Omnichannel retail logistics – the physical and location implications for distribution networks

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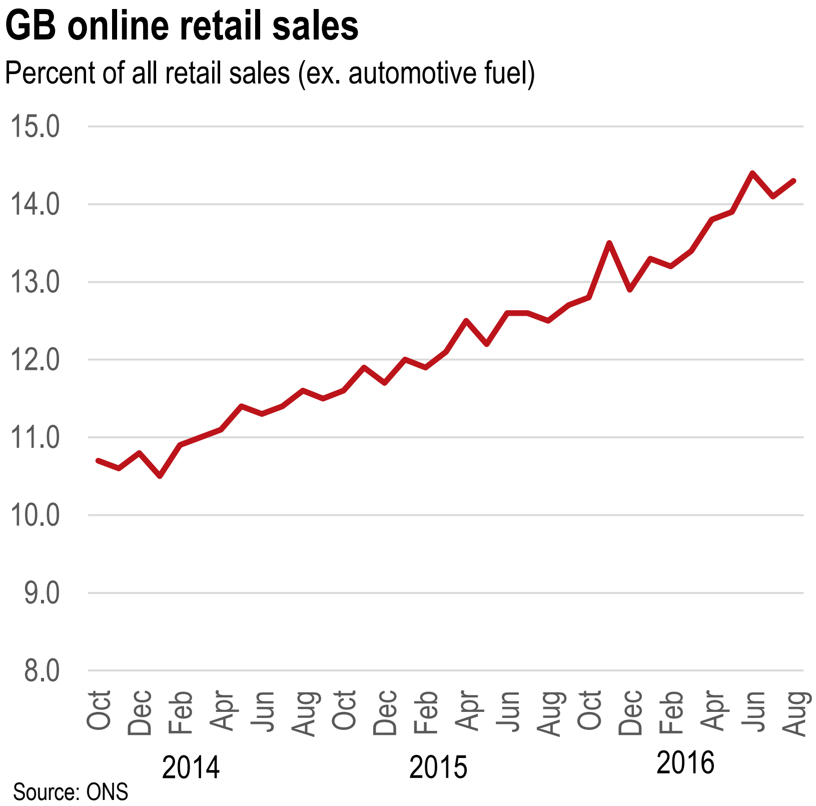
The growth of online retail – some context

- UK online sales have risen from 10.7% of all retail spending to 14.3% over past three years (ONS).

- IMRG estimates that the UK e-logistics sector generated over 1 billion parcels in 2015.

- Since January 2012 **dedicated** internet fulfilment facilities have accounted for 14% of all space taken up in Grade A distribution buildings of 100,000 sq ft and over (JLL).



Omnichannel logistics is different from store-based retail logistics

Attribute	Store-based retail logistics	Omni-channel logistics	General implication
Number of delivery points	Typically hundreds (i.e. from distribution centres to stores)	Millions - including homes, offices, stores, collection points, etc	Retailers typically partner with a parcel carrier.
Order lead time	Several days	Reducing – e.g. next day or same day	Need more facilities for same day.
Units per order	Large-scale replenishment of stores involves relatively high number of units	Small volume delivery to customers, often involving 1 to 5 items	E-fulfilment operations are based around item picking, more difficult to automate (also due to seasonality)
Seasonality / demand volatility	Relatively low / medium seasonality	Huge seasonality around peak spending periods (e.g. by a factor of 10)	High seasonality requires flexible warehouse capacity – retailers need capacity to ramp up operations during peaks.
Costs per unit	Low	High	Costs of e-fulfilment larger than store replenishment and may be 'uneconomic'.
Level of returns	Low	High (e.g. up to 50% for online fashion orders)	Efficient returns processing becomes critical to performance and profitability
Visibility of logistics issues to customers	Minor logistics issues are invisible to the customer	Minor logistics issues are immediately visible to the customer	Logistics even more critical to the retailer's brand, as customers are directly effected by logistics 'malfunctions'

Omnichannel retail is generating demand for new types of buildings – often with different physical and location attributes to ‘standard’ facilities

Mega e-fulfilment centres

Very large (500,000 sq ft to 1 million sq ft+)

Good height to accommodate mezzanine floors

Often cross-dock configuration – separation of inbound and outbound

Close to parcel hub to offer late cut-off times

Parcel Hub / Sortation Centre

High length to width ratio

Low site density

Cross-dock configuration with extensive loading for lorries

Main hubs are usually located in Midlands

Parcel delivery centre and urban logistics depot

High length to width ratio

Low site density

Cross-dock configuration with extensive loading for vans + dock level loading for hub deliveries

Located in main urban areas for ‘last mile’ delivery

Return Processing Centres

Generally standard buildings

Location often close to fulfilment centre(s)

Dot.com Warehouse for Online Food Fulfilment

Bespoke loading provision for vans

Extensive yard area for trailer & van parking + ample parking for workers

Location depends on centralised or decentralised model

Different types of buildings linked to e-commerce

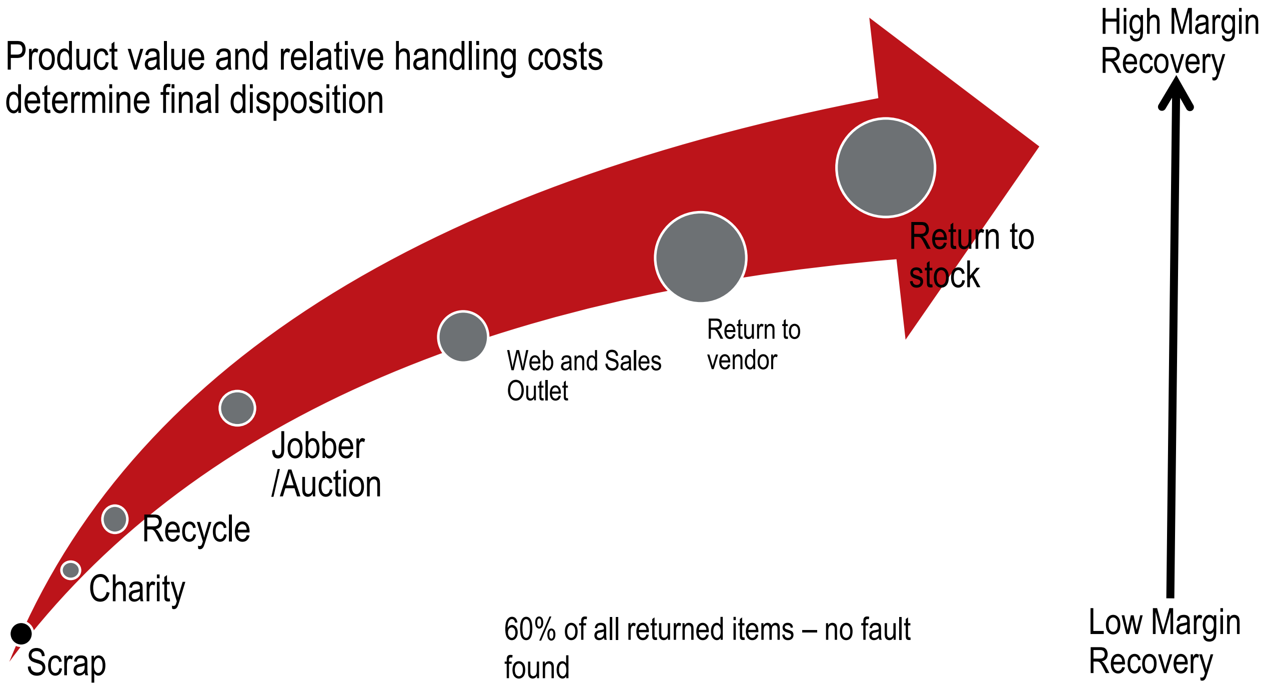

Amazon, Dunfermline, Graftongate


DPD, Enfield, SEGRO


DPD, Hinckley, Goodman


Tesco, Enfield, IDI Gazeley

‘Our customers are our biggest suppliers’ - the challenge of returns processing



Source: iForce

amazon.com

First online sale, 1995

First fulfilment centre, 1997 (USA)

Current global footprint – 300+ facilities, 122 million sq ft.*

UK

10 operational fulfilment centres in UK

+ 4 in immediate pipeline

Amazon Prime Now – selective areas, separate network of mini-DCs

Amazon Fresh – selective London postcodes

*Source: MWPVL

Copyright: Graftongate

Collaboration with Morrisons
In May 2016, Morrisons began to supply grocery items through AmazonFresh in London, Amazon Pantry nationwide and Amazon Prime Now.
+ lockers at Morrisons.

Amazon Prime Air – 2016 agreement with UK government to trial drones

The Amazon 'Prime Air' drone would be an optocopter with battery-powered rotors, capable of carrying a payload of 2.3 kgs (5lbs) up to 10 miles from base.

JOHN LEWIS

Leading UK retailer with 46 shops and gross sales of £4.6 billion (+4.4%)

Online sales:
33%
of total sales.

Click & collect = 53% of online sales, of which 70% collected from Waitrose

Online sales:
+17.3% 2015.

Store sales slipped -1.0%.

Click & collect +11%.

Magna Park campus, Milton Keynes

MP1: 650,000 sq ft.

MP2: 675,000 sq ft.

MP3: 644,118 sq ft. Under construction

Delivery options:
Click & collect, standard, next/named day, 'approved suppliers' + international to 39 countries

Return options:
to John Lewis + Waitrose shops, Royal Mail, Collect+, MyHermes

Returns processing

Solihull + new National Returns Centre operated by Clipper Logistics at Grange Park, Northampton

YOUR M&S

Group revenue: £10.4billion.

M&S.com sales: £791.5 million

M&S.com sales +23.4%.
60% delivered through 'Shop Your Way' - customers collect from store.

Tablet and mobile sales: +28% and +85% respectively.

Castle Donnington :
900,000 sq ft Automated Distribution Centre, operational 2013. Handles all M&S.com orders

New M&S.com website launched February 2014. + 9 country websites (local language & currency)

Delivery options: to home or work, click & collect, international

Return options: To M&S UK stores, by post, collection, (larger items, shopper pays), local stores if purchased on dedicated country web site

Clipper Logistics processes store-returned merchandise back into fulfilment centre from Swadlincote DC.

Online grocery growth will lead to more fulfilment centres to service high drop density areas

- Food accounts for c. 50% of all GB retail spending (IGD) but less than 5% of food sales are online (ONS).
- Online grocery sales forecast to grow 68% between 2016 and 2021 to reach £17.6 bn, 9% of total grocery spending (source IGD).
- Different logistics models:-
  - Omnichannel retailers predominantly pick from stores + limited dedicated dot.com warehouses (‘dark stores’) in certain urban areas with high drop densities
  - Ocado, pure play retailer, picks from customer fulfilment centres (CFCs) with outbases for transhipment.

Grocery retailers - who does what

<u>Tesco</u>

- Picks from stores. > 320 collection locations.
- 6 dot.com warehouses in/around London. 1 existing building, 5 built to suit buildings. More automated over time, but still lots of labour.

<u>Sainsbury's</u>

- Picks online grocery orders from stores. 101 click and collect locations in UK stores.
- Online fulfilment centre at Bromley-by-Bow (existing 185,000 sq ft building). 24/7 operation, 500 staff. Can process 25,000 orders per week (c. 10% of Sainsbury's national total). Combines with picking from 30 stores.

<u>Asda</u>

- Pick from stores + some dot.com facilities.
- Range of click and collect options – automated collection points, in-store, park and ride, lockers + petrol stations.

<u>Morrisons.com</u>

- Supported by service agreement with Ocado. Available to >50% of British households, seeking to expand nationwide.

<u>Ocado</u>

- Four customer fulfilment centres - Hatfield, Dordon, Andover + Erith.

Tesco, Enfield, IDI Gazeley

Conclusions

- Omnichannel logistics has driven requirements for buildings with different physical attributes to traditional DCs.
- It is also changing some location considerations.
- **Shorter delivery times introduce a new dynamic:**
  - In August 2016 ‘next day’ orders overtook economy delivery for UK domestic deliveries for first time (IMRG).
  - Same day (1-2 hour) distribution requires more local facilities.
- **Drone delivery** - if introduced - could encourage a proliferation of mini-DCs as the drones being tested only operate over c. 10 miles. But lots of other challenges.