

From tax incentives to infrastructure to cheaper transportation options, everything is on the table these days when it comes to picking the perfect location for setting up shop.

## Location, Location, Location

The choices for site selection have never been more plentiful.

Logistics hot spots come and go, based on a variety of factors. One thing is for sure, however, and that is the fact that communities know a good thing when they see one, and providing an attractive location for logistics operations is something more communities are trying

to do these days. As such, the pickings are ripe for companies looking to find the most advantageous locale for all their logistics functions.

Like never before, regions are putting together attractive packages to bring in logistics business. The appeal of jobs and economic development ranks high in the eyes of chambers of commerce, so many are rolling out the red carpet to lure in the business. For logistics companies, there has never been a better time to weigh the options and come up with the optimal solution to their location needs.

"Communities are actively courting logistics industries because the economic benefits are clear and compelling. Indeed, for cash-strapped municipalities, warehouses are a significant source of new property tax and jobs," says John H. Boyd of the Boyd Company, Inc., Princeton, NJ.

"Other coveted revenue streams generated by a new DC for the host municipality and state include sales taxes, personal property taxes, utility taxes, fuel, telecommunications and personal/corporate income taxes," he says.

Communities are recognizing that DC jobs encompass a wider skill set than in the past as well, making them more attractive. "Today's highly automated and computer-driven warehouses depend on a wide range of

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## Retail Fulfillment Trends

If there's ever been a time when customers want it now and expect it now, it's today's environment. Customer expectations are extremely high, and as the 2014 holiday season winds down, the ramifications of meeting or missing those expectations will start to shake out.

Dr. James A. Tompkins, CEO of Tompkins International, says that a number of factors are playing into the way retailers fulfill orders right now. "Customer expectations, cost, fulfillment networks, and the need for adaptability all impact retailers' behaviors," he says.

Breaking it down a bit, Tompkins sees it like this:

- **Customer expectations include:** speed, the number of shipments, delivery location/pickup location, communications, personalization, etc.
- **Costs include:** transportation, inventory, fulfillment center operational costs
- **Fulfillment network includes:** Fulfillment centers, store fulfillment and 3PLs
- **Need for adaptability includes:** labor and operations capacity, transportation capacity, peaks, etc.

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## Location, Location, Location *continued from page 1*

well-compensated tech employees who manage such sophisticated technologies as RFID, AS/RS, mobile robotics, inventory tracking, and software driven pick-and-pack systems."

From tax incentives to infrastructure to cheaper transportation options, everything is on the table these days when it comes to picking the perfect location for setting up shop. The public/private partnership is picking up steam and the supply chain is all the better for it.

### The trends

With so much competition for business location, certain trends are dominating the way companies approach site selection. "Our DC clients are trending in several regional directions depending on their industry, markets and global footprint," says Boyd.

One of the trends Boyd sees in site selection is the location of DCs near intermodal terminals. There are a number of factors playing into this, he says, including: rising diesel costs, truck drivers' mandated reduced hours, and sustainability trends. "Locating DCs near a rail terminal can help shippers reduce their carbon footprint by making it easier for them to incorporate more rail transportation in the supply chain," says Boyd. "Rail is recognized as being considerably more environmentally friendly than over-the-road trucking."

**"Companies want free trade zones, tax breaks and good infrastructure."**

Yossi Sheffi

He points out that rail can move a ton of freight 476 miles on a gallon of gas. That's equivalent to an SUV getting over 250 miles to the gallon. This makes rail attractive on both the green front and the cost savings front.

Yossi Sheffi, engineering professor at MIT and director of MIT's Center for Transportation and Logistics, adds that locating near intermodal hubs just makes economic sense in today's international environment. "With the high rate of overseas shipments today, you want to be able to unload containers and then put them on rail," he says. "There's a real need for intermodal yards and companies want to be near them."

Sheffi points to the example of BNSF and Kansas City, where the company recently opened a 1,500-acre logistics "park." The facility doubled the company's capacity in the area and greatly expanded its ability to bring in new business. BNSF officials cited the willingness of local officials to make the location attractive to business.

While not a new trend, "last mile" service continues to play a large role in location choices as well, says Boyd. "Trend-setting Amazon and its search for the holy grail of e-commerce—same-day delivery—has carved out a new 'last mile' piece to the DC equation," he explains. "In the Bay area, Amazon is testing its own delivery network for the final leg of the package's journey to the customer's doorstep."

This could pose a challenge to express shippers like UPS and FedEx, as well as open up a new distribution channel market in major cities, says Boyd. "We expect the Amazon experience—buoyed by surging e-commerce and new on-demand mobile crowdsourcing apps like Uber—to open up new growth opportunities within the express shipment sector as well as posing new challenges to express shippers."

Boyd also points to a port-proximate trend playing a role in site selection decisions today. "Container shipments are projected to increase tremendously at East Coast ports over the next several years," he says, "creating inland warehouse opportunities not unlike California's Inland Empire."

Communities located within a few hours' drive from deep-water ports in Miami, Savannah, Charleston, and Baltimore or Newark are examples of this. "Robbinsville is an excellent example of this port-proximate trend as witnessed by Amazon's recent decision to locate its first DC ever in the state of New Jersey."

Sheffi says that East Coast ports like Savannah, Virginia Beach, and Miami are all dredging right now to entice ships from the Panama Canal. "Miami is even building a new tunnel that will go under the highway and lead directly to the port to attract ships to its port," he explains.

## WERC Sheet

**WERC Sheet**® (USPS # 014998) is published bi-monthly by the Warehousing Education and Research Council, 1100 Jorie Blvd., Ste. 170, Oak Brook, IL 60523-3016.  
Phone: (630) 990-0001 Fax: (630) 990-0256  
Email: [wercoffice@werc.org](mailto:wercoffice@werc.org) Website: [www.werc.org](http://www.werc.org)

Annual membership dues are \$275, including \$80.00 for an annual subscription to *WERC Sheet*. Periodicals postage rates paid at Oak Brook, IL (Vol. 38, No. 1)

POSTMASTER: Send address changes to *WERC Sheet*, 1100 Jorie Blvd., Ste. 170, Oak Brook, IL 60523-3016. WERC assumes no responsibility for unsolicited manuscripts or other materials submitted for review.

Editor: Rita Coleman

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### **CORRECTION to November–December issue:**

Our apologies to Stephen Hopper, a *WERC Sheet* contributor and long-time WERC member. The correct website for Steve is [www.inviscidconsulting.com](http://www.inviscidconsulting.com).

## What it takes

There's no question that logistics business is more attractive than ever to communities, so what are they doing to bring it in? "Sheffi lists transportation access, good highway connections, and a big airport as being on most companies' wish lists. Boyd adds in a positive labor-management relations climate, a competitive incentive program and good cooperation from the local community.

Local government support must also be in place, says Sheffi. "Companies want free trade zones, tax breaks and good infrastructure," he says.

Boyd says that financial incentives often take on the form of property and sales tax abatements, labor training grants and public spending for improvements in highway, rail, and airport infrastructure.

"The education component can be quite helpful as well," Sheffi points out. For instance, if local colleges offer logistics courses, it can help provide a skilled labor force to interested companies. Going back to Kansas City, nearby colleges offer both degree and certificate programs in logistics, and lately, local high schools have also come onboard to help spread the word about college and job opportunities related to logistics. Combined with other factors, this has helped Kansas City attract warehousing business from companies such as Home Depot, Target and JC Penney.

One additional piece of the puzzle is a good telecommunications infrastructure. Boyd says that with more computer-driven functions in the DC and with e-commerce growth, having state-of-the-art telecommunications is a requisite in order to attract business.

Sheffi notes that some regions of the country are more likely to pull out all the stops to attract DC business right now than others. "Where jobs are plentiful, there's not as much incentive to try to attract this segment of business," he says. "But in places like the Midwest and the South, where jobs are in high demand, DC growth is welcome."

No matter what, things have changed for the better in the past 10 years when it comes to choosing the right site for your logistics operations. "It used to be that many communities were resistant to new warehousing projects and viewed them with skepticism," says Boyd. In most regions of the country, today, however, that attitude has done a 180. 

*John H. Boyd, The Boyd Company, Inc.,  
www.theboydcompany.com*

*Yossi Sheffi, MIT's Center for Transportation and Logistics,  
engineering.mit.edu/labs/ctl*

## The Kentucky Example

When eBay Enterprise, an eBay Inc. company, looked to expand its logistics operations, it

looked to its existing location in Louisville, Ky. Online marketplace Groupon also put down its logistics roots in Northern Kentucky recently, as did XPO Logistics and A & R Logistics, the former being an expansion project and the latter being new to the area.

**Why is it that all of these companies sought out the Kentucky region?** Many factors, most of which are common wish-list items for companies looking to dial in the ideal location to set up logistics shop.

For one, Kentucky has a central location, making it an easy trip to/from the East Coast and the South, as well as Canada and Mexico. It also has navigable rivers and seven public river ports, allowing it to send thousands of shipments via water. In addition to waterways and its central location, Kentucky is also well known for good infrastructure of other sorts, including bridges, airports and roadways.

Then there's the workforce. Kentucky has a logistics skilled workforce in place and a cooperative university system. And finally, Kentucky is motivated to bring logistics business to its grounds via incentives.

Due to its extensive marketing, Kentucky has attracted new logistics business and its economy is reaping the rewards. In 2013, Kentucky exports were up 14 percent over the previous year, making it the second-highest percentage increase among states. When it comes to attracting logistics customers, Kentucky has it all figured out.



## The Boyd Shortlist

According to John H. Boyd of The Boyd Co., Inc., based in Princeton, NJ, these are the locations, listed by region, that are currently in demand for DC site selection:

**Northeast U.S.:** Robbinsville, NJ;

Salem/Gloucester County, NJ; Lehigh Valley, PA

**Southeast U.S.:** Savannah, GA; Ruskin, FL; Miramar, FL

**Midwest U.S.:** Dublin, OH; Jeffersonville, IN;

Johnson County, KS

**Midsouth U.S.:** Pryor Creek, OK; Memphis, TN;

Shreveport, LA

**Southwest U.S.:** Casa Grande, AZ; North Las Vegas, NV;

Sparks, NV

**Mountain:** Sandy, UT; St. George, UT; Santa Teresa, NM

**California:** Apple Valley, CA; Redlands, CA; Tracy, CA

**Northwest U.S.:** Tualatin, OR; Quincy, WA; Twin Falls, ID





## Retail Fulfillment Trends *continued from page 1*

In response to these factors, retailers must find successful response strategies. According to Tompkins, they are taking several approaches, including getting local. "Getting inventory closer to customers and using more local/regional carriers for the final mile," he explains.

They are also implementing omni-channel approaches, Tompkins says. "This requires defining what, who, how, when and where to sell," he says, "and anytime, anywhere, however the customer wants consistently across the channels, and omni-channel logistics, which

**"Networks must be designed to maximize profits, not minimize costs,"**

James A. Tompkins

includes combined DCs/FCs, and demand driven, order-management systems."

The need to upgrade networks in order to meet demand is also key. "Networks must be designed to maximize profits, not minimize costs," says Tompkins. "Designing networks from true product

origin all the way to the customers, using realistic transportation, operating costs, and investment costs and practical sensitivity analysis for seasonal, promotional and event peaks."

This becomes especially important in light of the fact that the pressures for faster fulfillment continue to mount on retailers. Tompkins says this is an area where many retailers fall short. "Many do not have a good understanding of what the true customer requirements for speed are," he says. "The definition for speed depends on many factors, such as location, customer, type of product, and price."

In other words, he says, a customer in New York City is very different from a customer in Boise, Idaho, and customers also vary widely by age and gender. Product type and how it is handled has wide swings as well—ice cream vs. custom furniture, for instance, and price variances from low-end to high end. Think \$10 earrings vs. \$10,000 earrings.

Another trend that is shaping the current retail fulfill-

ment front is last-mile fulfillment. Tompkins says that three major changes are taking place in today's environment: (1) *Where product is delivered from*, (2) *Where product is delivered to* and (3) *Who delivers* the product.

"Where the product is *delivered from* could be a nationwide, regional, or local fulfillment center, a store, a 3PL or a third-party marketplace provider," says Tompkins. "The last-mile of the past was delivery to a home.

"Today, the *end delivery* can be to a home, a 3PL location, a store or to a pick-up locker. *Who delivered* the product was traditionally UPS, FedEx, or USPS. Today there are many alternatives that exist for final mile delivery, Zipments, and hundreds of regional/local carriers."

Indeed, Amazon.com recently developed its own private fleet to serve its top 40 markets. This will allow the fulfillment giant the ability to serve about half the U.S. population via its own fleet. This could signal the start of an entirely new approach to last-mile delivery.

Another retail leader, WalMart, has recently shifted responsibility for the backroom from its store locations to its logistics division in more than 3,000 locations. Often, where WalMart goes so does the rest of retail.

Tompkins says, "The supercenter backrooms are transitioning to logistics to provide click-and-collect services, supercenter front room replenishment, store fulfillment and crossdocking of products from DCs to FCs to smaller format stores. Do I envision others doing this? It depends on the retailer, but in general, *yes* for click-and-collect services, front-room replenishment, and store fulfillment. The answer is *no* for the vast majority of retailers for crossdocking to other facilities."

How will all of these trends and changes impact the holiday season this year? "Last season there were many fulfillment failures," says Tompkins. "This year should be better, but the volume of the products trying to be handled over the short holiday peak will strain the final mile capacity and some failures will ultimately result once again." Clearly, the retail industry has its work cut out for it. 📌

*Dr. James A. Tompkins, Tompkins International,  
www.tompkinsinc.com*

### About WERC's Omni-Channel Survey

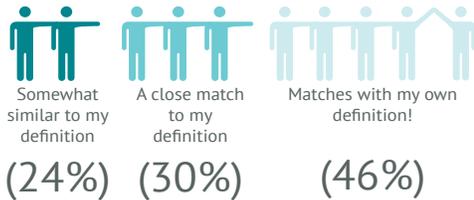
During Sep/Oct 2014, a survey was sent by email to WERC members. The sample consisted of 1,195 logistics professionals of which 59 have agreed to participate in surveys and 1,136 are part of a research group. The survey was sent initially on Sept. 11, 2014, followed by three email reminders to non-responders. As an incentive, respondents were offered a chance to enter their names into a drawing for one of three \$50 American Express gift cards plus an advance copy of the survey report. A total of 75 responses were received and tabulated.

# GET READY FOR OMNI-CHANNEL

VOTES are in: most DC/warehouse pros believe omni-channel is...

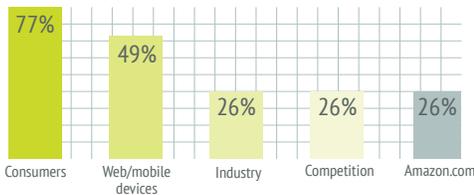


**OMNI-CHANNEL DEFINED:** Each warehouse/DC can support fulfillment to retail, ecommerce and wholesale channels, giving consumers seamless experiences regardless of *where* or *how* they buy.



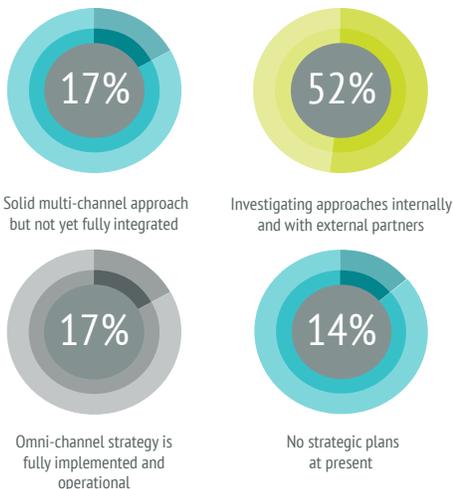
## DRIVERS

Who or what is driving the race to omni-channel?

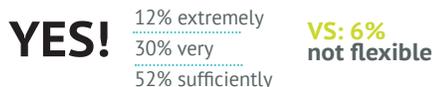


## STRATEGY

Have an omni-channel strategy?

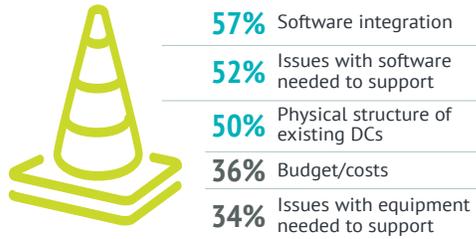


Is your DC/warehouse both flexible and capable enough to meet the demands of any channel?



## OBSTACLES

Top 5 obstacles to omni-channel implementation



## PLANS

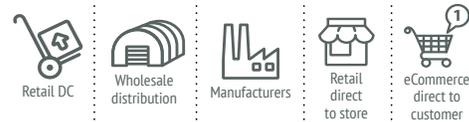
Expanding capabilities to address the omni-channel?



## CHANNELS

today and tomorrow

Number of channels served



Warehouse/DC areas that will be most affected by new channels...





## 5 Power Initiatives to Boost Efficiency

Industry leaders create options to improve operation performances this year.

Obviously, 2015 will be one where warehouse/DC management and professionals will be working to further capitalize on the progress and achievement realized from the projects and solutions already implemented and adapted. Yet, they will nevertheless continue their quest for additional answers to achieving peak performance within their facilities. But where to begin to focus?

To jumpstart this quest, several leading industry figures were challenged with the question: "If you had to select only one specific activity or initiative at this point to improve a facility's operational performance, what would it be?" They responded with several well thought out initiatives worthy of further consideration.

WERCSheet's 2015 leadership panel includes: **Steven R. Murray**, lead auditor and senior research associate, WERC; **Sandy Stephens**, principal, Johnson Stephens Consulting; **Bill McBeath**, chief research officer, Chain-Link Research; **Marc Wulfraat**, president, MWPVL International; and **Ian Hobkirk**, managing director, Commonwealth Supply Chain Advisors, LLC. Their individual recommendations follow:

### STEVE MURRAY:

**Visualize inbound and outbound shipments**

Consider the impact that lack of inbound and outbound visibility has on overall efficiency.

One of the areas of greatest weakness in operations assessments I have conducted, is the ability of the receiving/putaway personnel and the picking/shipping personnel to plan an efficient work flow. The reason: they have little or no idea of what will be arriving, or shipping, over the next few days, let alone even during the next few hours.

Inbound shipments are not simply delivered, nor do carriers simply arrive expecting to pick up outbound. Regardless of the planning that procurement and customer service teams do, the likelihood that warehouse personnel will know about these events in advance is much lower than it should and can be.

Married to visibility is, or should be, scheduling appointments. This also is an often neglected area with the typical excuse being that carriers could run into problems on the road making for a delay, or that carriers simply won't comply. My experience is that carriers will try their best to comply, and will agree to an appointed time, especially if they know it will reduce the amount of time they spend waiting to make a delivery or pickup.

Knowing when a truck is arriving inbound is great, but if there is no information regarding contents, a huge opportunity to plan is wasted. All inbound shipments should be planned, scheduled appointments set, and shipment contents known. The best case scenario is where the shipper sends an Advanced Ship Notice (ASN) or similar electronic advice, and where the carrier and consignee can agree on a time and perhaps even a dock door for the delivery.

**TIME TO IMPROVE**

Further, ensure that all cartons and pallets are properly labeled with machine readable (bar code or RFID tag) identifiers that eliminate the need to re-label or apply internal license plates or handling unit numbers. Labels should be a uniform standard GS1-128 or ITF-14 labels. These standards have existed for years, and since your supplier needs to label things anyway, why not require standard labels?

Imagine if you will a world where virtually all inbound shipments and contents are known in advance and can be electronically received on arrival.

But must we imagine? This is happening every day in facilities around the world. In some retail segments it is required, and if not done, the carriers and/or suppliers are penalized.

Yes, it will take a bit of effort to set up, but the pay-back is enormous.

## **SANDY STEPHENS:**

### **Plan for labor management systems**

**Labor management systems (LMS) facilitate continuous improvement, analytical staffing, team motivation and employee recognition on a daily basis.**

One constant regarding LMS is that results are achieved in direct proportion to the commitment of the management team to the development, discipline, and enforcement of the policies and practices. With commitment the results are always significant, achieving return of investment in two years or less, and often in less than one year.

LMS provides immediate results when best practices and analytical staffing are implemented. Expect a 10 percent improvement of effectiveness in the first three months. Additional improvement is realized once the standards /metrics are established and utilized as the foundation of LMS. The discrete nature of the measures will determine the percent improvement. Unit per hour metrics often achieve an additional 10 percent improvement while multiple variable engineered standards

facilitate improvements of 20 to 30 percent above pre-LMS performance.

Software is at the heart of LMS. The importance of a powerful and highly-functional software solution is one of many major factors in selecting the best LMS for an organization. The technology solution will enable real-time analysis of data. Real-time analysis facilitates feedback to workers, adjustment to staffing plans to satisfy immediate needs, and dynamic utilization of equipment.

Solutions are available in multiple platforms--licensed, hosted, software-as-a-service, and cloud-based. LMS and WMS technology solutions may be integrated or independent. Providers include major Supply Chain Execution systems (HighJump, JDA, Manhattan), major material handling manufacturers (Intelligrated/Knighted), WMS/WCS providers (NextView) and consultants (West Monroe Partners, TZA) as well as partnerships of the above and supply chain consultants to provide best-of-breed combinations (Johnson Stephens Consulting, enVista, Hilco, and others).

Often the technology does not provide major differentiation between providers and many different consultants partner with the same technology providers. The remainder of the system is the key to selection of the best-fit solution provider. Experience in an industry vertical, references for recent successes, approach, and style of management must be considered in equal weight with technology.

Internal resources may be employed for development of best practices, often called standard work and standard measures. External consultants will typically provide more experienced resources and a more timely completion of the project. To assess the capabilities of resources evaluate the experience of the team, recent projects, tools used to collect data, and overall approach to the process.

Opinions vary of whether to implement technology or metrics first, should LMS include incentive compensation, are team or individual metrics most effective, should LMS implementation be phased, and how to best communicate results. Discuss these topics with all prospective providers to determine the best-fit solution.

While technology, practices, processes, tools and systems each promise improvement for today's distribution and fulfillment centers, you can gain the benefits from all of these in one solution: the LMS.

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**BILL MCBEATH:**  
**Move to item-level RFID**

**Distribution centers handling RFID-tagged items should adjust their process to use RFID to improve the accuracy of receiving, putaway, and pick-pack-ship operations, while reducing labor required for audit functions.**

In the past few years, there has been a surge in the implementation of item-level RFID (Radio Frequency Identification) in apparel retail. This involves attaching an RFID tag (usually integrated into a hang tag) to each apparel item. This provides the ability, using an RFID reader, to instantly read and uniquely identify all the items in a carton or pallet, without requiring item-at-a-time line-of-sight scanning, as a barcode scanner does.

Associates are able to count RFID tagged inventory on retail shelves approximately 25 times faster than

when using barcode readers, and with higher accuracy. Retailers using RFID typically increase the frequency with which they count inventory from an average of about 2 to 4 times per year with barcodes to usually once a week or more with RFID. As a result, their inventory accuracies improve from an average of about 65 to 85 percent at the store/SKU level to 98 percent, 99 percent accuracy. Some retailers using RFID have even achieved consistently greater than 99.5 percent inventory accuracy.

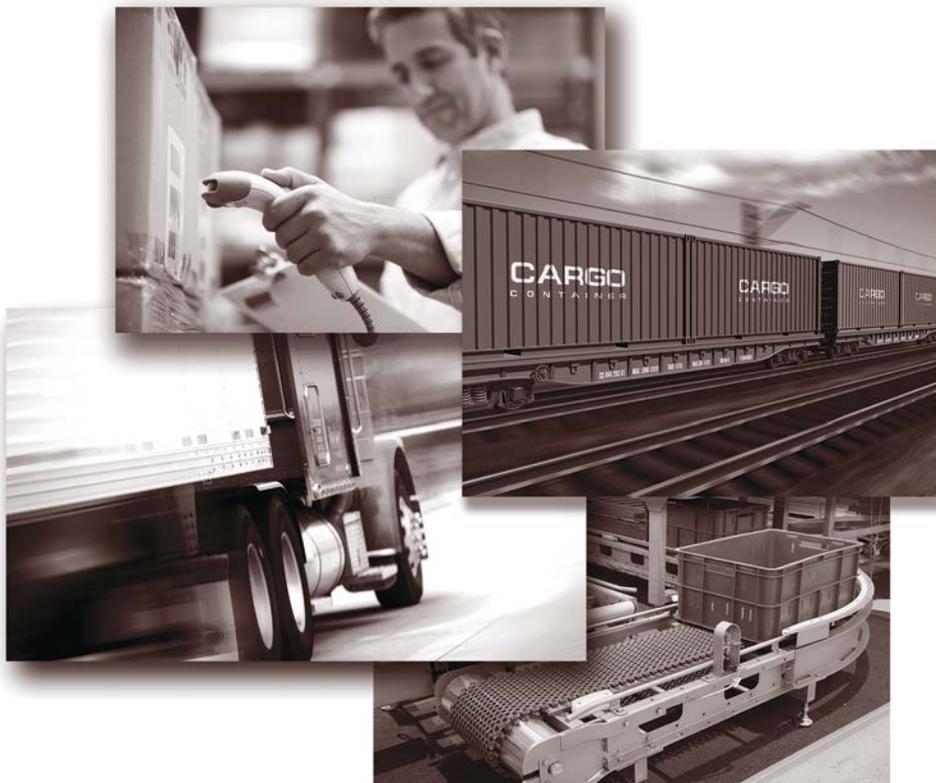
This results in dramatic reductions in out-of-stock levels and a corresponding increase in sales (between 8 and 15 percent), which is the key economic driver of adoption. Our research indicates that more than three billion apparel items were tagged in 2014, and we expect that number will grow at about 35 percent for the next several years.

So what does this have to do with warehouses and distribution centers?

Many retailers attach the RFID tags in their own stores or distribution centers, but increasingly, retailers are asking their suppliers to attach the tags at the source, since labor costs are lower and those suppliers (or their service partners) are already attaching various other tags and tickets. However, with a few exceptions, retailers (even those who are already doing source tagging) are not yet using those tags to improve performance in their supply chains. This is a big missed opportunity at each stage—the supplier's plant, supplier's distribution center, and retailer's distribution center.

Specifically, a distribution center that has RFID-tagged items flowing through it can realize some important benefits:

**Receipt verification.** Dock door readers can automatically read all of the content of pallets as they are being unloaded off the truck and compare against the ASN. Alternatively, for a lower capital expense, a handheld RFID reader can be used to scan pallets and cases to ensure the right items and quantities are being received. DCs using this technique have reported a dramatic increase in the number of errors detected and subsequent improvements in supplier performance.



- **Pick-Pack verification.** Suppliers in particular spend an enormous amount of effort (including redundant auditing/counting of carton contents) to ensure the right items and quantities have been picked and packed. With a tunnel reader on a conveyor, a 100 percent audit can be accomplished with no labor involved. Further RFID can be used during the actual picking process to alert to errors as the picking is happening.
- **Shipment verification.** Using either dock door readers or handhelds, RFID can be used to verify the right items and cartons are being loaded onto the truck for each specific shipment.
- **Automatic ASN generation.** If all items in a shipment are tagged, the RFID data read as items are being loaded onto the truck can be used to generate an ASN that is virtually guaranteed to be accurate.

## MARC WULFRAAT:

### Attack travel time

More than 50 percent of the time spent in a typical distribution operation is non-value-added travel time. To improve productivity in any warehouse it is essential to reduce travel time.

While there are multiple ways to accomplish this objective, they vary according to cost and complexity. Some of the alternatives to consider:

**Eliminate crowded aisles and dock spaces** that cause people to wait for others to pass, or move extra distance to get around a bottleneck. If the warehouse is over-capacity then it may be time to move non-productive inventory out of the building or get rid of it altogether. Probably 25 percent of the warehouses that I visit suffer low productivity for these reasons.

**Gather and analyze operating data** to identify the items that generate the most movement. I usually measure this in two ways: order lines and cube movement. By gathering a representative time period of outbound orders, you can collapse the file by item number and obtain movement in units and order lines (the number of

times an item was ordered). Order line velocity is a critical data point because it indicates the number of times that a person travels to the item's storage location.

Cube movement requires dimensional data. By multiplying the unit movement by the cube of the product you obtain cube-movement. It's a great common denominator to measure because it allows you to ensure that each item is being stored in the most effective storage media.

For example, with this data focus on the top 20 percent of the SKUs with the highest order line and cube movement velocity that generates 70 to 80 percent of the excitement. Make sure these items are strategically positioned close to points where packing and shipping are located to minimize travel time during the order picking process. Also, make sure that the fastest cube movers are stored in the appropriate storage media to minimize touches required to move product out the door.

**Equip each operator with battery-powered mobile equipment**, if this is applicable to the environment. For example, replace manual hand jacks with battery powered tuggers or walkie-rider pallet jacks.

Introduce conveyors to mechanize the movement of goods from picking to packing if the products being moved are conveyable (which is not always the case). If enough people are involved in the picking operation, there may be a cost justification for mechanization.

**The goods-to-person (GTP) automation system** is the Holy Grail to the outright elimination of travel time. With price tags that start in the \$1.5- to \$2.0-million range, to even consider this option, there needs to be sufficient order transaction volume.

Unless there is some other compelling reason to invest in automation (security) then the starting point to consider automation investments is 5,000 order lines per day, and I would go so far as to say that a more realistic figure would be 15,000. There are different types of GTP systems as this is one of the hottest growth areas in the automated materials handling industry.

Now, what about a "fitbit" device? I use a fitbit\* to know with accuracy the daily number of steps that I walk, the calories I burn, and the quality of my sleep. What if we equip every warehouse associate with a fitbit to measure the distance walked with actual data and then use this information to improve efficiency by reducing travel time? It's a thought.

\* Fitbit® is a trademarked wristband that tracks steps, calories burned and other activity.

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## IAN HOBKIRK:

### Prepare for dimensional weight billing

One of the most fundamental changes impacting the industry as a whole is the shift to dimensional weight billing on parcels in 2015. UPS and FedEx, for example, began pricing all ground shipments using dimensional weight on January 1.

While nearly all companies making parcel shipments will be impacted by this change, those hit especially hard will be companies shipping bulky, non-dense freight. There are, however, five specific steps that can be taken to minimize the impact:

**Step 1: Estimate the impact on your company.** If good historical shipment data exists, calculate the financial impact of the change. Take a list of historical shipments for a typical period of time. If the cubic dimensions of each parcel are known, then it will be possible to rate the shipments using both the former as well as the new rate structure. In this way, a company can determine if their exposure to this shift will be large, or insignificant.

**Step 2: Negotiate with the carriers.** Don't assume that the new dimensional weight policies are set in stone or apply universally to all companies. Have a conversation with your carrier. Some companies may negotiate more favorable terms with the carriers, while others might be able to postpone the change or bargain for a better dimensional weight factor.

**Step 3: Make operational improvements to reduce box sizes.** For many companies the billing change represents an incentive to finally justify the investment in time required to optimize their packing

processes. The basic steps to reducing box sizes are:

- **Gather SKU-level dimensional data.** Build a database of cubic dimensions at the SKU level, using manual measuring or automated cubing devices.
- **Pre-cartonize orders.** Best-of-breed software systems exist that can take this dimensional data and automatically determine the optimal sized shipping container for each order based on the contents.
- **Optimize shipping container sizes.** With the new billing shift, companies may find that they actually need a larger array of box sizes to be able to optimize each order and ship it in the most efficient sized parcel.

**Step 4: Investigate customizable box building technology.** These fairly new packaging machines allow companies to customize the size and shape of a box based on the contents. Instead of being confined to just a few box sizes in an operation, these systems offer an endless number of box size options, saving on dunnage, box storage space requirements, box erecting labor, waste, and transportation costs, to name a few benefits.

**Step 5: Optimize consumer packaging design.** If products are susceptible to damage and require significant amounts of dunnage, it may make sense to re-visit the consumer product packaging, or research new ways of securing the product within the outer shipping carton. If empty space around the product can be minimized, then box sizes can be reduced.

The shift to dimensional billing is one of the most far-reaching changes to impact the parcel shipping industry in years. While companies will almost certainly see their shipping spend increase, savvy companies can minimize the level of the increase by taking preemptive action to reduce their liability and maintain profit margins. 

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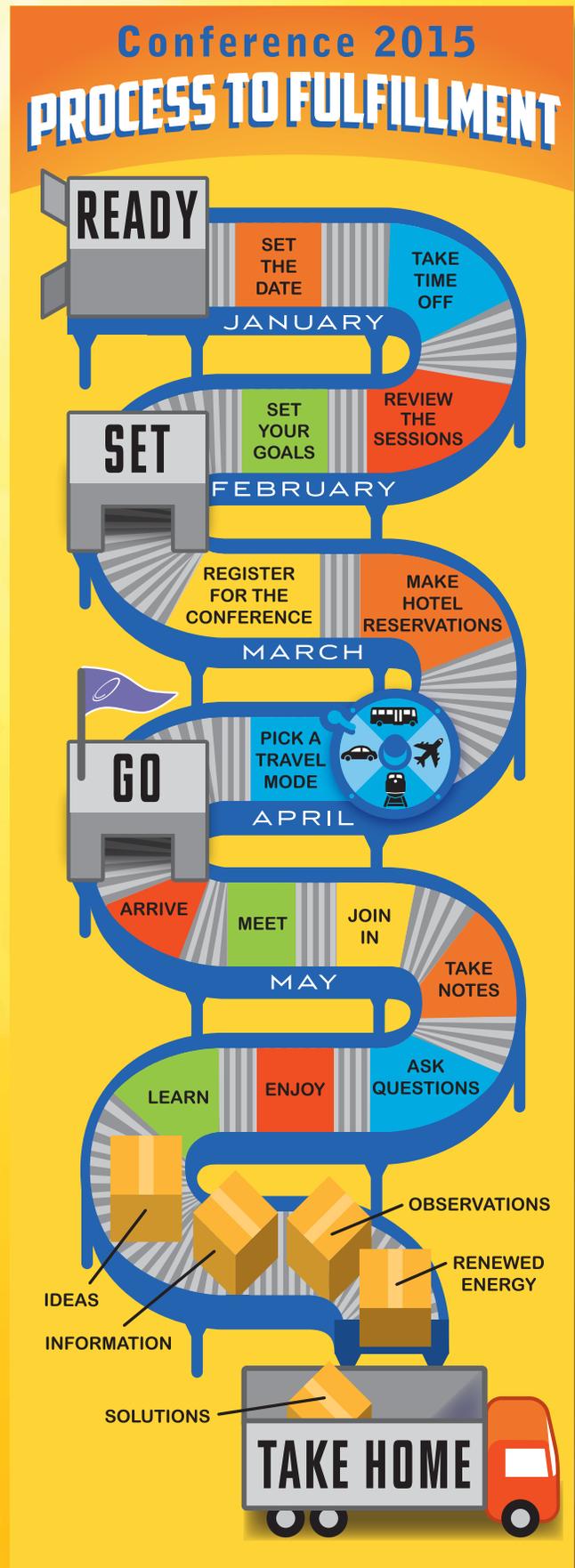
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