One key step to finding answers to any logistics problem is knowing the right questions to ask.

Inbound Logistics assembled a team of supply chain technology leaders and asked for their perspectives on the important logistics challenges and opportunities impacting your business.

More importantly, these logistics IT thought leaders can give you guidance when considering applying technology innovations to your business processes.

I.T. THOUGHT LEADERS

ROBERT
BYRNE

President and CEO
Terra Technology

Q: Why isn't transportation planned with the same level of rigor as finished goods?

BYRNE: Transportation cannot be planned with the same level of rigor as finished goods because transportation management systems rely on one piece of information–current orders–to schedule shipments. There is no forward-looking view of requirements that would let the planners understand promotion timing, capacity issues, or seasonal patterns. If transportation planners want to shift from reacting to orders to proactively managing capacity, they need a lane-level transportation forecast. Moreover, this forecast needs to be synchronized with the manufacturing and distribution plan so the whole company is responding to the same demand signals.

Q: What are the requirements for a transportation forecasting solution?

BYRNE: A successful transportation forecasting solution must generate a forecast that is not only tied to the corporate demand plan, but also provides the granularity required by transportation–for example, mode, protection class, carrier, etc. The solution must have visibility into promotions so that planners can adjust shipments in advance of promotion-induced spikes in demand. It should also reflect current manufacturing and distribution capabilities and strategies, and should not be based on historical averages. All currently available demand signals, including POS, should be used to ensure the most accurate shipment forecast. The solution must also be flexible enough to evolve as manufacturer and distribution capabilities change.

Q: What are the benefits of transportation forecasting?

BYRNE: Transportation forecasting solutions ensure that logistics, manufacturing, and supply chain are executing to the same plan. Transportation and warehouse planners have visibility into promotions so they can plan for spikes in demand, reducing their reliance on the spot market and enabling more accurate staffing.

Although premiums are not high now, transportation is a cyclical business and rates will rise as capacity has dropped and business is improving. Manufacturers can increase intermodal shipments and decrease deadhead miles with the ability to plan for increased demand weeks in advance of actual orders. Switching to intermodal shipments reduces carbon emissions and fuel consumption, decreasing costs and improving sustainability efforts. Visibility into future transportation requirements enables manufacturers to identify capacity issues in advance, giving logistics the time to resolve them. Visibility into future shipments and receipts improves warehouse staffing. Separating truck procurement from order creation both lowers costs and improves responsiveness. Forecasts that match current manufacturing and distribution capabilities and strategies generate more effective strategic sourcing and give manufacturers the opportunity to collaborate with carriers and retailers, benefitting manufacturers, retailers, carriers, and consumers.

Transportation forecasts can be integrated with Transportation and Warehouse Management Systems to further improve efficiency. Manufacturers can cut costs, improve service, and increase sustainability by forecasting transportation requirements rather than just reacting to orders.

KURT CAVANO

CEO
TradeCard

Q: Why is SaaS the next big thing in supply chain?

CAVANO: Business leaders and the supply chain community are just beginning to recognize the potential of SaaS and Cloud technology. As this continues, the innovation and impact will rapidly snowball.

A recent note by AMR analyst and supply chain guru Kevin O'Marah provided an interesting summation of the supply chain's impact on productivity gains and the potential impact of SaaS. For most of the 20th century, productivity grew at 1.5 percent per year based on mechanical innovation, O'Marah explains. From 1995 to the present, productivity is closer to three percent, based on supply chain efficiencies.

The point is that supply chain organizations, which are improving their own metrics 10 percent per year by combining mechanical operations and engineering with new technology and Internet-based tools, are allowing organizations to double their overall annual rate of productivity. The issue many of us have come up against is that supply chain and ERP projects, and other technologies designed to improve performance and efficiency, are expensive. They're costly to deploy, costly to maintain, and, unfortunately, costly to replace.

This is where software-as-a-service becomes key. As O'Marah put it: software-as-a-service architecture allows nearly constant revision without the pain of on-premises upgrades. This is a major breakthrough.

Q: What challenges or issues are you hearing from business leaders today regarding supply chains?

CAVANO: Most IT, finance, or operations folks have apprehension about the supply chain. It's complex. It's outside the four walls of the organization. There's too much risk associated with it. SaaS in the supply chain changes all this.

Supply chain strategies built around SaaS or Cloud computing eliminate many headaches that often come with supply chain investments. The need for presence overseas is reduced or eliminated. Time spent integrating systems across internal departments is cut. Time spent integrating with hundreds of suppliers and partners is greatly reduced.

Q: What types of initiatives are being tackled with SaaS or Cloud computing?

CAVANO: There's a lot already underway. The people who "get it" see that, with the right approach, SaaS becomes your ERP for the supply chain—but without the major headaches and costs. The companies TradeCard is working with today are using SaaS to address things like:

- Their sourcing organization's need to provide automated connectivity to suppliers.
- Their logistics team's need for shipment visibility.
- New Homeland Security, social, and SOX compliance regulations.
- Direct ship/DC bypass/crossdocking capabilities.
- Their finance group seeks to eliminate overhead supporting manual vendor and freight payables.
- Import documentation reconciliation and payments.
- First Sale Import enablement.

TradeCard | 212-405-1800
Kcavano@tradecard.com | tradecard.com

CHRIS
TIMMER

Senior Vice President of
Business Development and
Marketing, LeanLogistics

capacity. As the century turned, technology began to play a role in streamlining these processes. Software companies began to see the industry paying for this type of technology and developed high-end, logic-based tools to manage the process.

Today, we see another shift in the mentality of the transportation buyer. In a recent LeanLogistics survey, 52 percent of all shippers are now bidding freight on a local, regional, and lane basis, with 70 percent putting freight out to bid multiple times a year. This is a dramatic change from the network annual bid mentality that was prevalent since the late 1990s.

Q: How has innovation affected the purchasing of transportation services over the years?

TIMMER: After 20 years in the transportation industry, it is interesting to witness the changes that have occurred in the mentality deployed for transportation sourcing. I can remember the days working for a mid-sized truckload carrier developing pricing for the sales team. Tariffs and discounts, rate sheets and napkins–it was a lot different then. It took months to participate and obtain results from the customer. In most cases, the way to get business was to ask for a few lanes to prove your capabilities, then hope to grow with more volume.

Having participated in those processes, it is interesting to see the evolution of behaviors of the market. As the late 1990s approached, we saw more of a trend to participate in annual network bids. These were also very complex, manual, and time-consuming. The mentality of the buyer was to put more on the table for the carrier to see the bigger picture when pricing and committing

But what does this tell us about our market? I believe we are witnessing an evolution that reflects cultural influences. Today's buyer has stepped into transportation in an age where technology and access to transportation networks is commonplace. The user is accustomed to having technology handle administrative and logic-based decisions.

Additionally, the access to potential suppliers is less about a golf outing and more about a cost-plus-service equation. Don't get me wrong, relationship is the backbone for all business transactions, but relationship doesn't keep people's jobs and increase their bonuses. Savings do. With access and visibility to posting boards, SaaS transportation networks, and optimization technologies, transportation procurement has evolved to a point where it is truly a continuous management function.

Times sure have changed. I believe that these changes will help sustain a vibrant critical industry.

LeanLogistics | 616-738-6400
sales@leanlogistics.com | www.leanlogistics.com

Q: What are some of the challenges companies face when trying to achieve supply chain visibility?

CHOWDARY: Globalization has fundamentally changed the requirements for supply chain visibility. Key challenges in achieving supply chain visibility include: Manual data inputs, multiple sources of data, data latency, and point-to-point interfaces.

Existing solutions provide fragmented visibility, resulting in 'versions of truth' and higher costs.

CEO
Aankhen Inc.

SUBHASH CHOWDARY
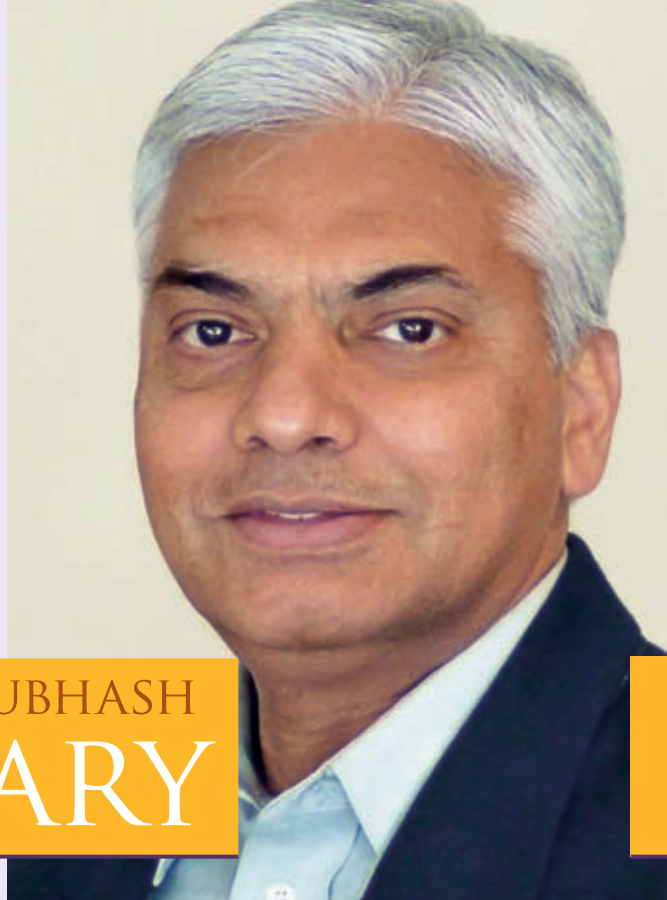
Q: What new technologies are available to address these end-to-end supply chain visibility challenges?

CHOWDARY: Tracking devices using RFID/GPS technologies attached to assets have been used in defense and commercial logistics. These tracking devices address some visibility challenges through accurate, automated, and real-time data capture. In addition, automated global data capture managed by on-demand software reduces the need for point-to-point interfaces.

Sensors integrated into the tracking devices provide security and environmental monitoring, with geo-location intelligence enabling real-time supply chain management to see and respond to risk.

Q: What difficulties are posed by using these new tracking technologies?

CHOWDARY: Some hardware technologies present challenges. For instance, RFID tags/devices require hardware readers to read the data from the tags/devices. In a global supply chain, a network of readers will need to be installed globally. This is not practical. GPS devices with communications built in are addressing this issue. As a tag/device traverses the global supply chain, it needs to be able to communicate its data. Satellite communications are expensive. Cellular network coverage requires access to global network providers. Out-of-network costs can be expensive. No coverage in the route can create blind spots. The technologies must become more cost effective.

Applications developed are hardware vendor- and device-centric, and not supply chain focused.

Q: How does Aankhen address these challenges and provide thought leadership?

CHOWDARY: Aankhen's solutions deliver supply chain visibility and intelligence as a service with process, security, and environmental monitoring. Aankhen's device and 'deviceless' tracking innovation is another first in the industry incorporating optical character recognition (OCR) technology to track containers, trucks, and railcars without having to attach a hardware device to the asset.

Aankhen creates new supply chain functionality with new sources of data and analytics not possible before to improve quality of product delivery at lower cost to customers.

Aankhen uniquely leverages investments required by enterprises to comply with security and compliance mandates to create significant, immediate, visible, and measurable ROI for all supply chain partners including enterprises, suppliers, customers, carriers, 3PLs, customs, border protection, homeland security, and financial institutions. Our knowledge of what works and what does not can help customers save time and money to achieve end-to-end supply chain visibility faster with no risk.

Aankhen Inc. | 408-387-0083
subhash@aankhen.com | www.aankhen.com

JAMES
STEVENSON

Vice President
Appian Logistics Software, Inc.

further and continually look for places to streamline operations and drive more cost savings. The combination of automated fleet routing, real-time GPS tracking, and resource optimization helps these companies execute better routes, resolve issues in real time, and continually uncover opportunities for cost reductions.

Am I getting the most out of my fleet operation? Are there cost savings opportunities we are unable to see using the processes and tools available today? These are the kinds of questions that a 3PL has to be asking continuously to ensure they are providing the best service possible to the customer. When you are able to quickly compare existing operations to what is possible, and to monitor planned versus actual performance levels, it is a different ball game.

Q: What keeps 3PLs from benefiting fully from planning tools?

STEVENSON: The main hindrances are not knowing the types of modeling and daily execution tools available and not evaluating different scenarios because it was so difficult in the past. Many times, companies have considered changes but the impact was left to conjecture because it was too time-consuming to evaluate options. Changes in daily fleet routing were difficult to implement because fixed route structures and tools did not lend themselves to dispatching new routes for part of the fleet and evaluating results.

It is important for companies to understand what is possible and to adopt a new mindset for evaluating change since automated tools streamline the process and eliminate the guesswork. Appian holds general user conferences and a specific conference for analysts and 3PL users each year to help clients understand these possibilities and to demonstrate the tools available using real-world scenarios. When modeling time is cut to a fraction of what it was, and new tools are utilized, these companies can uncover opportunities and quickly implement changes that provide benefits for their clients.

Q: How can 3PLs use advanced planning tools to model complex routing operations and streamline the bid process?

STEVENSON: Traditionally, companies used a team of analysts to model scenarios and calculate resource requirements. Any revisions required extensive man hours and double and triple checking updated plans for accuracy. The results were less than ideal because it was simply not possible to manually calculate all the combinations needed to arrive at an optimized plan. Factors such as rolling DOT rules, slip-seating, delivery windows, capacities, and truck schedules had to be included for the resource modeling to be effective.

In a tight economy, do companies have spare resources and time available to crunch through hundreds of combinations and arrive at an ideal solution? Probably not. They do the minimum required just to get the bids out in time. With the tools available, however, optimized bids and visual presentations can be compiled in a fraction of the time without the angst of cross-checking hundreds of manual calculations. Logistics companies that use these tools have a significant advantage in both demonstrating results and helping clients cut costs.

Q: Once they win the business, how do these companies put their design into action and drive continuous improvements on a daily basis?

STEVENSON: First, the company has to efficiently execute the proposed solution on a daily basis. World-class logistics companies take it a step

Q: Today, globally sourced, private label product is being developed and sold by businesses of all sizes. What are the key elements of success for businesses to navigate the complexities of the global supply chain?

ASKIN: The current, challenging economic climate has underscored the value of globally sourced private label product for retailers, brand owners, and wholesalers. Globally sourced, private label products allow merchants to maximize margins, while maintaining price points, ensuring a good return on investment.

Sourcing product globally is complex. Protecting brand, assuring quality, providing social and customs compliance, while managing trading partner relationships, are but a few areas where, if improperly managed, can spell disaster for the merchant. There are many critical elements that make for a successful, globally sourced, private

DONNY

CEO
Arigo

ASKIN

label program; three stand out above all:

First is Visibility. Complex private label global supply chains, encompassing everything from pre-production through delivery, require aggregating data from many different sources. PLM solutions, ERP solutions, logistics providers, warehouse management systems, and others, each provide siloed data reflective of each solution's focus. Aggregating this data with data integration tools into a single system of record provides a single version of the truth, 360 degree visibility of the global supply chain, and a data repository for analysis. Visibility of the complete global supply chain process is Critical Element #1 for businesses to navigate the complexities of the global supply chain.

Second is Intelligence. Successfully aggregating data from disparate data sources provides the foundation for private label, global sourcing analysis and analytics. Analysis includes tracking business process, calendaring, dash-boarding, alerts, what-if scenarios, and the ability to drive decision support from a homogenous, all-encompassing database. Leveraging advanced business intelligence tools provides the foundation for making educated business decisions and is Critical Element #2 for businesses to navigate the complexities of the global supply chain.

Third is Collaboration. With the advent of Social Networking and Web 2.0 over the past several years, communication has moved to an entirely new level. Enterprise 2.0 is the use of these new collaboration technologies to improve business process and communication. Imagine the ability to text, email, video or audio conference, cam, or create unique content communities… utilizing the form and type of collaboration best suited to communicate with your trading partner. Imagine the ability to communicate in real-time, near-real-time, synchronously, asynchronously, or virtually any means short of physically shaking the hand of your global trading partner. Imagine all of that and being able to attach and archive those collaboration sessions to any transaction, purchase order, RFQ, or trading partner interaction for later retrieval. Enterprise 2.0 + Global Supply Chain Management = Enterprise Collaboration, Critical Element #3 for businesses to navigate the complexities of the global supply chain.

Visibility, Intelligence, and Collaboration ensure a successful return on investment for retailers, brand owners, and wholesalers, who globally source private label products.

Arigo | 978-528-2200
daskin@arigo.com | www.arigo.com

Q: Given the volatility and uncertainty in today's logistics environment, how are logistics providers remaining profitable?

ELLIOTT: Sometimes it's easier than you think to find hidden profits in your warehouse or transportation operation. Many of the most successful companies are doing more with less by simply optimizing their slotting practices, pick paths, truckloads, and delivery routes.

We have customers using automated warehouse slotting and pick path optimization tools to organize products more effectively based on velocity patterns and streamline pick paths for least travel distance. With simple improvements like these in place, picker travel can be reduced by more than 20 percent and labor effectiveness can be improved by five to seven percent. For a 15-worker warehouse, this represents $45,000 to $65,000 in annual labor improvement. Additionally, the cost and time savings mean significantly improved service levels.

For-hire carriers and private fleets can save considerably by focusing on load and route optimization. Recently, a single distribution center for the Piggly Wiggly grocery chain cut approximately 3,000 miles per week just by creating more intelligent load plans and reordering delivery stops, garnering a 10- to 15-percent reduction in overall transportation costs. ROI was achieved in only two to three months.

Q: How can logistics providers measure the optimizations they've performed and determine whether they are creating a true benefit for their business?

ELLIOTT: Every operation is unique and conditions change constantly, so optimizations that worked for you in the past might lose their efficacy as time goes on. You need the means to evaluate the effects of your optimization by staying abreast of critical metrics and continually revising your plan.

Due to the historic high cost of deploying business intelligence solutions, many companies have chosen to stay with hard-copy reports that are often printed, set aside, and left unused. With the latest dashboard technology, companies can get immediate insight into essential key performance indicators, at a much lower cost than in previous years. Especially in today's economy, it's crucial to have access to real-time analytics displaying the current state of your business, historically relevant information highlighting important trends, and time-sensitive reports and alerts pointing out key criteria to aid in your decision-making process.

In our recent case study of Hall's Warehouse, a user of our logistics-tailored business intelligence tool, we found that they have accelerated putaway by 10 percent, improved personnel productivity by 15 percent, reduced replenishments by 13 percent, and can monitor USDA and FDA hold orders. This also enables them to give immediate feedback to their customers and has allowed them to institute improvements that likely wouldn't have been possible without the ability to monitor real-time activities in the warehouse.

Accellos, Inc. | 719-433-7000
info@accellos.com | www.accellos.com
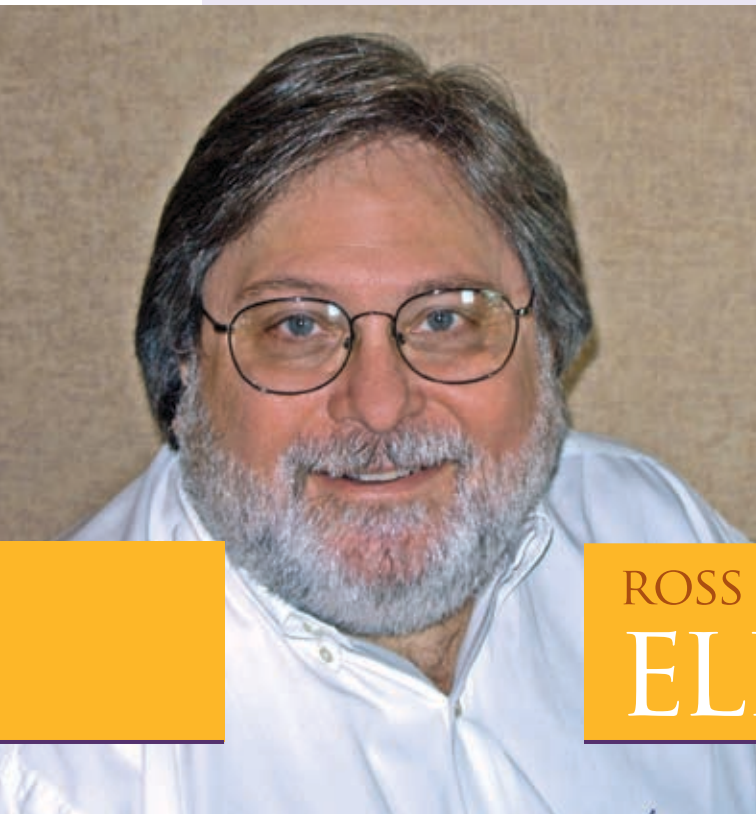
ROSS
ELLIOTT

Chief Technology Officer
Accellos, Inc.