



# E-commerce and Omni-Channel Retailing Module Summary

## E-Commerce

E-commerce or online sales are steadily increasing as a percentage of total sales and there is great variability in levels between individual retailers. Some leading retailers now take as much as 50% of their entire sales online, while the average in the UK and US in 2021 is about 32% of total retail sales in each country. Among the leaders click and collect or pick up at curbside represents up to half of online orders and this share is growing.

Consequently, the processes and organization for e-commerce departments (and Store Operations) are evolving and changing rapidly. What is evident is that customers want a choice and increasingly conduct a single sales mission across multiple channels. There is growing evidence of store traffic declining while conversion rates are rising and online conversion rates declining while online traffic grows. The reason is simple. A growing number of consumers are doing more research online using tablets or smartphones and going to the store to buy when they are clear what they need and certain that the store will have it.

Pure play e-commerce retailers are now opening showrooms and stores and applying lessons from their digital world to the operation of their stores making faster progress to a digital business than traditional brick and mortar retailers who are developing their online and digital operations.

## Introduction

This course is about e-commerce within a retailer that offers other sales channels, usually stores. E-commerce is the online sales channel - customers buying online, and increasingly using mobile devices. A multi-channel retailing approach is commonly called omni-channel. Almost all retailers are moving to omni-channel retailing, though progress varies dramatically by country. Let's start with a description of what omni-channel retailing really means.

A consumer can start a transaction in one channel and finish it in another. For example, they can research on the web, reserve stock in the store on-line, collect the items from the store, get the most advantageous price and return the purchase (if necessary) to the store or the web DC, as the consumer prefers.

This need is driving a resurgence in interest in CRM, and those using tokenization as part of their implementation of the PCI DSS payment security standards can get a better view of their customers and their individual purchases without some of the expense of traditional frequent shopper or customer loyalty programs.

Inventory is comprised of two elements, cycle time stock and safety stock. Cycle time stock is the inventory you need to cover sales from the point where an item is sold until it is back on the shelf to be sold again. You measure the cycle time, forecast the sales in the cycle time and that is the inventory needed in a perfect world. However, you add a safety stock to protect against forecast error. In practice, most of what you sell is slow moving lines. Our definition for this purpose is that it sells less than one SKU a week in a store. Generally, the safety stock for an item is quite a lot bigger than the cycle time stock and hence it is important to leverage a common safety stock across channels.

This impacts the type of warehousing you operate. Most retailers with omni-channel operations pick stock to satisfy online orders from the central warehouse, even for click and collect orders.



They do this even though they may have the item in stock in the collection store. The reason they do this is because they don't trust the accuracy of the store stock records and believe the accuracy is sufficiently poor that they won't risk disappointing a customer by taking a chance on the store stock figures.

You need a consistent pricing strategy cross channel.

You need an all-channels assortment strategy. This is not the same as having the assortment in all channels as we will see later.

Omni-channel retailing enables new data to be captured that you possibly didn't have before. This data should be used, where relevant, to inform activity in other channels.

Sales and costs need to be credited fairly and accurately. Stores incur labor cost for example, to service click and collect orders. Store Operations incurs the payroll burden and online takes the sales. As online and click and collect grow this will distort channel profitability unless accounting practices change.

Incentives for store staff need to be geared so that staff think and act in an omni-channel way. If store bonuses only get paid on store sales, the store will not be motivated to give good service on click and collect orders, for example.

Ideally the customer should be recognized in each channel at any point in time. This can be achieved online more easily, but increasingly retailers are using wi-fi routers in store that can read MAC addresses on mobile phones and know that a recurring customer is in the store. Some are providing in-store apps which encourage consumers in store to log into the store wi-fi and hence identify themselves.

Finally, in the appropriate retail segments, store staff should be able to pull up the shopper's purchase history to aid selling other items to them in a planned and not too pushy way.

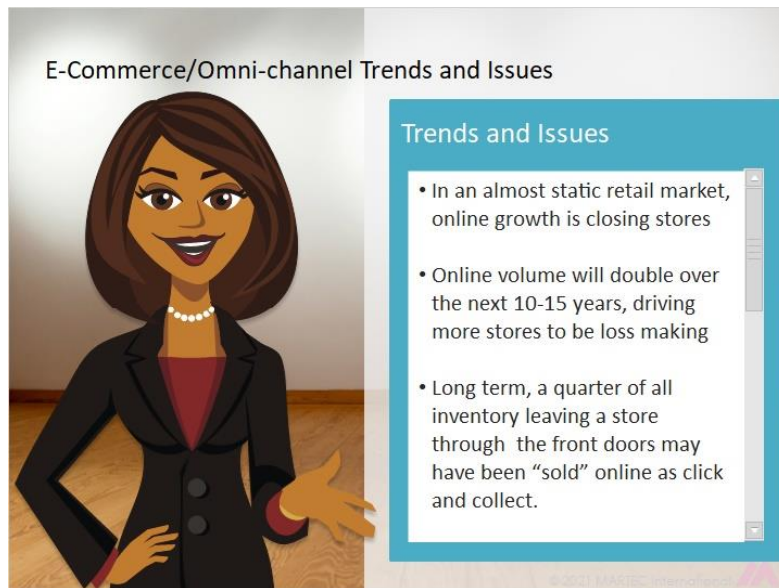
## **Omni-Channel Objectives**

The primary objective of omni-channel retailing is to serve the customer in the best possible way and make their experience more convenient, comfortable, and rewarding. In this way you build their loyalty and long-term retention.

The side benefits of executing omni-channel well are that the retailer acquires new customers, retains more existing customers, can market to them more effectively and can use the customer insights in one channel to help another.



## E-Commerce Trends and Issues



Online is growing a lot faster than the retail market and is cannibalizing stores. Hence, more stores are closing every year.

Various changes can be imagined. For example, larger stores in big cities to act more as brand building locations. Smaller stores than you have now because click and collect can be serviced from warehouse style stockrooms where cube utilization can be higher than in selling space. You may also opt to have pure collection points.

This won't affect things like convenience stores and pound or dollar stores, where the online impact will be minimal.

CEOs are very concerned about the cost of home delivery. As the share of sales made online grows, the delivery cost is rising, and the erosion of profits is becoming much more noticeable. There have also been several studies that reported supermarket chains losing money on home delivery of groceries.

Some retailers offer free delivery and consumers increasingly expect this. However, this can only be achieved if the cost is already factored into the price of the item. As more consumers use their smartphones to check prices, this is becoming more difficult.

Almost all retailers fulfil click and collect orders from their central warehouse because they don't trust the store stock records. Typically, 15% of stock records may contain errors in either direction - stock too low or stock too high. Fulfilling from the central warehouse avoids a risk of disappointing the customer. However, it comes at a cost. Fulfilment from store stock can be almost free, so retailers need to get the store disciplines tighter to make store stock records more accurate. RFID technology can help, but at a cost which only makes it viable for more expensive products.

Consumers have been educated to expect certain things when they shop online, and they increasingly expect to get their equivalent in store. They can also check prices more easily with their phones, so they demand the same price in store as they see online and the same price

wherever in the country they shop. Hence zone pricing, where the retailer charges different pricing in different areas depending on competition and distribution costs is becoming far less common.

Online returns can be 20% to 30% sales and higher still in countries like Germany (60%). Returns are growing as a percent of sales, as more consumers understand that they can buy two sizes, see which one fits best and send the other one back. More online orders are being returned to stores to save postage costs. Product returned to store can be stuck in the reverse supply chain for weeks where it is effectively off sale before being processed and put back on sale. Fast restocking is critical to profitability as return volumes grow.

## **CRM**

CRM has surged in popularity since the growth of online. Customers must provide data to get home delivery and retailers do not need to issue nearly so many coupons to get consumers to participate. Hence CRM is now cheaper than ever before.

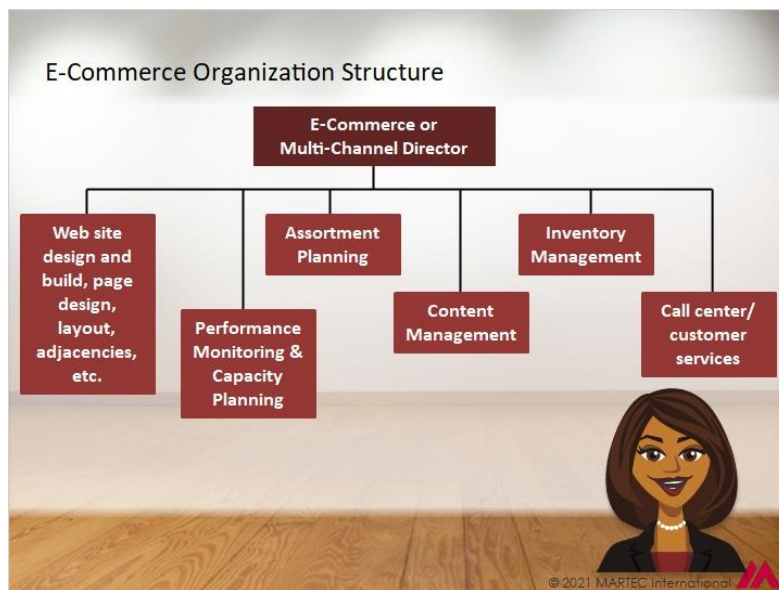
In store, customers must provide name and address details for products that need to be delivered. The on-line channel captures this data for every purchase. The key to proper CRM is to maintain a common database for all the retailers' customers but allowing data to be split by channel and related to specific purchases. In a full CRM system, the purchase habits, use of loyalty schemes, channel purchases and many other things can be seen. It allows the retailer to target both discrete mailings and store conversations at products that the customer is likely to want.

Sometimes it is not easy to match a consumer's store transactions with their online business to get a comprehensive view.

However, the payment cards industry has made this easier with the introduction of PCI DSS standards (Payment Card Industry Data Security Standards). PCI DSS uses two approaches to security - encryption and tokenization. If retailers use tokenization, matching transactions for the same card is easy. It does mean running the same payment software for online and stores, which is not always the case.



## E-Commerce Organization Structure



As the retail industry's understanding of e-commerce and omni-channel retailing develops, organization structures are changing, and we haven't reached stability yet. In general, you can say that an e-commerce division will perform the roles shown on this chart. These include:

- Web site design and build
- Page design and layout
- Performance monitoring and capacity planning (which could also be in IT)
- Assortment planning (which could be in the Buying Office, depending on the extent to which the company has one master assortment across all channels). This is increasingly the trend.
- Content management (images and product related data)
- Inventory management for non-store inventory (in some companies). In other companies the Buying and Merchandising Department does this.
- Call center operations and customer services.
- There may also be an analytics team and a customer data manager to drive customer segmentation and analytics to support marketing. This team may also exist in the Marketing Department.

Increasingly, retailers are running one common warehouse for stores and online. It has common goods receiving, bulk storage and a shared inventory. Picking will be different to suit the different picking needs of bulk to stores and packages to consumers. Transportation will be different too. This means parcels to consumers' homes for e-commerce and pallets to stores for store-based retailing. In this situation, the Logistics function will run all warehouse operations and transport.

Some e-commerce operations have their own buyers. Others leverage the buyers in the Buying Office. Content management is more demanding online because of the need for images which can be enlarged, rotated and so on. Content management may be performed by an online group or it may be a shared activity with the Buying Division. The call center is usually part of E-Commerce, but it could be part of Retail Operations. The call center will take phone orders but will also perform all other customer service functions. If online and stores share a common inventory, then probably merchandise and assortment planning and inventory management are shared activities too.

## KPI's

The next chart compares the most common indicators and how they are used in the two major channels.

## Sales

Key Performance Indicators		
Sales KPI's		
Metric	Online/Catalogue	Stores
Traffic	Yes – per site, traffic per page, hits per product	Yes, per store
Conversion Rate	Yes	Yes
Number of Transactions	Yes = Number of orders	Yes = number of sales
Average Transaction Value	Yes	Yes
Average Units/Transaction	Yes	Yes
Click and Collect Orders (#/\$)	Yes	Average no. of collections per store
Average Click and Collect Order \$	Yes	Average \$ upsell in store
Carts Abandoned (# and %)	Yes	No
Sales/Space	Sales per Page	Sales per Square Foot or Linear Foot
Purchase frequency	Yes – ideally by customer segment	Yes – ideally by customer segment
Net Promoter Score	Yes	Sometimes

Sales

Inventory

Margin

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## Inventory

### Key Performance Indicators

Inventory KPI's

Metric	Online/Catalogue	Stores
Availability (to fulfil)	Yes – per warehouse	Yes – on shelf
Weeks Cover	Yes	Yes
Inventory Weeks Cover	Yes	Yes
Inventory Density	No	Yes

Sales Inventory Margin

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## Margin

### Key Performance Indicators

Margin KPI's

Metric	Online/Catalogue	Stores
Returns % Sales	Yes	Becoming more common
Delivery Cost \$	Yes	No unless home delivery from store
Gross Margin %	Yes	Yes
Gross Margin \$	Yes	Yes
Clearance Markdowns	Yes	Yes


Sales Inventory Margin

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## E-commerce Processes

How E-Commerce Changes The Role of the Store		
	Before Omni-Channel	After Omni-Channel
Inventory	Separate inventory for each channel, duplicated safety stocks, overall bigger stockholding	Common inventory for the business, smaller total safety stock, visibility of inventory on boats and planes, less stock in stores because of narrower store assortments?
Store Staff	Minimal service desk staffing, minimal returns staffing	More service staff hours for customer pick up, receiving and returns
Staff Compensation	Anti-online when only focused on store sales	Smart retailers credit the store with online sales in the store catchment area, so online does not threaten bonuses
Store Space	Mainly allocated to selling, stockroom and offices	Add a bigger returns handling capability, a bigger customer pick up area, display of samples of Internet only lines
Customer Service	Mostly no assisted selling, except in upmarket brands, may not provide consumer wi-fi and few consumer tools to aid shopping	Internet ordering in store via store tablet or consumer smartphone, recommendations via smartphone, assisted selling from store staff, stock checking from phone, endless aisle support, etc.



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Let's consider the changing role of the store before and after e-commerce or omni-channel retailing.

Sharing a common safety stock will reduce stock investment while protecting service levels and sales. This will result in less stock somewhere and depending on your supply chain and speed of reaction may well mean less stock in stores, therefore less space needed for selling and reserve merchandise. Fewer staff may be required to handle customers on the selling floor as more orders go online, but you will also need to add hours to staff customer pick up points and handle online returns. This will affect the way you use the square footage in the stores. You can also use saved hours for more proactive selling.

Most retail formats have virtually no assisted selling and may not provide consumer wi-fi access in store. They provide little in the way of tools or apps that make it easier for the consumer to shop. In an omni-channel world, retailers are increasingly providing free consumer wi-fi, equipping store staff with tablets and providing a range of services to make shopping easier, more pleasant, and more successful. These include, for example:

- Being able to locate stock elsewhere when the store doesn't have a required item
- Being able to place an Internet order from a tablet or phone
- Being able to look up a customer's past purchases and using that information to sell more appropriately and successfully
- Provide recommendations to customers via their smartphones
- Provide special offers via their phones
- Allow the customer to interrogate an "endless aisle"
- Provide advice on building an outfit or creating a look





- Showing how a certain make up might go with a customer's skin tones, etc.

How E-Commerce Changes The Role of the Store

	Before Omni-Channel	After Omni-Channel
Store Opportunities	Add-on or impulse sales to store traffic only. Ad hoc in nature.	Someone is coming to collect an order and you know what for. Time to develop an add on sales approach for each pick up.
Staff Training	Some formats are self-service, some service based	More sell on opportunities, therefore more sales and product training required
Role of the Store	Sell product from local stock	<ul style="list-style-type: none"> <li>• Sell product from local stock</li> <li>• Act as a showroom for the wider assortment</li> <li>• Act as a marketing point (e.g. Nike Town)</li> <li>• Provide fulfilment for some online orders, whether click and collect or home delivery</li> </ul>



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We have already mentioned the potential for add on sales and the need to make sure staff are equipped to handle it in an appropriate way. Experience so far is that successful stores can add 10% to 20% to the value of click and collect orders by preparing in advance and offering the customer appropriate choices.


Staff training becomes even more important because as price is more easily compared across brands, service is a very important differentiator. Training staff in product knowledge and customer sales and service skills is crucial to success.


Historically, the role of the store has been to sell products to consumers and to be the last point in the supply chain to break bulk, so that consumers can buy one of something rather than a case. In future, the role of the store could be the same, or it could be to act as a showroom presenting the choice available from multiple channels. It could also be viewed as a brand marketing location, perhaps operating on a bigger scale than traditional stores in the chain.

Recent experience in the UK and US shows that when a store is closed, the value of online sales in that store catchment area falls by 3% to 10%, so this loss needs to be factored in when considering closures. The gain also needs to be factored in when considering openings.

## Inventory Management Online

Inventory Management Online		
Status	Interpretation	Works For
In stock for immediate delivery	It's really in stock now in the DC or a store	Customers who seek immediate or rapid fulfilment
In stock on 7 days delivery	We don't have it but we know it's in transit and we should be able to despatch it in a couple of days	Customers who want it soon but aren't fussy about getting it now
In stock on 14 days delivery	We don't have it but we have ordered it from the supplier. We should be able to receive and despatch it to make our 14 day promise	Customers who need it but aren't in a hurry
Available for delivery in 3 months time	The product is embargoed for release until a certain date (e.g. TV series DVD or a film)	Customers that want to own the product eventually, don't really care when (may be collectors or gift shoppers with lots of lead time, but want to order it and know it will turn up, so they don't have to think about it again)



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Once upon a time there was a clear understanding of what out of stock means. Out of stock in a store has a very clear meaning. The product is not on the shelf and not in the stockroom. Online it is very different. A product can be in stock for immediate delivery. This means we really do have it and we can pick and dispatch it today. It's similar to a store.

In stock on 7 days delivery means that we have ordered it, we know it's on its way and we know when it will arrive, but we don't have it yet. However, our knowledge is good enough to be confident that we can dispatch it when we say.

In stock on 14 days delivery means we don't have it, but we have ordered it from the supplier. We should receive it and be able to dispatch it when we say.

Some products may be in stock but are embargoed for release until a certain date. This is often the case with DVDs of recent films.

Many customers want the peace of mind that they have ordered something with the confidence that it will turn up in time for a wedding, Christmas or whatever, but they don't need it today. Being more flexible in terms of "in stock" will often allow you to capture more sales and maintain customer satisfaction.

### Endless Aisle - How Feasible Is It?

At a time when Internet sales are small, endless aisle means terrible inventory turns, high clearance markdowns and poor cash flow. In an omni-channel environment leveraging a common stock, the problem is greatly reduced, but only for lines also carried in store.

These problems go away or ease significantly when you get scale.

In the meantime, it is important to pay special attention to range or assortment planning.

### **Omni-Channel Thinking Gives New Insights**

Earlier, we mentioned that data in one channel can be used to inform activities in another channel. We can now look at a couple of examples.

One is Tesco Supermarkets. They found that if barbecue products trend upwards online on Tuesday and Wednesday, then it is likely they will trend up in stores on Friday and Saturday. The reason is that people who get online orders delivered must order earlier to be sure of having what they need, when they need it. Those who shop in store can wait a while to confirm that the weather will last before buying barbecue products.

Tesco now use the online insight to increase the size of the store replenishment orders based on the size of the uplift they have seen online. Thus, they are more likely to be in stock in the store when the store experiences extra demand.

Halfords sell items for your car or bicycle and their online sales are approaching 20% of company sales. They track their online customer orders. When a customer is told that an item is out of stock in a store they want to collect from, they track whether the customer cancels the order or whether he buys something else in that store or looks at other stores to find the right item. As this is a decent percentage of their sales, they can make good estimates of the level of substitution and which products get substituted.

Traditionally, retailers estimated lost sales by counting the days an item was out of stock and multiplying that number by the average rate of sale per day. However, this method overstates lost sales because sometimes the consumer buys a substitute instead of going without. The Halfords approach gives them a way to assess what share of the lost sales are really substitutions, so they can adjust lost sales for both products, the one which was out of stock and the one used as the substitute.

Demand equals sales plus lost sales. With a decent estimate of lost sales, past demand can be estimated more accurately and used to drive forecasting processes, so that future forecasts are based on demand rather than sales. This improves store replenishment, allocations and so on.

As another example, if a retailer can produce basket analysis for its online business but not for its stores, it can use the online basket analysis to help make wardrobing suggestions as part of an assisted selling program in stores.

Brick and mortar stores know what a customer bought but they know little or nothing about products the customer showed interest in and then didn't buy. Online you can gather this data quite easily.

Once you know what the customers showed interest in and then disregarded, you can ask the store associates why shoppers showed interest and then decided not to buy. Martec's experience is that store staff almost always know the answers because they often assist the shopper.

When you know the questions, you can call 2 or 3 stores, ask some experienced store staff, and then decide whether you can improve some aspect of the product to turn interest into sales.



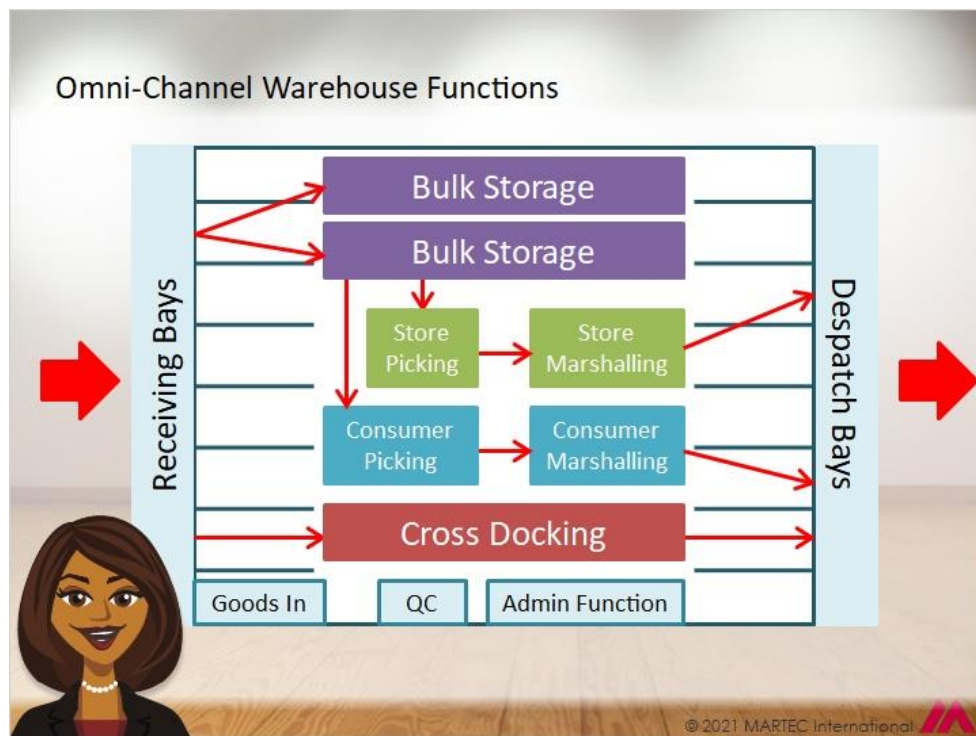
## A New Approach To Clearance? - Sell Through By Store



This chart shows the sell through of a product by store compared to the anticipated sell through for stores in this group. Store 30 is selling the product faster than plan and will sell out early. Store 1 is selling slower than plan, but a modest markdown may be enough to bring sales back up to plan. Store 7 is selling a long way below plan and will need a much bigger markdown or the stock could be transferred to store 30 to sell at full price. This latter option will incur inter-store transfer costs and may increase shrinkage.

A new option is to use inventory in store 7 to fulfil full price online orders for home delivery. When an online order is taken for home delivery, the order management system could check for any serious overstocks and, where they exist, instruct the store to post the item to fulfil the customer's order. This may well be a much cheaper way to clear some surplus inventory, reducing the amount to be marked down.

## Omni-Channel Warehouse Functions



To run an omni-channel business with the least amount of physical inventory, it is important to use a common stock pool for store and online and it should be in the same physical building. This being so, goods are received at the receiving dock irrespective of the channel they are planned for. Any stock that arrives pre-allocated can be cross docked immediately and shipped on to its destination stores. The rest is moved into bulk or reserve storage. There will usually be two completely different types of picking - bulk picks for stores and individual consumer picks for home delivery or click and collect. The common reserve stock is used to replenish each respective picking face on a first come first served basis. Shipments are marshalled and dispatched, either in bulk to stores or most often by parcel post to consumers' homes. This way inventory turn can be maximized, and lost sales reduced by squeezing the most out of a common stock pool.

Store picking and dispatch marshalling may be in a different area to consumer pick and pack, but that's fine.

One of the challenges of home delivery is what happens if the customer is not home when the delivery arrives. Some firms now market home delivery containers. These are secure boxes that can be opened with a 4-digit code number for a combination lock. Some can be remotely opened by mobile phone. The code number can be given to the delivery driver or sent by email or text when he arrives.

Once the delivery has been put in the container the delivery driver can lock it again. If the item is not refrigerated or frozen this will work.





## Summary

Let's summarize what we have covered in this course:

- In Western countries e-commerce represents at least 16% of all retail sales and its proportion of total retail sales is increasing. In leading companies, it is up to 50% or more.
- Omni-channel retailing makes shopping more convenient for customers and helps retailers acquire new customers and retain existing ones.
- E-commerce is having a significant effect on stores - more are closing, and many are changing their role. Stores share stock with the online channel, need more staff for servicing online orders that are picked up or returned in store and may act as a showroom for products that have been researched online.
- E-commerce departments vary significantly in the way they are organized, and their structures are changing as e-commerce grows.
- The KPIs retailers use to measure e-commerce performance include channel sales, hits and sales per page, shopping carts abandoned, customer average transaction value and customer frequency of purchase.
- E-commerce has changed the rules about what out of stock means and there are opportunities to sell products even if they are not yet in the business (in stores or DCs)
- The concept of an endless aisle is not as attractive as it first seems, and most e-commerce retailers do limit their assortment
- Insights from e-commerce can improve performance in stores and vice versa
- Omni-channel retailers usually have a common stock pool for online and stores channels.

