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DIGITAL SHIFT: UNDERSTANDING THE EMERGING IMPACT OF E-COMMERCE IN CANADIAN INDUSTRIAL REAL ESTATE

PORTFOLIO ANALYSIS & RESEARCH SERVICES

GWL REALTY ADVISORS

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AT A GLANCE

- E-commerce is changing retail supply chains as consumers now have more ways in which to shop for and access products. Stores are no longer the only retail channel for consumers; home delivery, store pick-up and parcel pick-up are emerging options that are changing conventional retail logistics.
- Due to the high volume of products being shipped from warehouses, e-commerce is creating a need for more specialized industrial buildings, such as larger distribution centres and e-fulfilment centres. This is expected to drive new opportunities for real estate investors.
- Omni-channel retailing, a concept used to define the multiple and diverse ways customers can now shop for products, is starting to blend conventional perceptions of retail and industrial real estate. Retailers now realize that product supply chains are just as important as their physical stores and are focusing on industrial real estate as a key part of their overall sales strategy.
- Because e-commerce is still relatively new and growing in Canada, third party logistics (3PL) firms are expected to play a key role for many retailers' e-commerce requirements. We also expect some groups to adopt an in-house e-commerce strategy although multiple logistics models are beginning to emerge for retailers.
- As a result of e-commerce, retailers are starting to shift their capital investments away from physical stores and towards their supply chain networks, suggesting that, in some cases, industrial real estate growth may actually be more indicative of a retailer's expansion than their physical stores.

SECTION 1: INTRODUCTION

THE "DIGITAL" SHIFT

Less than five years ago, online shopping was a relatively new phenomenon, limited to specialty products such as books and travel. In only a few short years, online shopping—better known as e-commerce—has grown exponentially, driven by the rapid growth of mobile technology.

E-commerce has had the most noticeable impact in the retail sector where retailers' physical footprints are shrinking in favour of more robust online platforms. It was only three years ago for instance when groups such as Blockbuster and Grand & Toy were staple tenants at shopping centres across Canada; today, their physical stores are virtually non-existent.

Beyond retail property, e-commerce is also having a profound impact on industrial real estate. As the retail sector shifts from a "bricks and mortar" strategy to one of "omni-channel", traditional retail logistics are shifting due to the increasingly complex ways consumers can shop and order their products. GWL Realty Advisors (GWLRA) analyzed how e-commerce is driving changes to industrial supply chains and what potential investment and development opportunities are emerging as a result.

As the report details, owners and developers of industrial real estate should understand the impact e-commerce will have on both existing property as well as new development. Aside from creating a general market shift towards more distribution and logistics activity, e-commerce is also expected to create demand for new forms of industrial property, including larger distribution centres and specialized e-fulfilment facilities. We note however, that Canada is a unique retail market compared to other global markets. E-commerce in Canada is relatively new, and it will take longer for the market to mature and feel the full industrial real estate impact of e-commerce.

Our report examines the following questions:

- What is omni-channel retailing and how does it differ from conventional retail strategies?
- How is e-commerce changing Canadian retail supply chains and what new industrial requirements are emerging from e-commerce? What are the risks from a real estate investment perspective?
- What is the state of e-commerce in Canada, and how does it compare on a global basis? What challenges are unique to the Canadian market?
- What are the strategic opportunities for investors in the Canadian marketplace?

GWLRA's own research and analysis on the topic was supplemented with interviews with industry experts, including those from commercial leasing, supply chain and retail sectors. GWLRA would especially like to thank Deloitte, CBRE Limited and Colliers International for their perspectives on this topic.

SECTION 2: HOW E-COMMERCE IS DRIVING CHANGES TO CANADIAN SUPPLY CHAINS

A man sits in a cafe shopping for shoes on his tablet computer. After comparing the price of shoes on competitive sites and reading reviews, he makes a purchase with some quick taps. In a few days, a box will arrive at his doorstep with shoes in his specified order and size. Unbeknownst to the buyer, the product travelled hundreds of kilometres and moved through several complex facilities before arriving at his home.

BRICKS AND MORTAR VS. E-COMMERCE DISTRIBUTION

Before the growth of e-commerce, product supply chains were fairly linear: manufacturers and shippers moved products to regional distribution centres (DCs), which were then sorted and delivered to stores for inventory replenishment. In-store sales drove inventory orders, something that was easily managed by retailers.

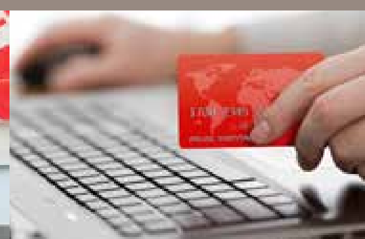
However, with the emergence of e-commerce and the concept of omni-channel retailing, retailers have had to grasp the concept of providing increasingly fast and varied access points for products—a trend that is challenging traditional supply chain structures (Tomow & Sleeman, 2013). More and more retailers are offering multi-day, next day or even same day deliveries, while at the same time allowing consumers to choose where they get their products (be it from the store, by delivery, or from a designated pick-up location).

Based on these trends, we note the following structural changes to traditional retail supply chains driven by e-commerce:

- The provision of low cost, multi-day, next day and same day delivery leading to greater emphasis on supply chain efficiency
- An increase in the volume of smaller, individual products moving through warehouses requiring different logistic considerations than traditional distribution centres
- The need for retailers' warehouses to be located close to urban populations resulting in a dispersed and localized distribution model
- The increase in both the required height, size and depth of industrial facilities and the growing need for specialized buildings such as e-fulfilment centres, grocery/food storage and distribution space to maximize the efficiency of product movement
- Greater emphasis on multi-modal (air, road) connectivity to move products, including the need for facilities to be in close proximity to integrator (FedEx, UPS, Purolator) hubs

The Shift From Bricks and Mortar to Omni-channel

Omni-channel retailing is a concept used to define the increasingly new and diverse ways customers can now shop for products—a trend brought on by e-commerce and mobile technology. The term "omni" is used to highlight the fact that customers can access products in more ways than traditional physical ("brick and mortar") stores, which now include websites, social media pages and even through more interactive means such as QR codes and online games (Lee & Podmore-Russell, 2013). While shopping diversity is a key trend in omni-channel retailing, so too is the concept of seamlessness—the idea that the shopping experience for a particular brand is contiguous and consistent between channels (for example, offering the same products online as in-store). Before the concept of omni-channel, e-commerce was referred to simply as online or cross-channel retailing because internet shopping was still relatively small and limited to home-based computers. Looking ahead, it is expected that omni-channel retailing will becoming more complex and competitive among companies as they battle for customer retention and more creative marketing (Lee & Podmore-Russell, 2013).



	TRADITIONAL BRICKS AND MORTAR RETAIL (1980s-1990s)	ONLINE/CROSS CHANNEL RETAIL (2000-2008)	OMNI-CHANNEL RETAIL (2008-PRESENT)
Shopping Methods	• In-store • Catalogue/call centre	• In-store • Catalogue/call centre • Computer/laptop	• In-store • Catalogue/call centre • Computer/laptop • Mobile phone • Social media • Kiosks • QR codes[1] (barcode scanning in public areas of consumer products) • Gamification[2] (interactive online games leading to product discounts or brand loyalty)
Product Receiving Methods	• In-store	• In-store • Home delivery	• In-store • Home delivery • Parcel centre/pick-up locations • Pick-up from the warehouse directly

[1] For more information on QR Codes: http://www.emarketservices.com/clubs/ems/prod/E-Business%20Issue%20-QR%20codes%20and%20what%20they%20mean%20for%20eCommerce.pdf

[2] For more information on Gamification: http://business.financialpost.com/2013/05/15/deloitte-insight-retailers-turning-to-gamification-to-lure-shoppers-back-to-physical-stores/

> *"[e-commerce is] about three things: storing, moving and managing…how and where you store the goods; how you move it to where it's stored; how you move it to where people want it; and how you manage these logistics better than your competition." John-Kurt Pliniussen, Queens University – Financial Post, June 3, 2014*

DIFFERENT E-COMMERCE SUPPLY CHAIN STRUCTURES FOR RETAILERS

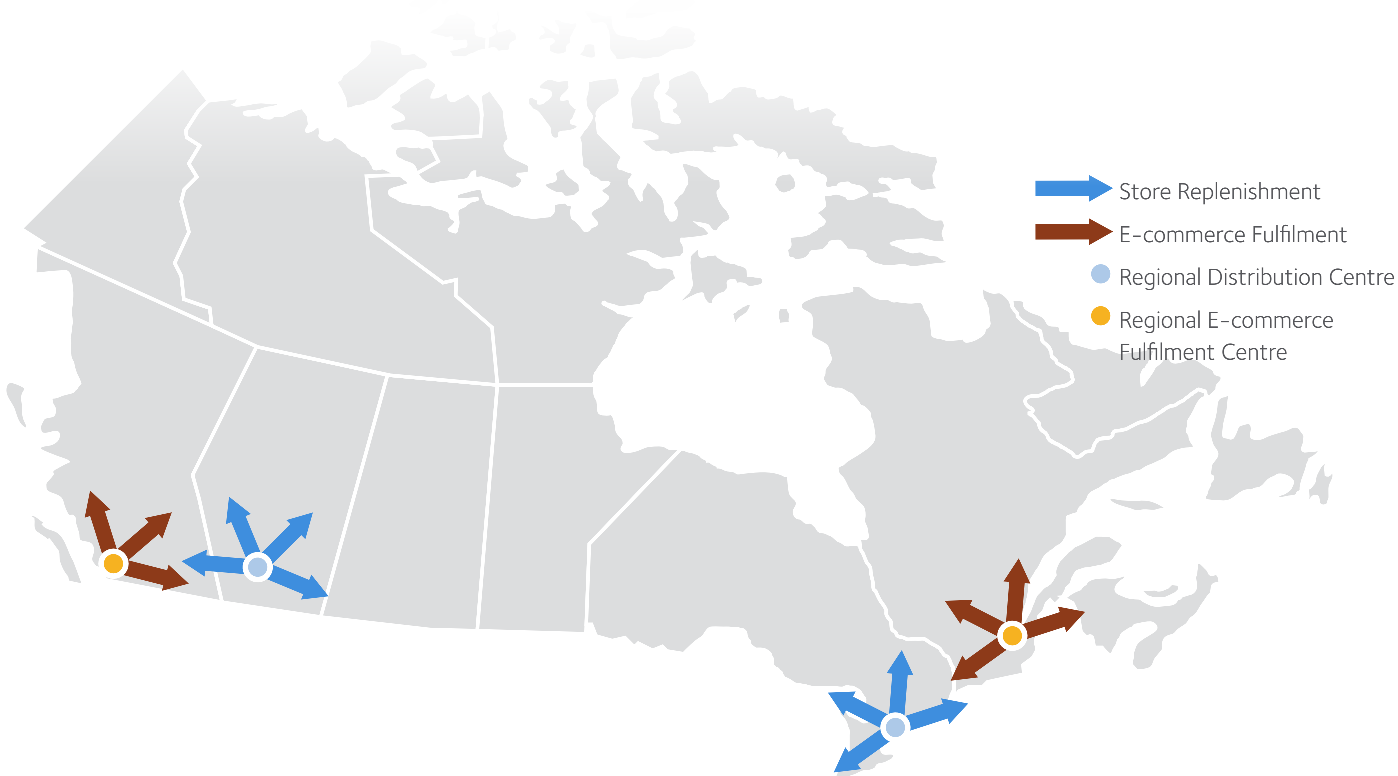
E-commerce supply chains in Canada are expected to vary among retailers. Large, global retailers with sufficient capital may elect to manage their own e-commerce distribution in-house, while other groups, or those that lack market penetration in Canada, may elect to outsource their e-commerce business to a third party logistics (3PL) firm.

The following is a list of e-commerce supply chain models that different retailers are generally expected to take, respectively, in Canada.

The Dedicated Approach

In a "Dedicated" e-commerce supply chain structure, large retailers will typically have two separate regional distribution centres that receive products from manufacturers: one that is dedicated to in-store replenishment, and one that is dedicated to e-commerce fulfilment. For e-commerce fulfilment, once a product moves from the manufacturer to a dedicated fulfilment centre, products are sorted and picked for delivery to a regional parcel hub often operated by groups such as Purolator, FedEx, UPS and Canada Post. The product is then shipped to the customer at their location of choice. The dedicated approach helps to make both in-store and e-commerce supply chains as efficient as possible by having separate facilities, since the two have different storing, sorting and picking requirements (Jensen, 2013; Taliaferro, 2014).

Dedicated Supply Chain



The Combination Approach

Some retailers may elect to have a single regional distribution centre for their in-store and e-commerce platforms—a supply chain strategy referred to as the "Combination" approach. Combination facilities store inventories of both in-store and online products, but the inventories are often separated into dedicated warehouse divisions. The separation is due to the different inventory and sorting systems required between store and e-commerce delivery.

The Blended Approach

A "blended" supply chain approach seeks to maximize the speed of delivery by using all points of a supply chain to send products to a customer. While regional distribution centres and regional fulfilment centres still facilitate the flow-through of most goods moving to customers and stores, in a blended approach, retailers may elect to ship products through other distribution points such as a manufacturer, supplier or local store. The complexity of blended supply chains is somewhat higher than other methods and requires the retailer to have sophisticated inventory management systems.

The following chart provides more detail on the types of e-commerce supply chains retailers are adopting.

Combined Supply Chain

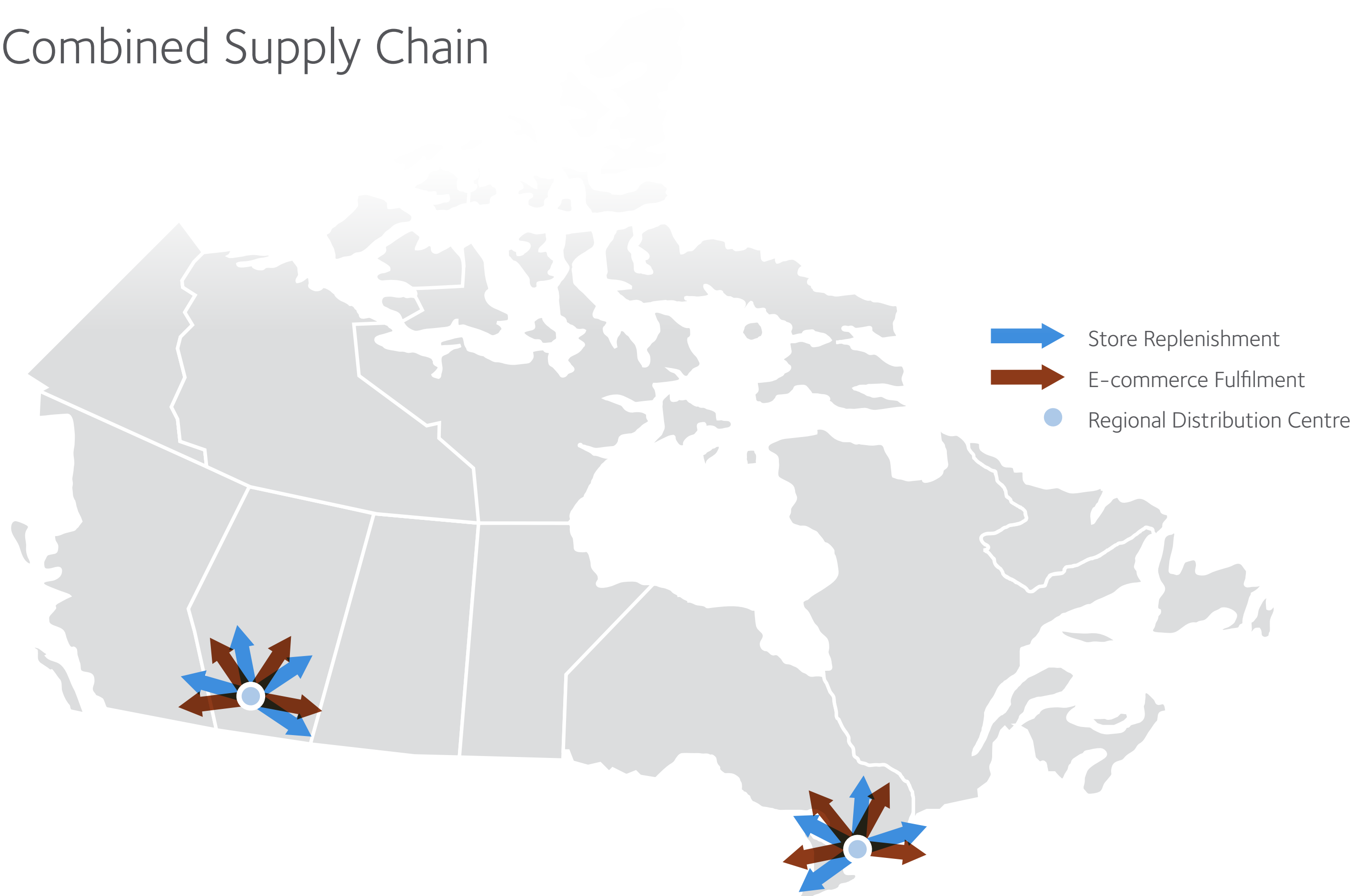
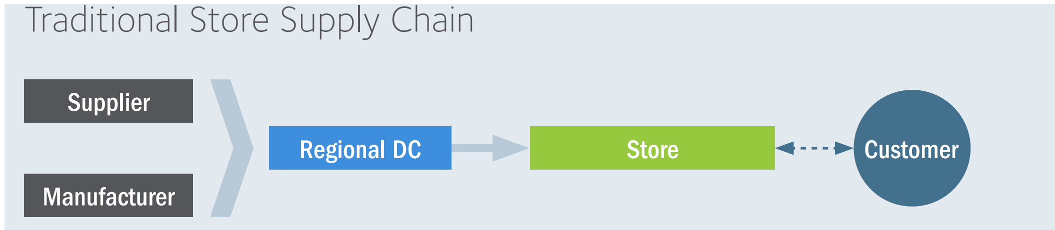


Figure 1: Supply Chain Structures

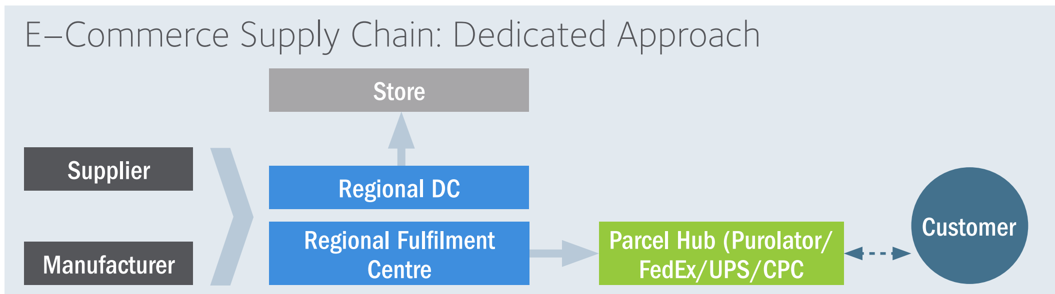
Key Characteristics

- Linear product line from supplier to customer



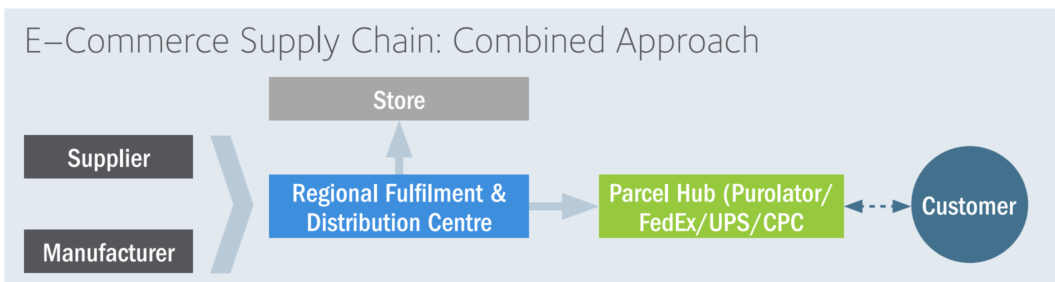
Key Characteristics

- 2 regional DCs, one dedicated to e-commerce and one for in-store replenishment; single delivery point from DC to customer



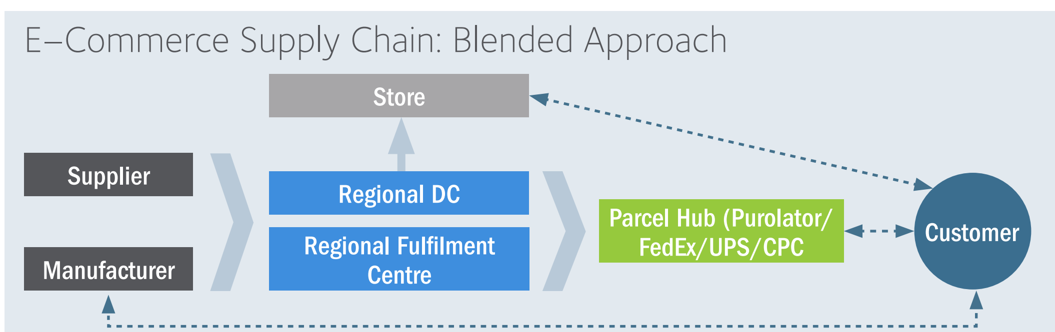
Key Characteristics

- One single DC servicing both e-commerce and in-store platforms; single delivery point from DC to customer



Key Characteristics

- Either a single “combination” warehouse or 2 regional DCs (one dedicated to e-commerce and one for in-store replenishment); multiple delivery points for the consumer



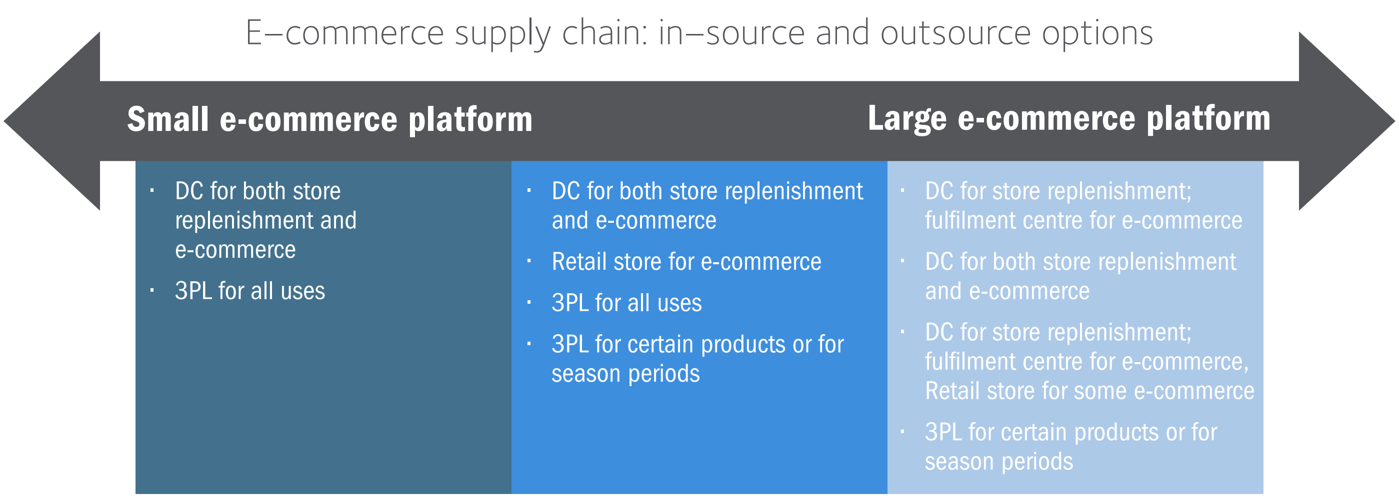
Shipping From Stores: *Some larger retailers in the US –mainly those that occupy big box retail spaces—are also experimenting with using their existing retail stores as fulfilment locations, due to their large existing stockrooms and inventories. For example, when a product is ordered online, the product is picked from the inventory at a local store, which is then delivered to the customer as opposed to being delivered from a distribution centre. There are varying perspectives, however, on whether this model will be successful or implemented in Canada. Capacity limitations at stores as well as variations in loading and building configurations make it difficult for retailers to implement a standardized delivery system (Brown, 2013). High street and urban locations in particular are difficult to ship from since they often have smaller inventories and loading areas.*

How 3PLs fit in the picture

Many retailers in Canada are expected to use 3PL groups to handle their e-commerce business for cost and scale. 3PL groups have the ability to reach economies of scale by managing fulfilment/distribution for several retailers in the same distribution centre. As well, retailers may also contract out a portion of their e-commerce requirements to 3PL groups during seasonal periods with high shipping volumes or in smaller markets where direct retailer fulfilment is not cost effective.

We also expect that when new companies enter the market for both their regular in-store replenishment and their e-commerce platforms, they will use 3PL groups to help build their supply chain network in Canada before deciding whether to move their logistics operations internally.

Figure 2: E-Commerce Management Options



LOCATION CONSIDERATIONS

Where a retailer chooses to have their logistics operations depends on a variety of factors, including the location of their suppliers, the framework of their existing[3] supply chain, as well as the current capacity at their facilities. While there are certain industrial markets in Canada that are more "distribution"-oriented based on their access to ports or other key infrastructure, those are not the only determining factors. We found throughout our research that major retailers could be found operating e-commerce/retail facilities in every major Canadian market. For example, Group Dynamite (parent group for Garage and Dynamite fashion brands) operates a single National Combination facility in Montreal (Taliaferro & Li, 2013) while Target operates facilities in Alberta and Ontario (MWPVL Supply Chain Consultants, 2014).

The move towards next day and same day shipping is expected to be a critical factor in changing the location of distribution centres for many groups. The need for retailers to reach a large customer base may result in more regional distribution centres as opposed to just one or two national facilities over the long term. As mentioned, some retailers have elected to have eastern and western regional distribution centres to gain market coverage. In the future, some retailers may even elect to have three or four regional facilities to access markets as quickly as possible (Taliaferro & Li, 2013). A dispersed, regional supply chain strategy is something that Amazon, for example, has done in the US and other global markets. Amazon's supply chain approach is to have regional facilities located in areas that have the greatest population coverage and overlap in order to fulfil their same or next day delivery offerings (MWPVL Supply Chain Consultants, 2014).

[3] Online (also referred to as "pure-play") retailers do not have to serve existing stores and therefore often do not have an existing supply chain network to adopt. Traditional Brick and Mortar retailers conversely, often have to integrate their e-commerce business with their existing store distribution to limit redundancies (Sinnot, 2013).

WHY "REVERSE LOGISTICS" IS A CHALLENGE FOR RETAILERS, BUT MAY HELP TO CREATE MORE AGGREGATE INDUSTRIAL DEMAND

Reverse logistics refers to the process of when a customer sends a product back to the retailer. While the concept of reverse logistics has been around since the advent of physical stores, e-commerce is quickly proving to be a challenge for the management and effectiveness of product returns.

Traditional in-store product returns meant moving an item along the same supply chain by which it was delivered—just in reverse. A customer returns a product to a store where it then gets sent to a distribution centre or manufacturer for inspection and is then returned to the regular inventory supply.

However, since retailers are now offering free shipping, free returns and relatively lenient refund standards for their online sales, customers are ordering more products online and returning them with less discretion (for example, ordering multiple pant sizes of the same product and returning the ones that do not fit). The sheer volume of products being returned coupled with the growing number of ways to return products is challenging the capacity of existing reverse logistics supply chains—return rates can be as a high as 30%-50% in some cases (Leber, 2013). Return costs are relatively high, and are a growing expense for retailers (for example, a refunded fabric item is sometimes cleaned/inspected incurring another cost).

While some retailers choose to handle their reverse logistics in-house, **3PL groups and other specialized service providers also continue to handle a majority of the reverse logistics business in Canada.** Accordingly, as more retailers make their foray into e-commerce, we expect to see two trends: 1) more 3PL and reverse logistics providers in the market place and 2) an increase in the amount of physical space in buildings dedicated to reverse logistics.

SECTION 3: DERIVING NEW REAL ESTATE REQUIREMENTS FROM E-COMMERCE

THE CONTINUED SHIFT TOWARDS MORE AND LARGER DISTRIBUTION AND LOGISTICS USES

While it is evident over the last decade that the Canadian industrial market has shifted away from traditional manufacturing towards distribution and logistics uses, the growth of e-commerce has intensified this trend. The result has been the growth in both the number and size of these distribution centres. Since 2009, almost all of the new industrial development across major Canadian markets has been distribution-related, particularly in the large-bay and retail segments as shown in Figure 3. We also note that the "new normal" for the size of distribution facilities being built is progressively larger and can range from 500,000 SF to upwards of a 1 million SF.

Figure 3: Top 20 Largest Industrial Developments – 2009-2014

Top 20 Largest Industrial Developments in Canada – 2009-2014 (Source: CBRE Research Q1 2014)

PROPERTY NAME	CITY	SIZE	YEAR	FACILITY TYPE
Target Distribution Centre	Milton	1,500,000	2012	Distribution/Logistics
Target Distribution Centre	Cornwall	1,400,000	2011	Distribution/Logistics
Target Distribution Centre	Balzac	1,200,000	2013	Distribution/Logistics
Unilever Distribution Centre	Brampton	815,460	2014	Distribution/Logistics
Gregg Distributors Facility	Edmonton	750,000	2013	Distribution/Logistics
100 Ironside Drive	Brampton	728,411	2013	Distribution/Logistics
Home Depot Distribution Centre	Vaughan	657,600	2013	Distribution/Logistics
Lowes Distribution Centre	Milton	634,000	2013	Distribution/Logistics
Sobeys Food Distribution Centre	Terrebonne	622,151	2012	Distribution/Logistics
Enscarpment Way Business Park	Milton	580,000	2010	Distribution/Logistics
Mayport Distribution Facility	Caledon	575,000	2013	Distribution/Logistics
Shoppers Drug Mart Distribution Centre	Cornwall	550,000	2010	Distribution/Logistics
Meadowvale Distribution Centre	Mississauga	531,395	2013	Distribution/Logistics
Amazon Distribution Centre	Brampton	520,736	2013	Distribution/Logistics
Tilbury West Corporate Centre	Delta	462,000	2009	Multi-unit Bay Strata
Hopewell Distribution Park	Calgary	454,977	2012	Distribution/Logistics
Boundary Bay Phase I	Delta	439,970	2014	Distribution/Logistics
Acklands Grainger Distribution Centre	Caledon	429,157	2014	Distribution/Logistics
Stoney Industrial Centre - Building 6	Calgary	416,412	2013	Distribution/Logistics
Stanley Black & Decker Distribution Centre	Mississauga	415,000	2012	Distribution/Logistics

FACILITY REQUIREMENTS DRIVEN BY E-COMMERCE

While varying by market and retailer, the following facilities are expected to see the most growth in Canada from e-commerce:

- **Distribution Centres:** Distribution Centres serve as receiving points for product shipments before being deconsolidated and re-organized into shipments destined for stores or for e-commerce fulfilment. While distribution facilities come in a variety of sizes, most of the market focus has been towards the prevalence of increasingly large distribution centres. These buildings have lower site coverage ratios due to large trailer courts and also have high cubic capacity due to wider and longer building dimensions, as well as higher ceiling heights to accommodate more racking.

- **E-commerce Fulfilment Centres:** e-commerce fulfilment centres (also referred to as e-fulfilment centres) are large scale distribution facilities that are designed specifically for the picking and sorting of individual goods being delivered direct to consumers. Fulfilment centres are designed for "unit picking", which is the process of manually sorting and packing individual products for delivery to consumers. It should be noted that fulfilment centres differ from regular distribution centres in several ways:
    - Are usually occupied by a single retailer (e.g., Amazon)
    - Are typically larger, ranging from 500,000 SF to 1 million SF in size
    - Focus on the movement and storage of smaller, individual products as opposed to large pallets or cases of a single item found in traditional in-store distribution centres
    - Have a larger number of permanent and seasonal employees resulting in large surface parking requirements (reaching up to 500 to 1,000 stalls for one facility in some cases)
    - Can be build-to-suit (BTS) versus speculative, and leased versus owner-occupied

- **Food Distribution:** One segment to watch in Canada is grocery e-commerce. While in its infancy in Canada, grocery e-commerce is a matured market in Europe and parts of the US. Groups such as Tesco in the United Kingdom have been offering "click and collect" home delivery and in-store pick-up for several years. Recently, the grocery retail market in Canada has become very competitive, with groups such as Amazon, Walmart, Loblaws and Sobeys vying for greater market share with food e-commerce as a part of that process (Gerlsbeck, 2014). Food (also known as multi-temperature) facilities are distribution facilities but with specialized infrastructure such as sorting systems, coolers, additional insulation and air conditioning. Also, due to the perishable nature of food, grocery e-commerce tends to require more local distribution facilities than a few, large national distribution centres (Wulfraat, 2013).

Figure 4: Notable Industrial E-Commerce Facilities

DISTRIBUTION CENTRES		
KEY CHARACTERISTICS	**EXTERNAL INFRASTRUCTURE**	**INTERNAL INFRASTRUCTURE**
· High cubic volume buildings that facilitate the movement of bulk products from manufacturers to stores or consumers · Increasingly large (300,000 SF to I Million SF) · Located in urban fringe areas, with good highway accessibility and multiple access points from major roads · Cross-docking preferable · Single or multi-tenanted · Spec or BTS · Leased	· Large, deep trailer courts for manoeuvring · Multiple dock loading doors (minimum 1 trailer space per door or per 4,000 SF, but higher the better) · Secured sites (fencing, security) · 32’ minimum clear height, although 36’ and 40’ becoming more in demand	· High floor load capacity (both live load and point load) · Wide-column spacing · High racking systems

E-FULFILMENT CENTRE		
KEY CHARACTERISTICS	**EXTERNAL INFRASTRUCTURE**	**INTERNAL INFRASTRUCTURE**
· High cubic volume buildings designed for unit picking of individual goods · Large labour pool of permanent and seasonal workers · Very large (500,000 SF to I Million SF) · Located in urban fringe areas, with good highway access and in proximity to multi-modal and integrator (FedEx, Purolator, UPS) hubs · Single tenanted, usually BTS · Leased, although sometimes owner occupied	· Large, deep trailer courts for manoeuvring · Multiple dock loading doors (minimum 1 trailer space per door or per 4,000 SF, but higher the better) · Large surface parking for cars · Secured sites (fencing, security) · 32’ minimum clear height, although 36’ and 40’ becoming more in demand · Security systems and fencing	· High floor load capacity · Large office/mezzanine build-outs, sometimes in multiple levels · Customized sorting machinery in some cases · Shelving for smaller products · Heavy power redundancy · Some automation of picking and sorting systems

FOOD DISTRIBUTION		
KEY CHARACTERISTICS	**EXTERNAL INFRASTRUCTURE**	**INTERNAL INFRASTRUCTURE**
· Buildings that facilitate the movement of bulk products from manufacturers to stores · Varied size (20,000 SF to 400,000 SF) · Located in urban fringe areas, with good highway accessibility and multiple access points from major roads · Single or multi-tenanted · Spec or BTS · Leased	· Multiple dock loading doors with dock seals	· Roof and building insulation · Refrigeration facilities and chilling equipment

SECTION 4: THE DEPTH OF THE CANADIAN E-COMMERCE MARKET AND ITS IMPLICATIONS ON REAL ESTATE

WHY CANADA IS A UNIQUE (AND TOUGH) E-COMMERCE MARKET

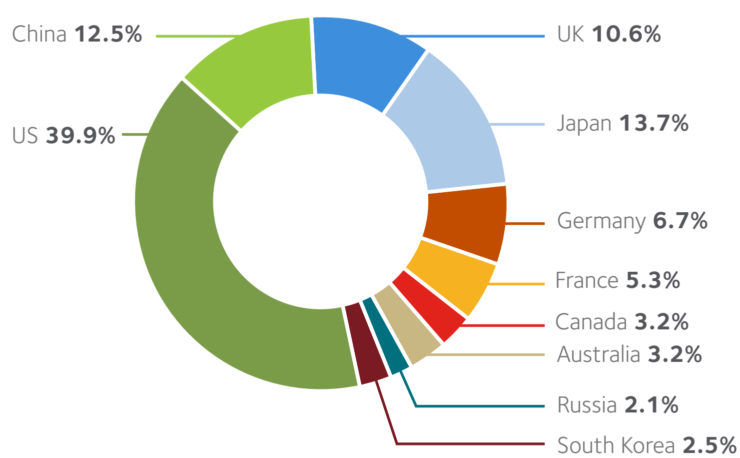
While e-commerce continues to grow in Canada, it is important to note that Canada is a different market compared to other well-established countries such as the US and those in Europe. Based on our research, the market capacity for e-commerce in Canada is relatively small over the short (one to three year) term, suggesting a longer time period for the market to mature. We note the following reasons:

- **E-commerce maturity:** Online retail sales in Canada have been growing at a fast rate but are still relatively small in global comparison. From 2010 to 2012, Canadian online sales have grown 28% to $18.36 billion and are expected to reach over $38.74 billion by 2017. While the pace of growth has been strong, online sales only account for 4% of the total retail sales in Canada. This is in comparison to the US, where e-commerce drives approximately 6% of the total retail activity based on 2012 numbers (and is much larger in real terms at $225 Billion). Online grocery sales are also small in Canada, estimated at less than 1% of total national grocery sales (Gerlsbeck, 2014). In terms of per capita numbers, online sales in Canada are much lower than the US, at $480.22 and $848.49 respectively.

Figure 5: Retail E-Commerce Sales Worldwide - 2012-2017

Online Sales ($Billions)	2012	2013	2014	2015	2016	2017	CAGR
US	$ 225.31	$ 262.34	$ 300.64	$ 343.34	$ 390.03	$ 439.95	14.3%
China	$ 70.88	$ 141.64	$ 249.38	$ 369.67	$ 506.31	$ 665.07	58.5%
UK	$ 60.16	$ 68.88	$ 77.84	$ 86.40	$ 94.17	$ 101.71	11.1%
Japan	$ 77.60	$ 70.75	$ 76.95	$ 83.30	$ 89.26	$ 95.08	4.4%
Germany	$ 38.13	$ 42.66	$ 46.69	$ 50.53	$ 54.54	$ 58.38	8.9%
France	$ 30.22	$ 34.21	$ 38.36	$ 42.62	$ 46.41	$ 50.25	10.7%
Canada	$ 18.36	$ 21.61	$ 25.37	$ 29.63	$ 34.04	$ 38.74	16.1%
Australia	$ 18.07	$ 19.16	$ 20.32	$ 21.44	$ 22.60	$ 23.61	5.5%
Russia	$ 12.12	$ 14.65	$ 17.36	$ 19.23	$ 20.57	$ 21.64	12.5%
South Korea	$ 14.40	$ 15.64	$ 16.84	$ 17.67	$ 18.46	$ 19.15	5.9%
Canada online sales as a percent of total Canadian Retail Sales	3.9%	4.5%	5.2%	5.9%	6.7%	7.4%	

Source: eMarketer



Retail E-Commerce Sales Worldwide Top 10 - 2012 (Source: eMarketer)

- **Small retail market:** On a global basis, the Canadian retail market is small. As such, the actual number of groups offering e-commerce in Canada is substantially less than the US or the UK and limits short term industrial growth as a result. Cross-border online shopping in the US continues to be a limiting factor for Canadian e-commerce as well. Approximately two-thirds of Canadian online shoppers continue buy from websites outside of Canada according to retail consultancy J.C. Williams Group (J.C. Williams Group, 2014).
- **Geography:** Because of the relatively small and dispersed population base across Canada, transportation costs are much higher compared to other global markets. This makes it tougher for distributors to reach economies of scale in Canada through their logistics channels (Gragtmans, Hay, & West, 2013).

Figure 6: Notable Retailers without e-commerce in Canada

ONLINE SHOPPING CAPABILITIES BY RETAILER AND COUNTRY	UNITED KINGDOM	US	CANADA
H&M	Yes	Yes	No
United Colors of Benetton	Yes	No	No
Nike	Yes	Yes	No
Michaels Crafts	N/A	Yes	No
Foot Locker	Yes	Yes	No
Brooks Brothers	Yes	Yes	No

UNDERSTANDING THE CHALLENGES IN AN EMERGING MARKET SEGMENT

Market Capacity

The real estate opportunities created by e-commerce are not without their challenges. Based on our research, a key factor driving the majority of the short term risk in Canada is the fact that the e-commerce market is relatively new, making it tough to predict future demand from both retailers and related-user groups. Recent leasing activity further supports this trend, evidenced by shorter lease deals (3-5 years) being done in the market by some e-commerce groups.

While the market focus has been on major online retailers (e.g., Amazon, Walmart, Target), many small to mid-sized retailers are still trying to establish their e-commerce platforms. This makes it difficult to understand the short term market capacity for new e-commerce requirements since many groups are not sure of their 2-3 year space plans and whether or not their existing supply chains can handle e-commerce. We also note that in some cases, a retailers' online sales are essentially replacing their declining in-store sales suggesting no net new gain in warehouse capacity needs over the short term. For the most part however, the unpredictability in demand is often associated with expansion and not consolidation suggesting future demand growth from retailers.

> *"From an investor perspective, the most important question, as I'm deciding if I want to own this building, is 'what is the rate of change of the physical characteristics of these buildings?'...When that Amazon lease rolls in 2025 (or whenever), will they want to stay in that building? Who is the next tenant when Amazon leaves? That is the most important question, from the perspective of a forward-thinking investor."*
>
> *Rene Circ – Director of Research, Costar (Adapted from NAIOP Development Magazine, Winter 2013. "Research Directors Discuss New Challenges").*

Flight risk and adaptability with specialized e-commerce facilities

Because e-commerce is still so new, trying to design an industrial building for long-term demand is also difficult as no real "tried and true" distribution framework has been established in Canada. For investors engaging in a specialized BTS deal with a tenant, there is always inherent risk if the tenant leaves (Stern, 2013). It is too soon to tell how adaptable current facilities will be in the long term and also how adaptable they will be between different retailers (e.g., can Walmart occupy an Amazon facility with relative ease). Automation of product picking and sorting also provides another layer of complexity in designing these facilities—automation is often specific to a retailer and, over the long term, could also change current labour and space requirements (Taliaferro, 2014).

FUTURE TRENDS

Because of the unique characteristics of the Canadian market, we expect e-commerce to take a longer time to mature in comparison to US and European markets despite being a major market driver of new industrial space demand. Looking at Figure 7, we list the potential short, medium and long term changes to the Canadian industrial market because of e-commerce:

Figure 7: Projected E-commerce Adoption in Canada and Potential Real Estate Trends

	1-3 YEARS	3-5 YEARS	LONG TERM
Key changes	· Early adoption of e-commerce by major retailers; limited requirements for stand-alone e-fulfilment centres · Continued growth from 3PL groups requiring new distribution centres · Some omni-channel retailer occurring (in store pick-up, parcel pick-up, home delivery) putting more complexity into retail supply chains · Next day or same day delivery becoming more prevalent	· More adoption of e-commerce by both large and medium sized retailers; more e-fulfilment centre requirements · Continued growth from 3PL groups requiring new distribution centres · More dispersion of regional distribution centres · Expansion of niche e-commerce segments such as reverse logistics and food e-commerce · Some facility expansion from integrators such as FedEx and UPS	· Advanced adoption of e-commerce by both large and medium sized retailers; more e-fulfilment centre requirements · Continued growth from 3PL groups requiring distribution centres · More dispersion of regional distribution centres · Strategic facility expansion from integrators such as FedEx and UPS
Real estate trends	· Demand for existing industrial space still prevalent, but declining · Demand for new distribution space growing · Some demand for specialized BTS and "e-fulfilment ready" facilities	· Functional obsolescence beginning to emerge for some older warehouses · Demand for new, modern distribution space driving more development · Strong demand for specialized BTS and "e-fulfilment ready" facilities	· Demand for new, modern distribution space driving development

THE VIEW AHEAD: STRATEGIES FOR INSTITUTIONAL REAL ESTATE INVESTORS

KEY OPPORTUNITIES

As e-commerce becomes more prevalent in the Canadian retail marketplace, lease and BTS requirements for distribution and logistics related facilities are expected to increase.

From an investment perspective, we note the following key opportunities from e-commerce:

- A general shift in the Canadian industrial market towards distribution and logistics activities creating more tenant activity from groups such as 3PLs, retailers and trucking companies
- A dispersed and localized retail distribution model driving distribution requirements in virtually every major market in Canada
- A rise in the number of BTS and large-scale facility requirements suggesting more industrial development opportunities
- Industrial location increasingly becomes a greater driver of demand than real estate costs alone

INVESTOR STRATEGIES

Because of limited (and suitable) availability, development will be a growing focus

As requirements for distribution centres and fulfilment centres become increasingly large and specialized, research suggests that much of the existing industrial inventory in Canada is not suited for these uses. New development will be one of the ways investors can accommodate these new e-commerce requirements. As noted above, however, flexible facility design and adaptability are key considerations for new development. Timing and site readiness is also an important consideration – retailers want to be able to occupy a facility within 12-18 months of choosing a site for development and investors could lose out on opportunities if the site is not properly serviced or prepared.

Limited land availability in Canada means strategic land plays will be important in capturing these large-scale building requirements, particularly in industrial nodes with multi-modal access

We have noted that retailers are beginning to shift their supply chains from a "real estate led logistics strategy" to a "logistics led real estate strategy" suggesting that supply chain efficiency is becoming more important than overall real estate costs. As such, retailers and 3PL groups will look to locate in areas that have good highway access and multi-modal connectivity and if current market listings are not suitable, will strongly consider developing versus trying to fit their supply chains around what buildings are currently available. Investors should recognize this trend and focus on land and property acquisitions in these areas. Proximity to integrator hubs are of particular importance for retailers because of daily "cut off" times for parcel shipping (Taliaferro, 2014). As well, due to the increasingly large buildings required for e-commerce, investors will also need to look at larger land opportunities—a 1 million SF Amazon facility, for example, can occupy 50-60 acres alone.

While it is expected that "bricks and mortar" retail will continue leading a majority of the logistics demand in Canada over the short term, e-commerce will have the most impact in terms of new distribution and facility requirements over the long term.

Despite the expected growth of fulfilment centres and other specialized e-commerce facilities in Canada, it is expected that general in-store distribution will create the most demand for industrial real estate over the short term while e-commerce groups will provide limited but large scale opportunities. Demand for distribution space will still provide developers with speculative opportunities, whereas e-fulfilment and food facilities will be typically BTS. Investors should recognize the differences in tenant depth between the two and balance their leasing and development expectations accordingly.

Industrial Real Estate = Retail Real Estate

Omni-channel retailing is starting to blend conventional perceptions between retail and industrial real estate. Retailers are beginning to realize that product supply chains are just as important as their physical stores and are focusing on industrial real estate as a key part of their overall retail sales strategy. Investors should look at industrial real estate as a key piece of the retail picture, instead of viewing the two asset classes as functionally (and economically) different. Retailers are starting to shift their capital investments away from physical stores towards their supply chain networks, suggesting that, in some cases, industrial real estate growth may actually be more representative of a retailer's expansion than their physical stores alone as e-commerce proliferates. This has important implications for investment diversification strategies across asset classes.

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