# Voices of the

**By Bob Trebilcock,** Executive Editor

Several years ago, an executive from Dematic came to *Modern*'s offices to introduce a new way of thinking about the warehouse and distribution center. He called it "four walls and two windows."

The idea was simple. Materials handling solutions may happen inside the four walls of a facility, but they are affected by what happens outside of a facility. To be truly efficient, a system needs visibility— those two windows—into what is happening downstream and upstream.

The concept goes a long way to explaining the evolution of materials handling solutions. If all that mattered was efficiency inside the four walls, we would all crossdock full pallets and be done with it. Instead, new customer service requirements, store operations, just-in-time manufacturing strategies and value-added services are driving distribution strategies. "How do I satisfy my customers and get an edge on my competition?" is the industry mantra. Questions like that have led to the development of sophisticated order fulfillment strategies such as the one featured in this month's cover story on Skechers (see p. 14).

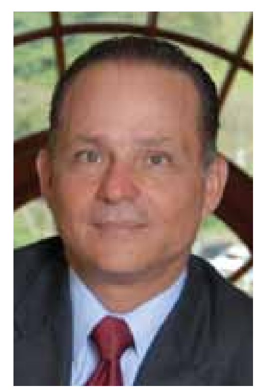
Add the upcoming expansion of the Panama Canal to the list of catalysts. Scheduled for completion in 2012, the canal will allow significantly larger ships and shipments to serve the East Coast of the United States. To get a view through the windows of how this might impact what happens inside the four walls of manufacturing and distribution facilities, *Modern* spoke to six supply chain experts.

# supply chain

**More than ever, what happens outside the four walls determines what happens inside the four walls. Six supply chain experts look at the most important factors shaping the future of the supply chain.**

*“We believe Panama is becoming the most important distribution hub in the Americas.”*

*—Alberto Aleman Zubieta, CEO, Panama Canal Authority*



When looking at the expansion of the Panama Canal, most logistics experts have focused on the impact bigger ships will have on supply chains centered in the Gulf of Mexico and the Eastern Seaboard.

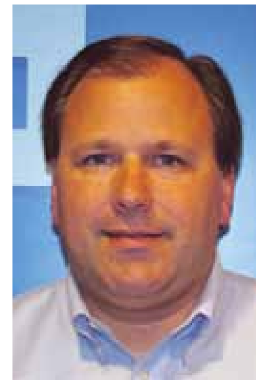
Aleman agrees with this assessment. “Some are calling this a game-changer for the maritime industry,” Aleman says. However, Aleman believes the more important change could be in where and how companies with global supply chains locate and distribute their products. “Panama is becoming the most important distribution hub in the Americas, especially if you want access to the growing markets in Central and South America and the Caribbean,” Aleman says.

As proof, he points to a growing number of warehouses in the Colon Free Trade Zone on the Atlantic coast and Panama Pacifico and to the fact that Panama is the only country with connectivity to two oceans. As such, he argues that the country is uniquely positioned to be a value-added distribution platform for global companies. Aleman also envisions Panama becoming a hub for redistributing at the level of the ship load.

“You can bring a full container into a distribution center, break it down and repack the product for a specific market before shipping it back out to a customer,” he says. “Or, you can offload the containers from a large vessel onto several smaller vessels headed to different markets. At the end of the day, this is a value-added route and not just a passage way between the Pacific and Atlantic oceans.”

*"The most important driver of our warehousing and transportation operations is the balancing of service and cost."*

*—Greg Buza, director of supply chain operations, BASF Corp.*



The expansion of the Panama Canal is one of the catalysts that has BASF kicking off the first comprehensive review of its North American distribution network supply chain since 2004. "The most important driver of our warehousing and transportation operations is the balancing of service and cost," says Buza. "We ask: How close are we to our customers, how quickly can we get product to our customers and what is the cost of getting those materials to our customers?"

An expanded canal may create opportunities to reduce supply chain costs by relocating facilities now operating on the West Coast to the East Coast or the Gulf region. "We are especially looking at Houston and New Orleans to expand our shipments to Asia," says Buza. "Freight for Asia is typically railed to the West Coast. If we can save money by bringing vessels into the Gulf through the canal, that could change how we crossdock and store materials."

While the expansion is first and foremost a network design puzzle for Buza, he says BASF is rethinking its order fulfillment processes. "We are looking at automating more of our warehousing and standardizing our processes across our network to lower our costs," says Buza. In North America, for instance, Buza is focusing on integrating supply chain management systems for greater visibility and efficiency. Globally, the company has built highly automated distribution centers in Asia and South America. "We're taking what we've learned and looking to add automated handling and storage in North America in the future," he says.

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*—John Carver, executive vice president of port, airport and global infrastructure, Jones Lang LaSalle*

The expanded canal will result in new supply chain opportunities, new areas of efficiencies and new strategies for transportation and distribution.

"There is an imaginary line where things destined for the East Coast come in east of the line and everything else comes in through Long Beach," says Carver. "Right now, that line is somewhere around Memphis. We believe it's going to shift to Dallas. That's going to result in new distribution strategies."

That doesn't mean that every product destined for the eastern half of the country will automatically be diverted away from Long Beach. Carver believes that products with a shelf life, including everything from food to trend-sensitive fashions and fast-moving consumer electronics, will still enter through the West Coast. Raw materials and basic products with a longer shelf life will find the most economical way to reach their final destination. "That is likely to be the East Coast because of the canal," says Carver.

Wherever that cargo lands, Carver is predicting more warehouse space because of slow steaming, slowing a vessel down from 25 knots to 18 knots to save fuel. "Talk to carrier lines, and they'll tell you that trend is here to stay," Carver says. "That suggests more inventory and more warehouse space."

Anyone who has watched the development of warehouse and distribution space around the ports in Long Beach, Oakland or Savannah understands that the expansion of the canal will affect more than just the cost of shipping a container.

It will also affect the industrial real estate sector and supply chain logistics. "The amount of growth and investment within the broader logistics universe will be exponential, impacting everything from shipping and rail line construction to warehousing and terminal development around the world," predicts Carver. He adds that there are already discussions underway between major shippers and logistics providers about new facilities even if the expansion is several years off. "Logistics providers realize that shippers drive business to their ports and warehouses," Carver says. "They're going after the Wal-marts, Home Depots and Ikeas of the world to address their needs."

*"Volume growth from the canal is going to dictate that companies look at where they put their four walls and how they operate."*

*—Page Siplon, executive director, Georgia Center of Innovation for Logistics*

"There's no question. The expansion of the canal is going to change the importance of logistics in the United States," says Siplon. "Volume growth is going to dictate that companies look at where they put their four walls and how they operate to handle that increased volume."

Siplon believes five factors will drive the development of distribution centers in the coming years.

**Site selection:** "Proximity to customers remains a key basic of site selection," says Siplon. "But they're also asking questions like whether there is the right kind of infrastructure and whether there will be enough truck drivers in a radius to serve their customers."

**In-house or outsource:** Siplon is intrigued by one distribution stat in particular: 51% of companies with more than $2.5 billion in sales have more than 10 distribution centers in their network. Those networks will have to expand to accommodate increased growth and volume. "The one commonality I hear when I talk to end users is whether they should outsource some of their network to a 3PL," Siplon says. "They want the flexibility to scale up or down, they want to reduce their costs and they want to mitigate their risks. With a 3PL model, the headaches become someone else's headache." Small manufacturers and distributors are especially attracted to the 3PL model as they look to expand internationally, according to Siplon.

**Add value:** Importers and exporters are increasingly looking at their distribution centers as value-added centers, places to configure a product before it is shipped to its next destination. "It's expensive for cargo to stop," says Siplon. "If it must stop in a warehouse, why not use that pause in the supply chain to do something that adds value." Since value-added services change over time "that fits perfectly the flexibility you get in a 3PL model," Siplon says.

**Add technology:** Materials handling automation is still the exception for most of the DCs in and around Savannah, but that is changing. "We're talking to companies that want to double their throughput in Savannah," Siplon says. "We're also talking to companies that are trying to get new customers in industries like pharma and food that have very specific inventory management requirements. Companies that want to play in that game need technology to scale and compete."

**Labor matters:** Yes, we have 9% unemployment. But distribution operations continue to struggle to recruit, train and retain qualified labor. "In Georgia, we have about 100 different logistics offerings in our high schools, community colleges and universities," says Siplon. "When we sit down with businesses and ask them what they need, the first thing they says is: How do you train a good work ethic." As the volumes of freight being stored, processed and moves increases, that is going to become more of an issue nationally. And, it may drive the adoption of automation and technology. "If we're going to get manufacturing back to the U.S., we have to figure out how to make the workforce compete," Siplon says.

*"Ultimately, the expansion of the canal is going to result in more efficient supply chains, and that's a good thing."*

*—Donald Ratliff, executive director, Georgia Tech Supply Chain & Logistics Institute*

How will the expansion of the canal impact global trade? Ratliff says the answer is not a simple one. He poses three key questions that need to be answered:

Will bigger ships be cheaper to operate? While Ratliff has seen estimates that larger ships could save anywhere from 10% to 40% per container, he asks whether the ships will be operationally cheaper once a shipper factors in the investment in these big new ships.

Will shipping lines pass on the savings? "Right now, shipping companies are in a world of hurt," Ratliff contends. "They have additional capacity and they're slowing their ships down to save fuel. If you're currently losing money and can't currently fill up your smaller ships, will you be able to fill up the bigger ships? And, if you do, will you pass on those operational savings to your customers?" Ratliff believes the jury is still out.

What will be the impact on service levels of bigger ships? Will carriers continue to send one ship a week once they go to bigger ships? Or will they make fewer deliveries? And, if it now takes one day to unload a smaller ship, will it take three or four days for a bigger ship? If either of those events occur, shippers will need to carry more inventory to offset the longer delivery times.

Bottom line: "There is a lot of uncertainty in my mind about the canal." What is certain, he says, is that the expansion is forcing major manufacturers and distributors to take a hard look at their international supply chains.

"Ultimately, that's going to result in more efficient supply chains, and that's a good thing," Ratliff says.

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*—Rick Blasgen, president and CEO, CSCMP*

"Supply chain management is still a very physical business despite technology," declares Blasgen. "We can move information on a moment's notice, but there are things that happen to effect the physical movement of goods, like oil shooting up from $30 to $140 a barrel."

The biggest impact of the expansion of the canal, Blasgen believes, will be the opportunity for companies to assess the state of their logistics. Looking ahead, he sees several trends affecting the very physical business of moving goods through the supply chain.

**Plan for supply chain disruptions:** Over the first six or seven years of the new millennium, low energy prices, steady growth and stable governments led to migratory supply chains. Manufacturers chased the lowest wage areas to produce their products. The wheels came off that train in 2008. Oil spiked to $140 a barrel in the spring and the economy crashed in September. Since then, supply chains have been disrupted by the Arab spring and a volcano in Iceland. Interest rates may be at zero now, but they could shoot back up. All of these events have turned risk into a four letter word. "If I were to tell you that a plume of smoke in Iceland would disrupt global shipping for two weeks, you might not believe me," Blasgen says. "But, supply chains now have to plan for that."

**Supply chain management as a revenue generator:**

For years, manufacturing, distribution and transportation were thought of as costs of doing business. Increasingly, they are the competitive differentiator. "The best companies realize they can generate revenue if they can manage their supply chains better than the competition," Blasgen says, who points out that Wal-mart's last two CEOs came out the retailer's logistics operations. If you have any doubts, look at how free shipping from Amazon has upended the world of online retailing. The practice costs Amazon money, like everyone else. However, since Amazon does a better job at warehousing, distributing and shipping than the competition, it gives up less of its profit margin while taking market share. "We were once a necessary evil," Blasgen says. "Now we're coming into our own."

**Who owns the infrastructure:** For all the talk of American competitiveness, one area where we are clearly lagging is in investing in the infrastructure that supports our supply chains. "We are not investing in an infrastructure that can support increases in population and demand," Blasgen says. "That's because no one agency owns the problem. There is no central agency to address these issues." Blasgen says the infrastructure isn't just about roads, bridges, rail and ports. It's also about talent. "In transportation, we have a driver shortage," he says. "Some of our universities are producing kids who are really well prepared for supply chain jobs, but they can't get experience. We have to ask how we can secure and retain supply chain and logistics leaders." Right now, that isn't clear. ☐

**Companies/organizations mentioned in this article**

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