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SUPPLY CHAIN  
INTELLIGENCE

# HOW TO INTEGRATE E-COMMERCE DISTRIBUTION

into your Existing Operations

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## ABOUT THE AUTHOR

David Beaudet has been helping companies make better distribution infrastructure decisions since 2004. His consulting experience spans many industries including food, pharmaceuticals, apparel and spare parts. He is a regular speaker on topics relating to e-commerce distribution.

In this eBook, David shares the critical steps to help you plan and execute the integration of e-commerce distribution into a traditional retail, wholesale or manufacturing operation.



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# CHAPTER 1 A NEW REALITY

## INTRODUCTION

Though it has existed for at least twenty years by now, e-commerce continues to force innovation in the way manufacturers, wholesalers and retailers operate.

Some companies are just now starting to add e-commerce to their operations.

- 1 Take, for example, a manufacturer who has shipped wholesale orders to large retailers for decades who is now being asked to drop-ship individual units ordered on their customers' websites.
- 2 Or consider a traditional grocery store that now offers “click & collect” services; their staff has to plan new logistics and learn how to pick items as carefully as a consumer would.
- 3 Or perhaps a company has supported e-commerce for a while but as a “side project,” which it now wants to grow. For instance, you might find a local clothing chain that has long fulfilled online orders from its stores, but now decides that to increase sales it must centralize distribution at its existing warehouse.





The unique characteristics of e-commerce, including distinct order profiles, broad SKU selection and fast delivery expectations, continue to reshape traditional distribution operations. Fulfilling online orders is more complex than listing products on a website and asking the distribution center to pick, pack and ship as they come. To grow – or even keep – your market share, your business needs to adapt its distribution infrastructure to become as agile in fulfilling online orders as you are in serving existing retail or wholesale customers.

## IN THIS EBOOK YOU WILL LEARN:

- ✔ How e-commerce distribution differs from traditional channels and how these differences impact your distribution infrastructure.
- ✔ How to transform infrastructure built for retail or wholesale distribution so that you can serve multiple sales channels and keep your workforce highly productive.



# HOW WILL **E-COMMERCE** DISTRIBUTION IMPACT MY OPERATIONS?

Compared to wholesale and retail distribution, e-commerce has distinct operational needs and patterns.

## **Some differences include:**

### **SHIPMENT PROFILES**

- › Order sizes shrink drastically to anywhere from 1-5 order lines (usually more in food and apparel) but typically averaging 1-2 lines per order.
- › Order lines are composed of mostly units or inner packs rather than cases.
- › Orders require new types of packaging materials and careful packing, which increases labour demands.

### **PLANNING ORDER FULFILLMENT**

- › Unless your customer base is local (e.g., some food operations), you will deliver your products through parcel carriers. Service providers can show up at your dock multiple times a day affecting labor planning.



- › Additional Warehouse Management System (WMS) functionalities may be required such as inventory allocation to B2C orders, replenishment of multiple pick slots for a given SKU, picking multiple orders simultaneously, and communicating packing instructions to employees.

## PEAK PERIODS

### Seasons


- › Some businesses can do up to 80% of their sales as holiday gifts in November and December.
- › For grocery delivery, sales are strongly positively correlated with cold weather and precipitation.

### Days/hours

- › Weekends are a good time to shop since consumers have more time, so orders pile up for Mondays if you aren't shipping Saturday and Sunday. On Monday mornings, workload balancing becomes a critical element of how efficiently you get orders out the door.

## RETURNS

- › As they would do in a store, customers want the ability to return merchandise that doesn't fill their needs. They expect the returns process to be easy.
- › You may still decide to process returns through your stores rather than a central distribution centre (or your clients' stores if you are a manufacturer) so you need strong return logistics, processes and IT.



## CHAPTER 2

# HOW DO I ADAPT MY **INFRASTRUCTURE** TO REACH TOP PERFORMANCE LEVELS ACROSS ALL CHANNELS?

Distribution infrastructure is the facilities, equipment and technology used to get products to customers. This infrastructure should be a cohesive and finely tuned ecosystem that enables you to be efficient, agile and profitable. **Read more about infrastructure and how it affects the performance of your distribution operations in [this eBook](#).**

To tackle e-commerce, you need to think of infrastructure in new and different ways, determining how to maximize the utilization of your current people and assets while minimizing disruption to existing operations.





## 1 DEFINE YOUR CUSTOMER

You need a clear understanding of who will order your goods online to make the appropriate decisions regarding the physical, technological and organizational aspects of your business.

Whether your web customers are, for example, mothers, young professionals, or multi-site businesses, they usually share the following characteristics:



**They have mature online shopping habits and expect to have all the information about a product readily available to streamline their shopping process.**

**You will need to provide answers to questions such as:**

- › Is this product in stock? When will I receive it?
- › What are the delivery/pick-up options? Are orders easy to track?
- › If I order multiple products but some are backordered, do I have to wait or will I receive multiple packages?
- › What is the delivery cost?



▶ **They don't need to touch and feel the product in order to decide if they will buy it, however they rely on reviews from their peers to choose where to shop and what to buy.**

**They want to know:**

- › What is available online – every single product, only specific product lines or best sellers for each product line?
- › Is it easy to return the product? Can I do it in-store or just via mail?

▶ **Decisions regarding how customers will shop drive the planning and execution of your process, layout and systems.**

**For instance:**

- › How will inventory be allocated to orders? How will the WMS communicate with the website?
- › Will we use a single parcel carrier or multiple ones?
- › How will orders be packaged? Is there a customization element? Will we insert marketing material?



**You need a clear understanding of who will order your goods online to make the appropriate decisions regarding the physical, technological and organizational aspects of your business.**



## 2 SET-UP ORDER MANAGEMENT

Once you have a clear understanding of what your customers' shopping experience should be like, you must define the order management process and system functionalities required to implement an efficient, error-free operation.



**Every industry has specific needs but the following elements typically need to be defined for most businesses:**

- › Where will we fulfill web orders? At the distribution center? In our stores? A combination of both? Picking orders at the DC has clear advantages but doing it in stores shouldn't be dismissed altogether:

### WHY PICK AT THE DC?

- › **Leverage your current labor**  
Reduces downtime and existing staff is easier to train and supervise
- › **Simpler inventory positioning**  
A central location is easier to manage
- › **Quality control**  
Improved consistency in packing contributes to customer satisfaction
- › **Reduce impact on retail space & labor**  
Picking in store means more product going through the back of the store and occupying valuable space better used for customers walking through the front door
- › **Shelf life**  
If your product is date sensitive, centralized distribution gets it to your customers faster

### WHY PICK IN STORES?

- › **Minimize the impact on the DC layout**  
Avoid making significant changes to your facility
- › **Variety/inventory**  
Products in the apparel and fashion industry have short lifecycles; a DC may not hold every size/color, especially towards the end of a collection, but a specific store might still have those great purple loafers in size 12
- › **The business warrants it**  
e.g., food delivery in remote locations



### **Operating shifts and order cut-off times for same/next day shipping**

- › Assuming web orders are picked and packed at the DC, you may have to tweak your shifts in order to meet fast delivery promises.

### **WMS configuration**

- › Rules in allocating inventory to existing customers and B2C orders may need to be established. Which customers will we prioritize in the event of shortage for a given product? How do we communicate this information to customers?
- › Do we want to advertise in-stock quantities on the website?
- › What are the replenishment parameters for unit pick slots? Where do we replenish from?
- › Can we minimize redundancy among pick lists, invoices and shipping labels?

### **Packaging and product dimensions at the unit level**

- › Accurate measurements are critical for designing a material handling system that optimizes space utilization and productivity, as well as for optimizing packaging sizes.
- › The nature of your products and the typical order profile dictates if you can “get away” with a single package size, which is simpler. Shipping one, two or three t-shirts is easy without appearing wasteful to your customers but office supplies or food is another thing.



▶ **Training and quality control – if unit picking is not part of your existing retail distribution operation, you must define processes that:**

- ▶ Minimize product damage during picking and packing.
- ▶ Make the presentation appealing to your customers when they open their package.
- ▶ Are accurate, since mistakes are costly.

▶ **Returns**

- ▶ Even if you eliminate mistakes, you have to manage returns. While you already do so with your existing retail customers, there may be additional steps required to assess credits and the state of the product for restocking for e-commerce business.



Once you have a clear understanding of what your customers' shopping experience should be like, you must define the order management process and system functionalities required to implement an efficient, error-free operation.





### 3 DESIGN YOUR DISTRIBUTION INFRASTRUCTURE

With the order management processes defined, the next step is to implement infrastructure changes. The most important design considerations driving efficiency and asset utilization are:

▶ **Pick line configuration - while some instances may warrant picking web orders through a traditional retail or wholesale pick line, many factors support the need to isolate a B2C area with its own pick line.**

- In absolute terms, you fulfill more web orders than store orders, but each of these orders is much smaller; this provides the opportunity to pick multiple orders at the same time, increasing hit density.
- Material handling equipment must provide dense picking fronts and be easy to replenish:

1. *Pick slots*

*Case flow racks and shelving units enable a much denser pick line, presenting order selectors with significant variety over a reduced foot print. Make sure that fast movers get the appropriate number of fronts.*

2. *Container movement*

*A cart holding multiple totes (or boxes) or conveyors with narrow aisles are better suited to dense pick lines than pallet jacks in wide aisles.*



- › Different kinds of packing stations may be required, and those stations and staging areas must be positioned to marry up with the end of the pick line and shipping dock.

▶ **To batch or not to batch, that is the question. When picking multiple orders simultaneously, dominant approaches are “batch pick and sort” and “pick to the shipping container”.**

- › The best method for your operation comes from the analysis of order profiles (size and SKU variety). In an e-commerce environment, where lines per order are low, it is advised to simulate both methods to determine which one yields better productivity, i.e., does the highly efficient batch picking approach warrant the additional labor required to sort the product?



Ultimately, the design solution is a function of trade-offs among space, equipment, labour and capital, as well as WMS capabilities. Because B2C orders are different than store or wholesale orders, they warrant their own little world – it’s a question of how to make it fit within the existing space without having a negative impact on what is already working well.



## 4 INCREASE DEPARTMENTAL COLLABORATION

Parallel to engineering the infrastructure, you must develop adequate communication channels between operations and the rest of your organization to maximize both sales and customer satisfaction.

### So who needs to talk to whom about what?

#### › Marketing and Operations

Online buying habits are often influenced significantly by promotions. Before Marketing launches an initiative to increase sales on specific products or time periods, it must inform Operations with the details in order to proactively organize the pick line and workforce in preparation.

#### › Customer Service and Operations

1. *Customer Service must document credits (reason, product, order number, etc.), categorize them and communicate the information so Operations can analyze them, find a root cause and take corrective action.*
2. *Customer Service must be able to answer questions from customers about their orders and inform them proactively about any delivery delay, which requires Operations' input.*



› **Information Technology and Operations**

A close collaboration between these departments is critical to your success. Many aspects of the company's application park are impacted by changes from adapting to e-commerce distribution. Whether it is the ERP, WMS, CRM or website – most likely all of them – compromises are required and it is important not to underestimate systems integration.

› **Procurement and Merchandising**

The company now supplies two distinct but interrelated operations and this impacts how certain products are bought (quantity and frequency).



# FINAL THOUGHTS

The online shopping world is evolving quickly. Fewer and fewer companies can operate without having an e-commerce presence, and everyone must continue to adapt to increasingly sophisticated ways of selling online.

Given that the labor component represents a significant cost of distribution operations, it is paramount that you take the time to plan how your company adapts to these new ways of operating.

**As you develop your e-commerce strategy, make sure that you do the following:**

## **1 Define the needs and expectations of your customers**

If this picture is clear, you have a much stronger base to understand how e-commerce affects your infrastructure and drives process and design decisions.

## **2 Plan, plan, plan, then invest**

All aspects of your organization are affected by the introduction of e-commerce: people, systems, process, physical infrastructure. Your investments will dictate the success or failure of this initiative so sketch it out more than once and do not underestimate how different from your current practices e-commerce will be.

## **3 Coordinate with other departments**

As an operations leader, you are best positioned to evaluate options and decide on the best logistics solution for the entire range of your company's customers. However, you should collaborate with other departments so that each of them understands your needs and vice-versa.





**Please share** this with your team as well as with all the players in your value chain and join in the discussions on [our blog](#) and [LinkedIn page](#).

We'd all like to **hear your opinions** and learn from one another's experiences. After all, in a world filled with noise, the only way we can win is to cut through the clutter and invest time and effort in **making real connections**.



# CONTACT US



Schedule a **Discovery Call** to talk about your goals & define your needs



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