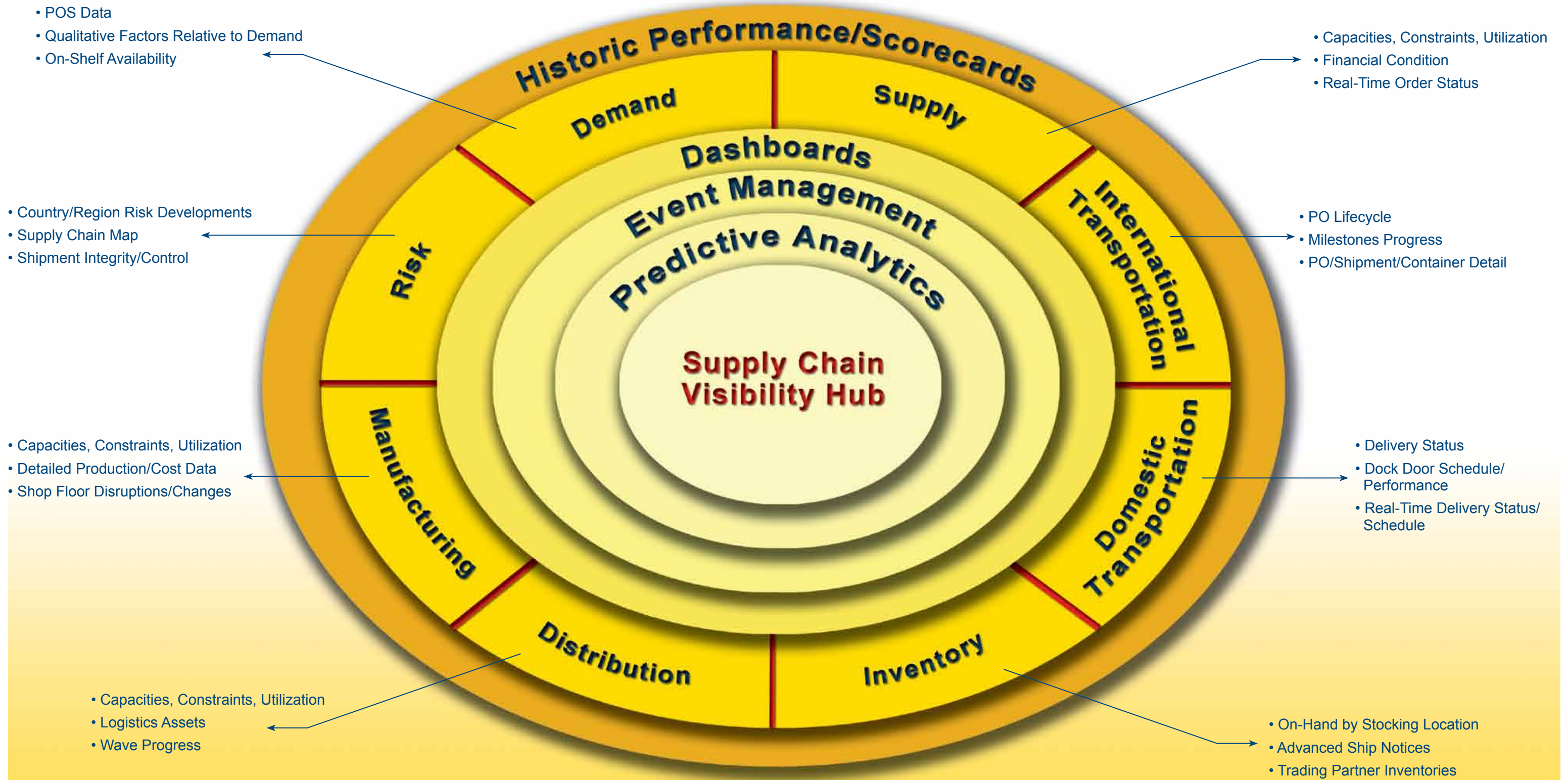
Of course, a given company might look at its primary vectors differently, but we believe this is a reasonably comprehensive taxonomy.

While it would take many months and a lot more space than we have here to even attempt to identify all the components in each of the eight sectors, the graphic provides some examples of those elements, with the most basic at the top of the list and more advanced at the bottom.

So, taking the inventory vector as an example, today many but not all have real-time inventory visibility in all internal stocking locations. A much smaller number receive advanced ship notices (ASNs) from 100% of internal or external suppliers communicating carton/

*continued - page 9*

# Supply Chain Visibility Framework





## Visibility Solution Profile



**Amber Road**  
POWERING GLOBAL TRADE

Amber Road's Supply Chain Visibility solution provides companies with the tools and expertise to consistently track and manage orders, shipments, and inventory across all your extended global trading partners and locations.

Amber Road's solutions are focused on alerts and event management. When an issue or event occurs, our solutions notify you immediately so you can take action to avoid delays. You know where your shipment is, when your shipment arrives, and can take the proper action to ensure optimization of your processes.

### Example Customers:

Abercrombie & Fitch, Brown-Forman  
Bunzl Distribution USA,  
Glazer's Family of Companies, Levi Strauss & Co.

### Website and Contact Info:

[www.amberroad.com](http://www.amberroad.com)  
201-935-8588  
[Solutions@amberroad.com](mailto:Solutions@amberroad.com)

### Featured Collateral

- Visibility Case Study: Glazer's
- White Paper: Key Strategies for Automating the Import Supply Chain
- Capability Overview: Amber Road's Supply Chain Visibility for Shippers
- Visibility eBook: "Three Common Global Supply Chain Issues that Affect Your Bottom Line"

All content is available on the *SCDigest Resources Page* ([www.scdigest.com/Supply\\_Chain\\_Visibility.php](http://www.scdigest.com/Supply_Chain_Visibility.php)) or the *Amber Road website*.

## Three Ways You're Throwing Away Money in Your Global Supply Chain

*Stephanie Miles, Senior Vice President, Commercial Services, Amber Road*

Today, the vast majority of enterprise-class companies are global. Why? The benefits of sourcing from low cost countries and selling into new foreign markets are too strong to dismiss.

Unfortunately, many still make due with sub-standard global processes and technologies borrowed from domestic operations. Global transportation and supply chain visibility are two such areas.

Here are some questions to ask yourself to highlight ways you may be losing money without the right processes in place for global shipments.

### Over-reliance on expedited shipping

While some shippers must always use expedited shipping because their products are time-sensitive, many organizations use it to compensate when something has failed in the supply chain. Examining opportunities to reduce expedited airfreight and move to ocean freight is always a good cost-reduction strategy for global shippers.

When evaluating this opportunity, ask yourself these questions:

- Do I have enough visibility into my inbound shipments against orders to make trade-offs that will still meet customer demand without having to expedite shipments?
- Do I need to pay for expedited inbound shipping from my suppliers? Where can I find more lead time in the planning process?
- Is my inventory system giving me enough information about ordering timeframes so I can avoid the cost of rush orders?

Through better planning and supply chain visibility, most global shippers can reduce expedited freight by 15 - 20% annually. This translates to significant costs savings for global companies with even moderate shipping volumes.

### Incurring demurrage and detention fines

Demurrage and detention charges usually occur when planning schedules are out of balance, when

*continued - page 9*

(Continued from Page 8): *Three Ways You're Throwing Away Money...*

communication and notification are poor, and when there are delays in clearing Customs. A company that routinely incurs these fees is likely not carefully monitoring cargo arrival and doesn't have a sound understanding of in-transit cycle times.

Understanding your business processes is the first step:

- How am I notified when freight arrives?
- Am I clearing Customs as efficiently as possible so the free period in the terminal isn't exceeded?
- How can I further minimize transit times so I can return containers on time?
- Can I improve my yard and dock operations to ensure maximum throughput and prevent trailer aging?
- According to a study by the Aberdeen Group, real time visibility and coordination can help reduce demurrage and detention fees by 25 – 50%.\*\*

### Poor communication with trading partners

An unproductive use of your customer service representatives' time is providing answers about deliveries that could be found online. Similarly, purchasing specialists can work more efficiently if they have two-way communication with vendors and shippers.


- Ask yourself whether customer and supplier portals would free your staff to address more strategic initiatives.

- How do I currently communicate delivery status to customers?
- How do I place orders with my suppliers and receive delivery status from them?
- How can I improve communication and information sharing along the entire supply chain?
- What is the percentage of time my customer service representatives spend providing order status information?

According to the same Aberdeen Group report, a US-based consumer packaged goods manufacturer was able to drive the following benefits by improving trading partner collaboration and supply chain visibility:

- Reduced number of days of inventory in hand by 24%
- Reduced lead times by 28%
- Improved on-time customer delivery from 33% to 74%

### Making the Changes

Recognizing areas where you may be losing money due to lack of supply chain visibility is only the first step in improving operations. Implementing processes that improve the efficiency of those areas is the next step in reducing costs. With answers to these questions, you'll be able to determine whether improved visibility into your supply chain will produce tangible results. 

\*\**"Globalization: Linking Supply Chain Transformation to the Profit and Loss Statement," Aberdeen Group, Sep 2011. s.*

(Continued from Page 5): *The Visible Supply Chain*

pallet level detail about what inventory is in transit. And just a very few companies have visibility to supplier and customer inventories.

**Dashboards:** Dashboards differ from scorecards in that they are not about what happened even yesterday, but what is happening right now. They are tools to help managers make more informed and better decisions about what to do in the present tense.

Clearly, the potential for dashboard development in any given area is directly connected to the level of real-time visibility in that area. No visibility, no dashboard. More data, a richer dashboard.

Continuing our inventory example, a dashboard might combine real-time inventory information with order and other demand information to indicate where actual and

potential inventory issues are developing, before an order cannot be filled.

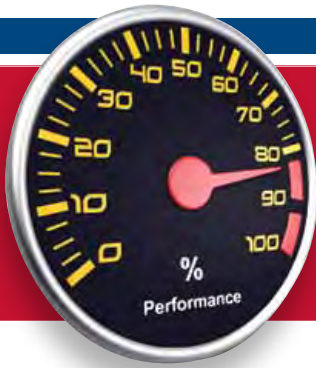
Dashboards take visibility information, make it more useful and are generally tailored to individual roles or needs.

**Event Management:** Already briefly discussed above, event management has rapidly gone from nice in theory but little used in practice to almost commonplace capabilities with a high level of sophistication today.

It could be well argued in a sense that event management is simply a subset of the dashboard, proactively communicating when something important has happened so that a user does not have to identify that occurrence him or herself. These "events" are usually a specific exception (e.g., the container did not clear customs on the

*continued - page 10*





*“Dashboards differ from scorecards in that they are not about what happened even yesterday, but what is happening right now. They are tools to help managers make more informed and better decisions about what to do in the present tense.”*

(Continued from Page 9): *The Visible Supply Chain*

date expected) or relative to some performance threshold (e.g., perfect order percentage is within 3 percentage points of falling below our target).

**Predictive Analytics:** If dashboards tell us what is happening right now, predictive analytics will tell us what is likely to happen, giving companies even more time to do something to mitigate a potential problem.

While still relatively early in what eventually will be a powerful trend, predictive analytics will use sophisticated algorithms and even concepts like statistical process control to provide better insight today about tomorrow. Using a newspaper analogy, scorecards are like yesterday’s paper, dashboards are like today’s newspaper, and predictive analytics will be like getting your hands on tomorrow’s newspaper.

There are already a few examples, such as an internally developed application at IBM that looks at a variety of data (financial results, shipment timeliness, quality levels, etc.) to identify suppliers that might be at risk for real problems down the road. Maybe before long, companies will be able to see that there is big risk that a key order will not go out today at 10:00 a.m. when something might be done about it, not at 4:30 in the afternoon when it is too late.

**Visibility Hub:** We may never get there, but the ultimate end game would be the creation of a central portal that would contain integrated visibility information across all the eight sectors.

Such a hub might be seen as analogous to the “grid” capabilities supposedly developed by the FBI, CIA, and other government entities. That grid brings in information from a wide variety of sources (credit card usage, cell phone and other calls, bank records, and who knows what else) that not only can be made visible in the effort to investigate, thwart or find the bad guys, but also can link that visibility data across sources. Or at least, that is what the TV show NCIS and others would have you believe.

Here today? Not quite yet. Are vendors working on somewhat analogous concepts? Absolutely.

## Visibility Fails

Although many companies have achieved impressive levels of visibility in their supply chains, lack of visibility has continued to cause problems for many companies.

Recent examples include:

- Boeing made a major change to its sourcing strategy in the mid-2000s for its new 787 Dreamliner aircraft, outsourcing many more major subsystems to tier one suppliers who contracted with others for components. But Boeing had no real way to keep track of how these tier two and tier three suppliers were performing, and in many cases the same supplier was making multiple commitments to different tier ones without the tier ones or Boeing knowing it. Disaster ensued, and Boeing ultimately delivered its first 787 almost four years late.
- When the financial crisis and the recession hit in 2008 into 2009, the high tech and consumer electronics industry almost completely froze, as a lack of visibility caused something like a reverse Bullwhip Effect. In Q4 of 2008, consumer purchases were down 8%, but final goods shipments were down 10%, and component orders were down 20%. This was in large part because the tier ones and two didn’t have good visibility to what was happening at the consumer level, and thus feared the worst. Giant electronics retailer Best Buy said in 2009 that it could have sold more electronics equipment over almost two quarters than it did, because substantial inventory and SKU reductions by suppliers led to higher than expected stock-outs at the stores --- at a time when most manufacturers were anxious for any sales dollar they could find --- because manufacturers simply could not see what was happening.
- After the terrible earthquake and tsunami in Japan, Toyota and many other larger manufacturers experienced major supply chain disruptions because of supply shortfalls --- in many cases, not even realizing they were dependent on specific tier 2 and 3 suppliers. Toyota recently went through an exercise to map most of its supply chain to get visibility to its full supplier network --- and found hundreds of risks it didn’t know existed.

*continued - page 11*

(Continued from Page 10): *The Visible Supply Chain*

## Visibility Recommendations

The *SCDigest Letter* offers the following recommendations for companies pursuing higher levels of visibility:

- **Focus on “Actionable” Visibility:** Procter & Gamble may or may not have invented the phrase, but it uses that concept to help guide where and how it invests in improved visibility. Visibility for visibility’s sake doesn’t do a company much good. Supply chain managers must focus on and clearly define what specific information will enable them to make better decisions and effectively act faster to problems and opportunities.
- **Build a Proactive Plan and Roadmap:** Too many companies we see add supply chain visibility in a

sort of scattershot fashion, based on perceived needs in some area or another at a given point in time. While the nature of visibility lends itself to falling into that approach, development of a master plan that sets priorities for effort and investment, and what sorts of visibility platforms need to be acquired or built (and it will always be several) will lead to a more effective and cost effective result.

- **Learn the Cost Justification Math:** Visibility applications can be sometimes hard to justify. Managers know there are qualitative improvements, but find the hard savings at times is not easy. Vendors can help here - they go through this over and over again. But companies need to take their templates

*continued - page 12*

## The Visibility Technology Tool Kit

*Technology has evolved to the point where there is almost no technical limitation today to achieving extraordinarily high levels of supply chain visibility. Most of these technologies have been around for more than a decade. All are being used in visibility systems today.*



**Auto ID/RFID:** Traditional bar coding has been an important tool to increase accuracy and hence visibility for two decades, but RFID has many advantages (automatic readability, no line of sight) that eventually will lead it to dominate the auto ID landscape. “Inlays” (chips before they are put into a label) for passive RFID tags are now down to about 6 cents apiece. Even lower cost “printable” tags may not be that far off. “X-Raying” a pallet (reading all carton/item tags on the pallet in one pass of the reader) is still a challenge though.

**Wireless/Mobile:** The growth of wireless technologies and devices from beyond the distribution center floor to other areas of the supply chain is extending the reach for real-time communications and automatic data capture.

**Sensors:** Technology for monitoring temperature, moisture, etc. have been around for decades, but are now increasingly being tied to RFID and other communications technologies to provide visibility to environmental conditions and changes.

**Notes:** A small wireless device that when deployed with other nodes can form its own communication network by “talking to each other” without human intervention. Nodes are often connected to sensors, especially in manufacturing.

**Global Positioning Systems:** Increasingly sophisticated GPS technology provides a real time view of where a truck, a person, or even a pallet of inventory is in the supply chain. That can enable, among other benefits, dynamic routing in case of delays.

**Video:** Video technology is now being used primarily in a reactive way (a customer says the order is wrong, supplier shows video evidence the carton or pallet was accurately built). But “video analytics” are coming that will also enable more proactive use of video.

**The Internet:** Obviously, a broad communication pipe that provides the ability to communicate and share data easily, often with less painful connectivity efforts and potentially even “ad hoc” connectivity.

**The Cloud:** Related to the Internet, but the real promise is visibility-related workflows and the ability to house and manage supply chain data in a multi-party environment.

***Together, the technical ability to build an “internet of things” is clearly here. These tools will also enable a new era of “perfect logistics.” (See article on pg 1.)***



## Visibility Solution Profile



# DESCARTES™

Descartes (TSX:DSG) (Nasdaq:DSGX) is the global leader in logistics technology. If logistics is critical to your business, Descartes connects the people and technology to put your organization in motion. We extend the command of logistics operations, helping the world's largest and most connected logistics community to quickly reduce costs, improve service and comply with customs and transportation regulations.

Descartes' cloud-based Logistics Technology Platform uniquely combines the power of the Global Logistics Network, the world's most extensive multi-modal network, with the industry's broadest array of modular and interoperable web and wireless logistics applications. At our core, Descartes' team of industry-leading logistics experts is dedicated to delivering innovative solutions while working closely with our customers to help ensure their success. Descartes is headquartered in Waterloo, Ontario, Canada and has offices and partners around the world.

### Key Customers:

Descartes has more than 6,800 customers located in over more than 60 countries around the world. Examples include CVS Caremark, TJX Canada and more.

### Website and Contact Info:

[www.descartes.com](http://www.descartes.com) • [info@descartes.com](mailto:info@descartes.com)  
Phone: 1-800-419-8495

### Featured Collateral

Business White Paper: Logistics Flow Control

*Available on the SCDigest Resources Page  
([www.scdigest.com/Supply\\_Chain\\_Visibility.php](http://www.scdigest.com/Supply_Chain_Visibility.php))  
or the Descartes web site.*

## Five Points for Getting Value from Visibility Solutions

*By Chris Jones, EVP Marketing & Services, Descartes Systems*

The concept of visibility has been around for almost 20 years, but the results received from one company to another have been “hit and miss”. From our experience working with leading retailers, distributors and logistics services providers, we have developed a five point framework for customer success.

**Narrow the focus:** The biggest challenges with visibility projects are scope and time to value. Visibility projects fail from the start when the scope is too comprehensive and there is a “hockey stick” view of value. Because visibility is so nebulous for many executives, tangible results and momentum really matter. To get results fast, start by picking a defined portion of the supply chain (e.g. a small set of trade lanes) or a couple of critical supply chain events to track. Do not underestimate the time and effort of getting trading partners and carriers connected as it can be the longest part of the implementation. This is one of the reasons that network based cloud solutions with preconnected parties are becoming more pervasive.


**Manage data quality:** Did you know that the acronym ASN has two definitions: advanced ship notice and already shipped notice? The latter can make any visibility project fail. Data quality is still alarmingly poor and needs to be recognized as a management problem as opposed to a technology problem. As part of the initial phases of a visibility project, implement data performance reporting to measure the timeliness and completeness of data for all of the parties involved – including your own organization. Scorecarding data quality is just as important as delivery performance will make and keep visibility projects producing great results.

**Expand your constituency:** The fatal mistake in achieving or maximizing visibility value is to keep the data confined to the supply chain organization. There are so many others that can use the information and impact supply chain performance. For example, one customer provided visibility system access to their merchandising organization and completely eliminated a large inventory staging yard piled 3 high with 40' containers. As the merchandisers gained confidence in the reliability of the shipment data, they began to order less reducing inventory. Include “360°” scorecarding with the carriers and logistics services providers. One version of the truth is essential to improving supply chain performance and do not assume that their systems will tell them what is really going on.

(Continued from Page 12): Five Points for Getting Value...

**Add visibility layers:** It is important to understand that implementing a visibility system is a learning experience. By analyzing the visibility information with your greater constituency, you will expose blind spots in the supply chain. For example, knowing the status of customs clearance for international supply chains or scheduled dock appointments may be key information that provides you with a comprehensive view of your supply chain performance. Look for solutions that have a comprehensive view of the purchase order to warehouse receipt, but with the ability to layer in more events as you learn more about your supply chain performance drivers.

**Achieve actionable visibility:** Visibility systems make information available to all of the supply chain parties and form the basis for making collaborative decisions that improve performance. However, these systems do not provide the actual collaborative process for making decisions. Without “baked in” processes, so many visibility projects fail to realize their full potential. There is a next generation of multi-party applications that allow all of the parties to participate in the decision process and understand the impact of the decisions made by each party. These solutions use the information of the visibility system, but have the multi-party process built in to facilitate decisions and project their outcome. One new solution which we call Load Flow Control is used by a retailer, its suppliers and carriers to intelligently consolidate shipments at the supplier or within the carrier network. As changes are made by any of the parties, the solution’s intelligent route guides dynamically advise if the changes comply with the retailer’s delivery performance mandates and makes the information available to the retailer, supplier and carrier.

From our experience, successful visibility implementations can be counter intuitive to many technology projects – less is more and they are a journey. Because time to value and data quality matters so much and there will be unknowns, a premium should be placed on choosing a solution with flexibility and trading partner connectivity. From there, the single most important objective is to determine a reasonable scope and stick to it until the results start pouring in. 

(Continued from Page 11): The Visible Supply Chain


and really dive down into the details to not only produce a plan to gets the project approved, but also the results delivered.

- **Recognize that Much/Most of the Information You Need Will be External:** If you have outsourced or virtualized much of your supply chain, by definition most of the data you need will reside outside your enterprise. This can be true even if a company has retained manufacturing and other functions internally. That in turn means connectivity becomes core to the visibility quest; we have found that some companies simply lack the will to make the effort. However, an increasing number of cloud-based vendors have achieve significant pre-connectivity to hundreds of companies and logistics providers.
- **Invest Effort in Non-Systematic Visibility:** While we tend to think of visibility as something that is technology based, leaders often actually spend a lot effort to get at data and insight that can’t be captured systematically at the start. Cisco’s advanced Sales & Operations Planning process has matured to the point now that among the top concerns is finding out “qualitative information we can’t see” about market conditions, customer plans, etc., an executive there recently said. As Boeing’s 787 disaster fades and it now faces a flood of new orders, it is sending more than 100 supply chain managers and engineers into the field to work with suppliers on a regular basis --- sometimes daily --- to monitor schedules, inventories and other factors that could impact supply.

**Summing It Up**

Many have heard the old saying that “What gets measured gets managed.” That’s certainly true, but we could now add a corollary that “You can only manage what you can see.”

The supply chain winners of the future may largely be the ones that have more information at their disposal, and use that information more smartly than their competitors.

Welcome to the visible supply chain. 

**SUPPLY CHAIN VISIBILITY**  
*Resources*



Look us up! You’ll find a wealth of resources on Supply Chain Visibility at our website:  
[www.scdigest.com/supply\\_chain\\_visibility.php](http://www.scdigest.com/supply_chain_visibility.php)

**Including:**

White papers • Video • Case studies • Expert columns • Supplier brochures  
*You’ll find the information and insight to better understand Supply Chain Visibility!*

[www.scdigest.com/supply\\_chain\\_visibility.php](http://www.scdigest.com/supply_chain_visibility.php)



*“The (Perfect Logistics) technology is largely in place: Auto ID, wireless, mobile, GPS, video, advanced ship notices (ASNs), the “Cloud”, and emerging examples of Perfect Logistics in an increasing number of segments of the full supply chain”*

*(Continued from Page 1): The New Era of Perfect Logistics*

By way of a parallel example, global positioning system (GPS) technology is becoming not only prevalent but on its way to being pervasive. With smart phones soon in almost everyone’s hands, mobile GPS will also become commonplace. Today, these systems not only map virtually every road in a country, but many are expanding to geo-map things like park trails and bike paths.

The upshot of all that: we may be the last generation that can actually get lost walking or driving. We’ll be able to tell stories to our grandkids about the experience that they no almost nothing about.

***And here is the really important point: if we can’t get lost, than neither can our inventory or our assets.***

The technology is largely in place today. Auto ID, wireless, mobile, GPS, video, advanced ship notices (ASNs), the “Cloud” - and we are starting to see examples of Perfect Logistics in an increasing number of segments of the full supply chain.

To fully get there will probably require more broad implementation of RFID, which will indeed someday soon dominate the auto ID playing field. Bar codes can help get us close to Perfect Logistics, but it usually requires a manual scan effort that can be missed, and doesn’t work so well in more unstructured processes and environments, whether it is the backroom of a retail store or field operations in the orchard or the battlefield.

The ability of RFID to support automatic reads, in combination with the other technologies and systems, will push the potential from near perfection to actual perfection - with big implications for our supply chains.

## Examples of Perfect Logistics are Starting to Emerge

The industry is in fact seeing a growing number of examples of partial logistics perfection:

- Perdue Pharma, maker of the drug OxyContin, uses a Las Vegas style camera system to video record every step of the packing process as the drug that is literally worth more than its weight in gold is placed into shipping containers, pack by pack. If there is any receiving quantity discrepancy on the other end, Perdue simply goes back to the tape. With the coming of “video analytics,” Perdue could actually use the same system to catch any packing errors as they occur.
- A division of South Africa’s Imperial Logistics manages direct store delivery for a major food company in the country. The delivery operations is controlled by a sophisticated routing and scheduling system connected to GPS units on the vehicles. Large screen displays throughout the master control room show precise, second by second movement of dozens of trucks as they execute their routes. Dispatchers know instantly if a delivery is going to be off from the scheduled appointment time even by a few minutes, such as from a traffic delay or extra time required at a stop. When this occurs, the customer is often contacted and updated with the new expected arrival time. More seriously delays can cause a dynamic re-optimization that changes routes or dispatches new deliveries.

*continued - page 14*

(Continued from Page 13): *The New Era of Perfect Logistics*

Very close to perfection indeed, based on visibility.

- A retail customer of Descartes Systems uses its Logistics Flow Control software to precisely manage inbound vendor shipments to its DCs and remove much of the variance it had previously experienced. The tool is a cloud-based, collaborative system that ties together vendor, carrier, and retailer.

In addition to full visibility of the purchase order through receipt, the software provides visibility and control of the carriers to the retailer as well, especially for LTL service providers, which it discovered were the source of much of the delivery variance it had been experiencing. Now, rather than being somewhat subject to the delivery whims of the LTL carriers, it can see what is happening in the network and LTL terminals relative to inbound goods, and then pull or delay those orders into its own DCs depending on its inventory needs and the DC schedule.

Perfect control of the inbound supply chain.

- Monarch Beverage, a major beer distributor located near Indianapolis, recently installed an automated case picking system, using a series of technologies and robotics to select cases and build pallets (from Hartness International). In addition to being an impressive display of automation on its own, every case running through the system is also captured on video.

If there are any order discrepancies at the customer, Monarch can go back and show every case that was picked, placed on the pallet, and shrink wrapped for delivery for that customer. It has reduced both incidents and claims dramatically - due to video visibility.

- A major department store retailer is building towards a vision in which cases and items within the case are RFID tagged and read automatically as part of the truck loading process at the vendor's DC, which will be used to create the ASN. It then wants to see the inbound load also read somewhere along the transportation process by the carrier, and then again read automatically as it receives the goods into its own distribution centers, closing the loop.

Not only will this provide truly perfect visibility into the inbound flow of goods, that visibility will highlight where any errors tend to be occurring, leading to their eventual elimination. Perfect.

There are other examples. Perfect Logistics will be about both accuracy and continuous product flow. Another

retail executive recently commented, for example, that "It's all about speed to market, so there's a great focus on how we eliminate dwell time."

Today's visibility tools will provide supply chain participants the ability to find and root out those dwell times with increasing precision in every supply chain sector.

### Perfecting the Perfect Order

It's hard to talk about Perfect Logistics without talking about the Perfect Order, long a key metric for supply chain execution effectiveness. Clearly, visibility tools will make Perfect Order achievement easier for such elements of the measure such as "on-time" and "undamaged."

But what about "in full"? In cases where lack of order completeness occurs because there was inventory available to ship but it did not make it on the truck for whatever reason, clearly improved visibility can help address those situations. Visibility can also help with more dynamic sourcing to find and ship products to complete the order that may reside in other nodes of the supply chain.

But what if a company just hasn't made the inventory needed? Well, visibility can also in part help prevent that situation. A relatively new generation of "demand sensing" tools better utilize actual store-level POS data to adjust short-term forecasts that drive production schedules and hence inventory position. Companies such as Procter & Gamble and Unilever have reported short-term forecast improvements of 30-40%, which would clearly lead to much improved Perfect Order attainment.

### Perfect Logistics is Coming

The *SCDigest Letter* not only believes Perfect Logistics is coming, but that as supply chain leaders begin to deliver different aspects of it, it will increasingly become a customer expectation that vendors and service providers can support it.

This will lead to something of a "visibility arms race" to get there. And the issue will become not can a company deliver Perfect Logistics, but how much it costs them to make it happen.





**This Month: Supply Chain Visibility**

**THE SUPPLY CHAIN DIGEST LETTER**

P.O. Box 714  
Springboro, OH 45066

PRSR STD U.S. POSTAGE <b>PAID</b> SPRINGBORO, OH PERMIT 714
---

**SUBSCRIBE TODAY**

- **B2B Media Group** provides the best in supply chain and logistics information. Our publications and informative Websites provide the latest news, insight, and opinions to help you keep informed, improve performance, and find the solutions and services you need. *There is nothing else like them in the industry - see for yourself. Subscribe or visit today - it's free.*
- **Supply Chain Digest:** Weekly on-line newsletter and valuable Website. The very best in the industry, [www.scdigest.com](http://www.scdigest.com).
- **The Supply Chain Television Channel:** On-line, broadband video channel devoted to supply chain and logistics. News, case studies, thought leaders, education and training. Coming Soon!
- **SC Digest On-Target:** Weekly e-magazine with insightful news and article by key focus areas: supply chain trends, distribution and material handling, transportation management, global supply chain and logistics, RFID and AIDC, procurement and sourcing, manufacturing.
- **The Supply Chain Digest Letter:** Hard copy newsletter published monthly focused on a specific topic, with concise, in-depth information and insight. It's a great read! [www.scdigest.com/letter](http://www.scdigest.com/letter)

**Editor: Joan Nystrom**

**Publisher: DAN GILMORE**

The SUPPLY CHAIN DIGEST LETTER is published monthly by B2B Media Group, PO Box 714, Springboro, OH 45066, Copyright 2007. B2B Media Group LLC, All rights reserved. A one-year subscription includes 11 monthly issues plus email transmissions of news and updates. Subscribers may make occasional photocopies of articles within THE SUPPLY CHAIN DIGEST NEWSLETTER, but may not reproduce the publication in its entirety. Routine or systematic photocopying or distribution of the newsletter or articles from the newsletter is a copyright violation. To ensure compliance with all copyright regulations or to acquire a license for distribution or republishing, please contact B2B Media at 937-855-3253, or by email at [info@scdigest.com](mailto:info@scdigest.com). Periodical postage paid at SPRINGBORO, OH and additional mailing offices. Postmaster: Send address changes to: **SUPPLY CHAIN DIGEST, Box 714, Springboro, Ohio 45066, 937-350-7915, email: [info@scdigest.com](mailto:info@scdigest.com).**