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# r&c worlds *Express*

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## Highlights:

- While brick and mortar retail real estate has contracted in recent years, e-commerce has driven a corresponding growth in industrial real estate for fulfillment and distribution.
- Customers growing expectations for faster delivery are changing the whole supply chain dynamic as to where inventory gets stored and how it gets delivered to customers.
- As e-commerce retailers aggressively pursue the goal of same day or faster delivery, distribution site selections are focusing on proximity to customers and, thus, to major population centers.
- Success requires achieving the right balance between cost and service in a very dynamic environment.

## Location, location, location

**While the e-commerce revolution may mean fewer stores, real estate for distribution and fulfillment has never been in higher demand**

The growth in e-commerce has had a very different impact on brick and mortar retail space than on industrial real estate space. While e-commerce has taken sales away from traditional brick and mortar locations, contributing to a number of store closings across the world, the impact on the industrial real estate segment, specifically distribution space, has been extremely positive.

In fact, the continued rise in e-commerce sales has been a driving force behind the recovery of the US industrial real estate sector.<sup>1</sup> According to a report by Colliers International, the US industrial vacancy rate declined in Q1 2016 for the 22<sup>nd</sup> consecutive quarter to 6.3%, the lowest vacancy rate in more than a decade. And demand continues to outpace new supply. According to an article on [joc.com](http://joc.com), a website providing logistics business intelligence, the demand for industrial real estate space is just as tight in other markets around the world, as well.<sup>2</sup>

Much of this demand is related to large fulfillment centers serving the e-commerce market. According to a joint PwC-Urban Land Institute 2016 study, e-commerce retail requires as much as three times as much warehouse space as does brick and mortar retail.<sup>3</sup> This is necessary to accommodate millions of singly-packed products and a wider product variety than found at traditional retail outlets, according to PwC's US Real Estate Leader Byron Carlock, Jr.<sup>4</sup> A major factor driving all this, in turn, is customers' growing expectations of delivery. While two and three day delivery has been the norm, e-commerce retailers are now aggressively pursuing the goal of same day (or even as fast as one hour) delivery – shifting supplier inventory needs – and requiring a whole different approach to facilities and location.

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<sup>1</sup> Industrial Market Outlook Q1 2016, Colliers International

<sup>2</sup> E-commerce growth squeezing tight industrial real estate market, 4/3/2016, [joc.com](http://joc.com)

<sup>3</sup> Emerging Trends in Real Estate: The global outlook for 2016, PwC and Urban Land Institute

<sup>4</sup> Byron Carlock, Jr., quoted in National Real Estate Investor, <http://nreionline.com/industrial/retail-downsizing-has-industrial-sized-silver-lining-gadfly>

### ***You want it when?***

Site selection for fulfillment/distribution centers is typically decided based on how long it will take goods to get to the retailer's stores or customers. For the fulfillment center model, which is geared to satisfying online orders rather than replenishing stock in stores, speed is the key factor. PwC's Carlock explains it this way: "For the two and three day delivery standards you can have warehouses out in the middle of cornfields in Kansas, but for same day delivery you need premium fulfillment facilities closer in to the city. Major online retailers are seeking space closer to large cities." Customer willingness-to-pay for speed remains unclear, but current fulfillment center networks for many online retailers may not be the most efficient model for meeting customer expectations.

The convergence of trends in urbanization, technology and consumer demand appear poised to continue to drive an increase in demand for industrial real estate along the e-commerce supply chain. Cross docking and depot facilities that can be utilized in more urban areas will likely see an increase in use to meet e-commerce delivery in general and same day delivery goals. Despite the smaller footprint, these facilities will still need to be strategically located. Any urban facility will need to be located to avoid or at least manage infrastructure disruptions such as traffic congestion. In addition, while these facilities are less labor intensive than their big box counterparts, they must still be in locations where they can attract qualified labor and may need access to public transportation if parking is limited by availability or cost.

Around the globe, retailers and logistics firms are looking at a range of different strategies and alternative building types to make last mile and same day delivery both efficient and cost effective. These are some industrial real estate options that can be integrated into distribution decisions, organized from least expensive/longest time to customer to most expensive/shortest time to customer.

### **Big box e-commerce model**

These large, highly automated centers are geared for shipping directly to customers in two to three days or more, from a cost-viable location. Highly automated and operating 24/7, they generally serve a wide geographic area; for example, in the early days of e-commerce retail, Amazon concentrated its facilities in northern Kentucky, which could serve a region extending from the Midwest to most of the Eastern US, with low cost ground delivery in two to three days. On a per good basis, this is generally the least expensive method of distribution for e-commerce. Northern Kentucky also sits close to a major air hub for UPS which offers a speedier but far more costly option of next day air. This was a key reason for Zappos locating its sole fulfillment center there prior to its integration with Amazon's network after the acquisition. But such a location is not well-suited for same day delivery.

### Extended network model

The extended model features more locations but still positioned in cost-viable locations (but likely more expensive than the big box model). An extended network can serve multiple final destinations with next day ground service; for example Blue Apron has geographically dispersed facilities in New Jersey, Texas, and California. The extended network offers faster (and cheaper) delivery to a greater percentage of the country, but its network is not designed for same day delivery. As the company scales and adds more facilities same day delivery may become economically feasible over time.

### Cross docking

Cross docking, properly implemented, extends the reach of an existing network without investment in full-scale fulfillment centers. The smaller cross-docking facility is designed to minimize transportation cost by breaking larger semi-truck loads down to multiple delivery trucks, typically without automation and with limited staffing. Webvan, the online grocery start-up of the early Internet era, designed a “hub and spoke” network to extend the reach of its 330,000 square foot Oakland facility by shipping customer orders in full truckloads to multiple cross-dock operations that received goods by truck at inbound docks, sorted and then transferred the orders across to smaller delivery trucks at an outbound dock. Cross docking facilities tend to be located in higher-cost locations but are designed for next day and accordingly could only support same day delivery in a tightly managed network.

### Urban depots

The “pure play” model for same day delivery entails smaller depots located in an urban core. Such facilities typically encompass tens of thousands of square feet versus hundreds of thousands. Amazon PrimeNow applies this model, which was also the design for Kozmo and UrbanFetch during the early days of the Internet. Typically, these depots do not use significant automation, but plans seem to be afoot that could change that. For example, Amazon bought Kiva, a highly flexible system for automating split case picking in 2012 and now operates tens of thousands of the robots in their fulfillment centers. And Louis Borders, cofounder of Borders Books and Webvan plus an ardent technology enthusiast, continues to explore automation designed for such facilities.

### Ship-from-store

The same-day model for traditional retail stores seeking to serve the needs of their omni-channel customers entails store-based picking. As more cost effective techniques and technologies develop, this model may help save the traditional store. Despite the steady growth of online retailing over the past two decades it remains a relatively small percentage of total retail sales and, accordingly, only the most aggressive prognosticator envisions the complete demise of retail stores. And the same inventory on hand for in-store shoppers can be used to fulfill the same-day needs for the consumer who does not have the time (or inclination) to go to the store. Instacart and Google Shopping Express both offer services to fill this need. The costs remain high even with “crowd sourced” shoppers, but clearly some consumers with same-day time lines will pay a premium to avoid shopping.

### Impact of the last mile on costs

With the customer usually not picking up their purchase in store, the costs in the delivery chain are obviously quite different in the e-commerce model. The strategy behind how to address the last-mile and same-day delivery question requires decisions about the most cost- and time-effective methods of getting a product into the hands of the final consumer.

Last mile is defined differently depending on a retailer's target market and delivery goal. The following table describes how different retailers define target e-commerce delivery times.

<b>Retailer</b>	<b>Typical delivery time</b>
Traditional	From the last point of distribution or sortation to the final destination at a store, home or business
Online only retailer, such as Amazon	The last 2 to 4 hours of delivery, with next day = order by midnight, delivery by noon – 5PM next day
Omni-channel retailer, such as Walmart	Order today, pick up in store within hour or shipment tomorrow
Same day delivery, such as Fresh Direct	Order by noon, delivery by 8PM

The exercise of balancing all of the factors involved in the supply chain to meet consumer needs will require looking at how the full bundle of costs – transportation, labor, operating and real estate – all work together. The formula that includes the perfect mix of these inputs is likely to change over time, making the process extremely dynamic while many of the inputs will actually represent fairly significant fixed costs. Labor costs may be influenced by competition for workers in the market and the utilization of technology, while transportation costs are directly related to the cost of oil. Real estate costs can be managed by locating in lower cost locations, but any savings could be nullified by the inability to attract labor, rising transportation costs and/or a shift in delivery time demands from the market.

What does all this mean in terms of the future of industrial real estate space related to retail? The level of projected e-commerce activity

could drive demand for up to 160 new big box logistics centers to serve the top urban markets along with approximately 110 new or repurposed cross dock or depot facilities to support local delivery in those same key urban markets.<sup>5</sup> According to a Cushman & Wakefield spokesperson, e-commerce has driven 45% of all big-box industrial growth in the last year.<sup>6</sup>

As e-commerce sales have grown, retailers are tasked with figuring out how to meet customers' expectations of delivery and what this means for their distribution networks.

Distribution facility strategies that focus on proximity to the customer are enabling ever-faster delivery times, allowing retailers to stay competitive in a fast-changing business environment. These service delivery decisions, in turn, are drastically altering the retail real estate landscape.

<sup>5</sup> "The Last Mile: E-commerce's Revolution", presented at I.CON: Trends and Forecasts, June 2016

<sup>6</sup> Ibid.

## ***Resources***

***Byron Carlock, Jr.***  
National Real Estate Leader  
byron.carlock.jr@pwc.com

***Timothy M. Laseter***  
Managing Director  
timothy.laseter@pwc.com

## ***Editorial***

***John G. Maxwell***  
Global Retail & Consumer Leader  
john.g.maxwell@pwc.com

***Mike Brewster***  
Global Retail & Consumer  
Marketing  
michael.j.brewster@pwc.com

***Susan Eggleton***  
Global Retail & Consumer  
Marketing  
susan.eggleton@pwc.com

***Denis Smith***  
Global Retail & Consumer  
Marketing  
denis.s.smith@hk.pwc.com

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