

Mastering fulfillment and delivery can help e-retailers keep their customers satisfied

WHILE MARKETING LURES CONSUMERS TO A RETAILER'S WEBSITE, and intelligent merchandising encourages them to buy, flawless fulfillment plays a key role in keeping customers' satisfied and loyal.

Omitting an item from an order, sending the wrong color or size, or failing to deliver an item within the time promised can damage a retailer's reputation. Unhappy customers have more options than ever to express their dissatisfaction and many won't hesitate to vent their frustration to their friends about a retailer's fulfillment and delivery issues through social media, where consumer-generated commentary can quickly spread.

Since a mistake at any stage of the fulfillment and delivery process can cost a retailer a consumer's loyalty and future sales, warehouse design and shipping strategies should not be afterthoughts.

"Fulfillment and delivery complete the customer experience," says Ken Wacker, president of BirdDog Solutions Inc., a provider of shipping solutions. "A customer satisfied with order fulfillment and shipping is more likely to make another purchase than one that is not. An unhappy customer can hurt a retailer's brand."

Real-time inventory

Retailers looking to improve their fulfillment operations should start by evaluating how the latest generation of warehouse technologies can help them meet their customer's expectations for speedy and accurate delivery, experts say.

Real-time visibility into inventory can improve the accuracy of product availability and help avoid disappointing shoppers who otherwise would not learn an item is unavailable or stocked in the desired quantity until checkout, says Perry Belcastro, vice president of fulfillment services for Saddle Creek Logistics Services, a provider of warehousing, transportation, packaging and fulfillment services.

Technology is available, for example, that would show a customer who wants to purchase a dozen

extra-large golf shirts that only 10 are available and that his order cannot exceed the available quantity. Should the customer attempt to place more shirts into his shopping cart than are available, the retailer's real-time inventory information can enable the site to indicate that an order of that size cannot be processed.

"Showing customers inventory counts in real time sets accurate expectations about product availability," Belcastro says. "Updating inventory every 10 minutes is not real-time inventory visibility."

Proving guidance

Once a customer clicks the Buy button, the retailer needs to fulfill the order. Doing so quickly requires the retailer to make the process efficient because no

matter how efficiently a warehouse is laid out, there are limits to how quickly human pickers can navigate it without any guidance. One way to speed up the order-picking process is to equip workers with voice-pick systems that guide them through the warehouse to each item in an order using the shortest path possible.



KEN WACKER
President of BirdDog Solutions Inc., a shipping consultancy and solutions provider

equip warehouse workers with headsets connected to a portable two-way communications device integrated with the warehouse management and inventory management systems. After orders are processed, they are fed into the voice-picking system, which calculates the most efficient route through the warehouse to gather the items in the order. The system uses voice directions to guide pickers along that route.

After the picker grabs each item, he confirms he procured the correct product by scanning the item's

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bar code, which transmits the item's information back to the warehouse management system. With each product picked, the inventory management system updates the inventory on the retailer's website.

"Voice pick improves pickers' productivity by freeing their hands to get items more quickly and directing them through the warehouse to the right product using the most efficient route," says Craig Hayes, vice president of fulfillment operations for eBay Enterprise. "The learning curve for training pickers to use a voice-picking system is low because voice is a natural extension of how people communicate."

Language-translation software for voice-picking systems make it possible to hire non-English speaking workers. For instance, eBay Enterprise's voice-picking system supports translation into Spanish as well other European and Asian languages.

"Being able to train and communicate non-English speaking workers widens the labor pool, especially during the holiday season when the workforce is temporarily expanded," says Hayes. "Voice picking is a mature, flexible technology that can also be used for other warehouse tasks, such as receiving, replenishment and returning items to the shelf."



CRAIG HAYES
Vice president of fulfillment operations for eBay Enterprise, an e-commerce services provider

Robots pickers

A voice-picking system isn't the only way to streamline fulfillment; retailers can also use robots that can work more efficiently and at higher speeds than humans.

"Competition is compressing the amount of time a retailer has from when an order is received to when it must be on the loading dock ready to be shipped," says Alex Stevens, business development manager for Opex Corp., a provider of material-handling solutions. "Automated picking systems can fill orders faster than they can be filled manually."

Opex's Perfect Pick system uses autonomous robotic delivery vehicles, or iBots, that are programmed to move horizontally and vertically through a modular storage aisle to locate items, giving them full

accessibility to the inventory in their aisle. Once the iBot finds the tote containing the correct item it slides a sleeve underneath the tray holding the tote and pulls it back on to the iBot. The iBot then transports the tote to the workstation where the picker pulls the item. To confirm the correct item has been placed in the order, the picker can check it against the order information on his workstation screen, which includes an image of the item and its SKU. Additionally, a light is directed into the cell within the tote from which the item is to be picked. After the picker hits a button confirming the item has been removed from the tote, the iBot returns the tote to the storage location and is sent to fetch another one. The iBots are powered by ultracapacitors, which recharge as they pass over a charging strip located in the track at the bottom of the aisle. iBots also have regenerative braking, which allows them to recharge as they descend down the aisle.

"From the time an order is received until it is out the door, Perfect Pick can put it all together in about 15 minutes, which increases a retailer's capacity to fill more orders in the same day," Stevens says. "When orders increase, more iBots can be added to handle the load."

Perfect Pick can grab more than 800 items per hour, compared to between 400 to 500 items per hour for a typical warehouse worker. That kind of efficiency reduces the need to hire more order pickers, which is a big financial advantage because labor is one the largest costs in operating a warehouse, fulfillment experts say.

Filling an order accurately is just as critical as filling it fast when it comes to customer satisfaction. One method for improving order accuracy is to download individual items' weights into the warehouse management system. As each item is scanned at the packing station, its weight is added to the other items in the order. If the order's weight, excluding the shipping box, differs from its expected weight, the order is sent to a reviewing station where its contents are double checked.

"Verifying order weight is one last check to ensure order accuracy before it goes out the door," says eBay Enterprise's Hayes.

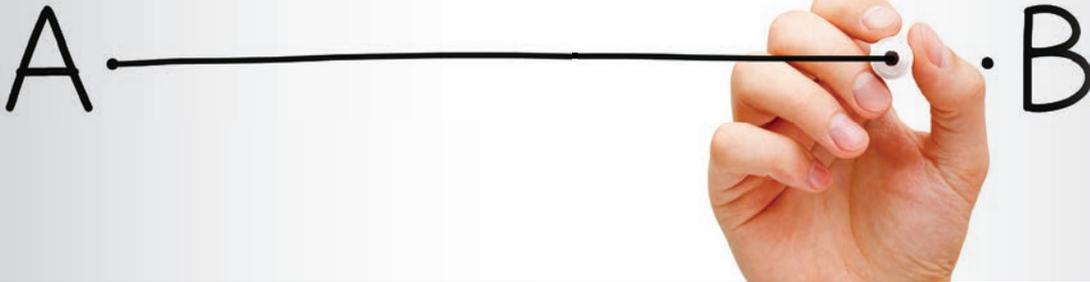
In addition to setting up warehouse management systems, eBay Enterprise will manage the entire logistics process for retailers including fulfillment, freight management, shipping and returns, including hassle-free solutions and restocking. The company has more than 7 million feet of warehouse space in the United States and Canada and its distribution



NO ELEVATORS. NO CONVEYORS. NO TRANSFERS.



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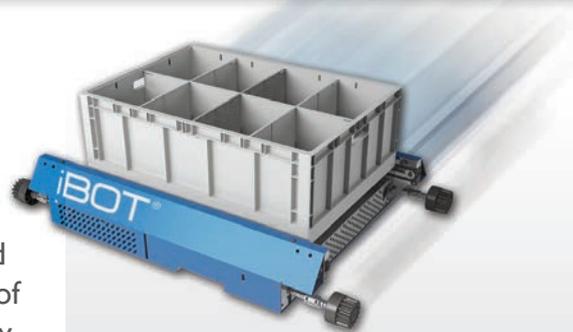
Simply put, Perfect Pick was engineered to simplify order fulfillment technology.

Perfect Pick's "one touch" design is based on a single automated component – the iBOT.® Perfect Pick does not require the use of multiple transfer points, lifts or conveyors, which add complexity to the system and represent potential failure points and added cost.

Grows with Your Business

Perfect Pick's simple design and streamlined operations result in a more flexible and scalable system. It offers growing businesses the opportunity to invest in technology to meet today's fulfillment challenges, secure in the knowledge that it can quickly and easily adjust to often unpredictable future demands and business cycles.

To learn more about Perfect Pick go to www.opex.com/perfect-pick



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centers shipped more than 174 million units in 2014. In addition, eBay Enterprise offers value-added services, such as gift wrapping, custom packaging and marketing inserts.

Inventory replenishment

While retailers often focus on order fulfillment, they shouldn't overlook inventory replenishment. As stock dwindles, it needs to be replaced. Having a warehouse management system that tracks available inventory based on order velocity can automatically alert a retailer when available inventory has fallen below an acceptable minimum.

Here again is where automation can help; iBots can be used to replenish stock in the warehouse in a variety of ways. For example, Opex's Perfect Pick system can detect when inventory in a tote containing catcher's mitts has fallen below the minimum threshold. When that happens, the system sends an iBot to grab a replenishment tote full of catcher's mitts and brings it to the restocking station. Simultaneously, the tote in need of restocking is sent to the replenishment station. Once a worker replenishes the stock in that tote, he enters the number of mitts added into the warehouse management system, which updates available inventory on the retailer's website and sends both totes back to their respective spots in the warehouse.

Perfect Pick's screen-directed picking process can also guide workers to put or replenish a tote. One worker can pick items at the workstation at one end of the aisle while another is putting at the backend workstation. Workers can also pick and put simultaneously from either workstation. Some Perfect Pick users prefer to pick during one shift and replenish during another.

"Being able to pick and replenish at the same time provides a lot of flexibility and operating efficiencies," Stevens says.

In addition, Perfect Pick offers a modular storage system that can scale with a retailer as its business

grows. "Perfect Pick is a flexible, modular technology that fills orders quickly and accurately and supports a retailer's needs no matter how fast it grows," Stevens says. "Online shoppers are only expecting faster fulfillment and warehouse management automation is the way to meet that expectation."

Proper packaging

While speedy fulfillment is important to consumers, it means nothing if their orders arrive damaged. Proper packaging starts with understanding a shipping container's durability. Since most package designs and packaging materials have weaknesses, retailers should test them before they put them into production, says Mike Stolzer, vice president of sales, packaging/fulfillment for Veritiv, a business-to-business distributor that provides packaging, logistics, print, publishing and facility solutions.

Stolzer recommends retailers utilize International Safety Transit Association (ISTA)-certified package durability tests that are conducted on state-of-the-art equipment necessary to perform package, product, and material testing. "Our engineers are able to simulate stresses a product and package undergo under the most exacting conditions," Stolzer says. "This allows us to develop a packaging solution that is optimized for the product and ensures it arrives to its destination unharmed."

Shaking packages can also determine how well they protect the item inside from vibration. "Once the point at which a package fails is identified, design work can begin," Stolzer says. "The key to identifying a superior package design is to work backward from the point of failure."

The Veritiv packaging design network works with retailers to deliver research-based and production-tested solutions. Veritiv's 13 design centers specialize in packaging for specific industries, such as wineries or electronics. Veritiv, which tests packaging designs in-house, says its solutions can reduce returns because fewer items arrive damaged.

"When a package fails it usually leads to a return, and processing returns is a big cost for retailers," Stolzer says. "Because our design centers focus on industry-specific solutions, retailers can be assured they are working with package designers that will meet their needs."

While corrugated cardboard is one of the most common packaging materials, rice and bamboo fibers



ALEX STEVENS
Business development manager
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handling solutions provider

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and plastic are alternative lightweight materials that offer strength and durability during shipping. “There are several materials other than corrugated that can create a good balance of protection and cost effectiveness for optimum shipping solutions,” Stolzer says.

Suspension packaging can work well for fragile items, such as cellphones and ceramics. As its name suggests, suspension packaging suspends an item in the center of a box between two layers of strong, flexible film molded around the product. Suspending the product, as opposed to placing it in a box and surrounding it with filler, protects the item from vibrations and sudden shocks that can cause it to shift or break during shipping.

Keeping costs low

With retailers striving to keep shipping costs low, many are focused on optimizing their packaging so items are protected but not over-packed. Optimizing a package’s size to the item’s dimensions prevents wasted space in the shipping container.

“Effective warehouse management systems can support selecting the most efficient box size based on the dimensions of the items in the order,” says Saddle Creek’s Belcastro. “New packaging technology will even augment box dimensions based on the order’s profile and the items that need to be shipped. This reduces wasted space in the box and excess weight, optimizing shipping costs.”

That is particularly important now that many web retailers are being charged based on a package’s dimensional weight, Belcastro says. Earlier this year FedEx and UPS changed their dimensional weight calculations resulting in higher charges for shipments not previously qualifying for dimensional charges. Larger sized shipments that are relatively lighter weight take up excess cargo space, which increases the costs for carriers like FedEx and UPS. Carriers calculate dimensional weight by multiplying a package’s length by width by height, then dividing it by a dimensional factor. Belcastro recommends retailers refer to their carrier or transportation expert regarding dimensional weight charges.

The new dimensional weight charges will require retailers to rethink how they package their shipments. “When it comes to avoiding dimensional weight charges less is more, because retailers end up saving more for orders with less excess space inside a package,” Belcastro says.

Saddle Creek helps retailers select the optimal size package to sufficiently protect fragile items, while avoiding excess waste that may result in higher shipping costs.

With more online shoppers becoming conscientious about packaging waste’s impact on the environment, many retailers are developing environmentally friendly packaging strategies. Merchants looking to take that approach should review what changes they can make to reduce the amount of packaging material they use. Veritiv packaging experts can help retailers

define, for example, packaging machines that build boxes to fit an order on demand so there is little or no wasted space. Such perfectly proportioned boxes require less packing material to secure the item inside it.



PERRY BELCASTRO
Vice president of fulfillment services for Saddle Creek Logistics Services, a warehousing, transportation, packaging and fulfillment services provider

“Reducing the size of the box used to ship an order is an aspect of sustainability that tends to get over-

looked,” Stolzer says. “Smaller boxes allow carriers to make better use of space in the cargo hold, which means they can carry more items in a single load. That translates to better fuel efficiency for the carrier, which is part of a company’s overall sustainability strategy.”

Veritiv also works with retailers to select recycled or biodegradable packing materials that can withstand the stress a package undergoes during transport. “The types of packaging materials, and the amount used, create an overall impression about the retailer with the customer,” Stolzer says.

Ready to go

Another way to create a positive impression with consumers is by getting items to their doors quickly. By presorting packages by ZIP code prior to pickup, eBay Enterprise can shorten delivery times by as much as a day for its retail clients. Presorting enables parcel carriers to send packages directly to the regional distribution center from where an order will be delivered to the customer, rather than first taking it to the carrier’s central distribution hub for sorting.

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“When a carrier has to presort packages, it lengthens delivery time to the customer,” Hayes says. “Presorting is a more efficient practice because the carrier doesn’t have to do it, which gets the package moving to its final destination sooner.”

While same-day delivery is becoming a popular marketing strategy for e-retailers, delivering on that promise is not easy. This is a complex issue, and inventory levels, fulfillment location and cost all play key roles in the ability to offer this service. However, providing same-day shipping with the latest possible cut-off time is a good way to keep shoppers satisfied. Retailers need to work closely with their fulfillment operations to manage order volumes and the time required to pick, pack and ship. Knowing the number of orders that can be filled per hour is important. Real-time order flow is key. If a fulfillment center receives 90% of the day’s orders in the last 30 minutes of the day, orders won’t get through the system in time. Good data analysis and efficient operations can help retailers set realistic cut-off times for orders guaranteed to ship the same day they’re received. Working with parcel carriers to set a pickup time as late in the day as possible is also important.

“No matter what service levels have been committed to, retailers and fulfillment operations must clearly communicate and work together to ensure that consistent service is provided to meet or exceed customer expectations,” Belcastro says.

Shipping an order the same day it is received is only part of fast delivery. BirdDog Solutions’ Wacker recommends retailers work with multiple carriers, including regional carriers, to find the best combination of fast delivery and low shipping costs.

“A regional carrier can usually deliver a package within its operating area faster and at a lower cost than a larger carrier,” Wacker says. “Regional carriers may not be as large as FedEx and UPS, but they are built to be more nimble, which helps them compete aggressively with the market leaders.”



CHRISTIAN BRUNS
CEO of Estafeta USA, a
Mexico-based logistics,
warehousing and parcel
delivery services provider

Using retail stores to fill orders is an effective way for multichannel retailers to shorten shipping distances and costs. “Stores can work as mini-distribution centers,” says Wacker. “Multichannel retailers should make more use of their stores when it comes to shipping, because they are often closer to the consumer than the warehouse. The ship-from-store strategy can drastically reduce time in transit while increasing customer satisfaction.”

As important as fast shipping is to consumers, retailers have to consider whether consumers are willing to pay extra for next-day or two-day delivery. Wacker recommends offering consumers several delivery options, such as one-day or two-day shipping, at checkout. Providing consumers a choice of when their package will arrive lets retailers charge more for their fastest delivery option and less for slower deliveries.

“Letting customers choose how fast they want their order to arrive also provides them with the flexibility to select an arrival date when they are likely to be home to receive the package,” Wacker says.

One way retailers can reduce the costs associated with offering free shipping is by using FedEx SmartPost or UPS SurePost, which are economy ground delivery services that utilize the U.S. Postal Service for final-mile delivery, Wacker says. “Delivery through these services takes a little longer but if the customer wants free shipping and is not in a hurry to receive his order, they’re a good option,” Wacker says. “The lower cost of these carriers’ services makes it easier for retailers to justify free shipping.”

Alternatively, retailers can mail a package directly through the U.S. Postal Service, which also offers several low-cost shipping options, including Priority Mail service with one-, two- or three-day definite delivery based upon zone, Wacker says.

A new market

Of course, those services are only an option when retailers sell domestically. Shipping internationally can introduce more challenges, particularly when retailers want to sell to Mexican consumers. To ship to Mexico retailers have to deal with the red tape involved with clearing packages through customs, as well as concerns that parcel carriers can’t reach a large portion the country’s population outside of metropolitan areas.

Finding solutions to those issues may be worth it because Mexico offers attractive growth potential.

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From 2009 to 2013, Mexico's e-commerce sales grew fourfold, according to Euromonitor International. And Mexican e-commerce is projected to grow 20% to 35% annually over the next several years, suggests Forrester Research Inc. Moreover, retail experts estimate as much as 30% of the country's e-commerce sales are made by shoppers purchasing from U.S.-based retailers.

For e-retailers looking to establish a presence in Mexico, setting up a warehouse in the country to fill orders makes more sense than contracting with a parcel carrier to deliver south of the border. Fulfilling orders for Mexican shoppers locally means orders get to them faster as packages don't have to clear customs or travel as far.

"Having a warehouse in Mexico helps e-retailers compete with the large U.S. retailers establishing a presence in the country," says Christian Bruns, CEO of Estafeta USA, a provider of logistics, warehousing and parcel delivery services in Mexico.

But many retailers aren't eager to deal with the issues involved in opening and operating a warehouse in a foreign country. Those challenges include hiring and training a workforce not fluent in English, a lack of firsthand knowledge about local labor laws and practices, and understanding product packaging and delivery compliance requirements.

In Mexico, for example, electronics must meet consumer safety guidelines, including safety warning statements, before they can be certified for sale to consumers. Affixing an incorrect mailing address to a package is another concern, as incorrect addresses can delay delivery while the carrier corrects the address or result in non-delivery.

Working with a third-party logistics provider can help retailers quickly overcome these challenges so they can get their business up and running in Mexico faster. Estafeta provides retailers dedicated and shared warehousing in Mexico where they can stock inventory and fill orders. To help retailers stock their warehouses, Estafeta helps clear their parcels through customs. Once a shipment arrives at the warehouse, Estafeta's personnel move it off the receiving docks, unpack it and stock the shelves.

"Our warehousing services allow retailers to leverage our expertise as Mexico's largest logistics provider and delivery carrier and establish a footprint in the country at a much lower cost than if they were to build and operate their own warehouse," Bruns says.

Retailers using Estafeta's warehousing services can install their own warehouse management system or use Estafeta's system, which is supplied by JDA/Red Prairie. Regardless of the warehouse management system used, retailers receive real-time reports on inventory levels.

The company operates seven warehouses in Mexico. Once an order is filled, Estafeta can deliver it anywhere in the country through its nationwide delivery fleet of more 1,500 vehicles. All orders shipped are tracked using a GPS telecommunications network and proof of delivery is verified.

Another advantage Estafeta offers is that it has more than 1,100 branded retail stores where consumers can have orders delivered. Consumers can also drop off items to be returned at Estafeta's retail locations.

"When it comes to logistics, customs laws and delivery in Mexico, we offer a one-stop solution," says Bruns. "Our warehouses can be adapted to meet a retailer's needs and we work with retailers to determine the lowest cost and most efficient method to import their products to our warehouse and deliver them to consumers in Mexico."

Conducting audits

Regardless of whether retailers ship internationally or domestically they should conduct performance audits of their parcel carrier to identify where shipping costs can be reduced. Avoiding or mitigating dimensional weight charges, address corrections or packages sent to non-deliverable addresses are ways retailers can curtail shipping costs, BirdDog's Wacker says.

"Information about parcel carrier performance is important to retailers because it identifies where they can make improvements to reduce shipping costs and get packages delivered faster," he says.

As retailers focus on increasing the speed and accuracy of their order fulfillment, it is becoming increasingly important for them to find the right combination of warehouse automation and analytics that can provide information about their parcel carriers' performance.

"Transportation and delivery is the last step in the fulfillment process and leaves an impact of the customer's shopping experience," Saddle Creek's Belcastro says. "Warehouse automation and performance analytics give retailers flexibility to meet customers' expectations for getting their orders filled accurately and delivered quickly and cost effectively." ■