A research report exploring the last mile conundrum.

Knight Frank

Future Gazing

Logistics – The Last Mile

FOREWORD

“Customer is King”. This age-old adage has never been more fitting than it is now.

The modern consumer is well informed, demanding and armed with real-time information. In short time, technological advancement has served to propel e-commerce and mobile shopping into mainstream retail. Consumers now have more control over the purchase process and are demanding of instant, anytime access to goods and exceptional customer experience. The bar of expectation is already high, but is crucially still rising.

This shift is having a marked influence on the role of real estate. Fulfilment has risen as an area of high competition, with customer convenience a defining measure of good service and therefore satisfaction. A myriad of fulfilment models have emerged meaning that distribution networks have undergone adaption and optimisation to meet the rapidly changing consumer landscape.

Last mile facilities have entered the equation and become the focal point in a complex chain. This has meant that industrial use directly competes with other sectors such as residential for land opportunities.

It is somewhat ironic that the physical location of the retailer has become less important to the consumer, but the location of the consumer has gained greater importance from a retailer and distributor perspective. Undeniably, the logistics and retail sector are now intrinsically linked.

Charles Binks
Partner, Department Head
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URBAN LOGISTICS. THE SHIFT TO UNCHARTED TERRITORY

10 KEY POINTS

The ongoing evolution of the online retail market will continue to drive the pursuit of 'last mile' logistics solutions.

Online sales accounted for 18% of all retail sales in 2018, a share that is projected to hit 28% by 2024.

Consumer expectation is heightening complexity to an expanding array of fulfilment models.

Urban logistics heralds a transition to a business to consumer (B2C) model.

A network of physical stores is emerging as a key competitive advantage in a wider multi-channel offensive.

The search for industrial development or investment opportunities needs to be more forensic and discriminating than the current 'gold rush'.

Not all industrial sites are created equal – some are more equal than others.

Successful urban logistics sites need to cross 'Five Great Divides' – Consumer Demand, Supply (Imbalance), Labour, Infrastructure, Technology.

Appropriate data and analytics at a local level is key to understanding site viability and 'last mile' potential.

In a consumer-driven market, the goal posts will continually shift – nothing stays the same for long.

The continuing rise of online retailing. Bane of physical retail, boon for industrial.

This has been the narrative for too long. At best, simplistic, at worst, fundamentally wrong. Online retailing hasn't supplanted the high street, but it has made retailing infinitely more complex. The rise of online has actually been a major opportunity for many store-based retailers, but capitalising on this opportunity has been a huge, often capital-intensive, challenge. Most store-based retailers have started to make the transition to become multi-channel operators, but many are still at the start of the journey.

Retail supply chain dynamics have changed significantly on the back of the e-commerce evolution. This is prompting a shift in the industrial warehousing market, not just in terms of values, but also in terms of fresh demand and new specification. One-size-fits-all 'big box' warehouses still serve a fundamental purpose, but are not strategically located to fully cater for online demand.

In simple terms, highest online demand tends to occur in major urban locations, particularly (but not exclusively) in Greater London. There are also significant demand hotspots in the more affluent locations in the South East. Areas where land values tend to be high and there is correspondingly limited supply of industrial warehouse floorspace. Hence the clamour to secure appropriate urban logistics space.

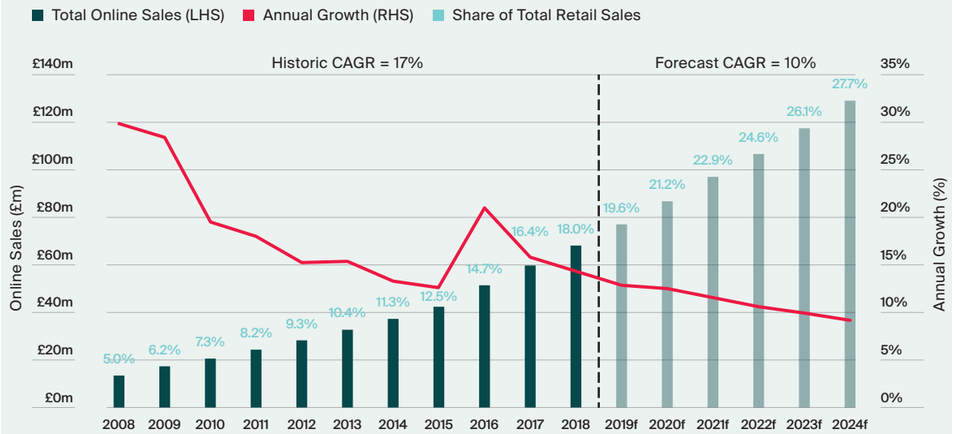
Online retail – how big is the market and how fast is it growing?

The size of the online retail market is fairly easy to quantify. Online sales amounted to £68.5bn in 2018, accounting for 18% of all retail sales. This represented year-on-year growth of +14.4%, slightly below the compound annual growth rate (CAGR) of the previous 10 years (+17.4%). Despite obvious market maturity, substantial growth is also forecast going forward. Mintel estimates that the market will be worth £130bn by 2024, around 28% of all retail spending, in spite of a slowing CAGR (+10.9%).

How big the market is and how fast it is growing are fundamentally the wrong questions to be asking. Retail is not binary, online and physical retail do not operate in splendid isolation. The dividing lines between channels continue to blur to the point of no longer existing. However accurate they may be, the actual market size numbers are fundamentally meaningless and will become increasingly more so going forward. And to focus on them merely distracts from the real issues and challenges of online.

The issue is less about quantifying the online market, and far more about qualifying what it actually means in reality.

UK Online Market Size 2008 – 2024f



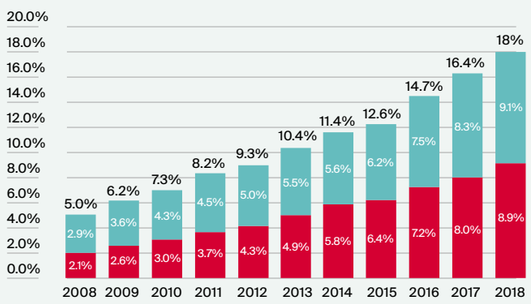
Source: Mintel, Knight Frank

The complexities of multi-channel

The split between online Pure Play (i.e. retailers that only operate online and have no stores, such as Amazon, ASOS, boohoo and AO World) and online multi-channel operators (i.e. traditional store based retailers that also have an online platform, such as Next, John Lewis, Argos and the major grocers) is virtually even, the former accounting for 9.1% of all retail spending last year, the latter 8.9%. As well as being the same size, both segments are growing at a broadly similar rate.

Online: Pure Play vs Multi-Channel 2008 – 2018

Online as % of Retail Sales



Source: Mintel, Knight Frank

Again, the dividing line is fairly artificial. Pure play and multi-channel operators inherently face the same challenge – getting the right product to the right location at the right time. But the playing field as to how they achieve this is anything but level.

There are a multitude of online models. The most commonly accepted is the one whereby a customer places an order online, the order is shipped from a central warehouse and this is then fulfilled at his/her home. The reality is that this is just one of many permutations and combinations. Using data from CACI, we would estimate that the 8.9% 'multi-channel' online sales are split as shown in the adjacent infographic.

The reality is that even these do not cover the full spectrum of ordering and fulfilment options. The fact is the online market is becoming increasing fluid in terms of lead times and delivery options.

4.1%

'Inspired by a Store' internet spend that has been inspired by a physical store's wider brand presence.

3.0%

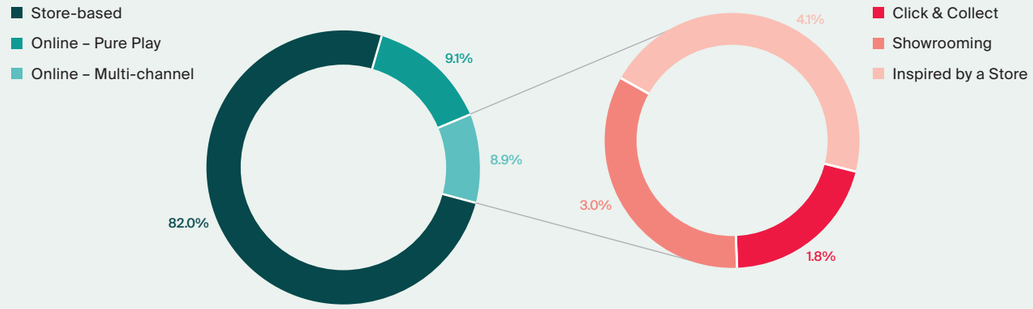
'Showrooming' internet spend made after customers have first visited the physical store to use it as a showroom in which to see, touch and feel the product they are interested in.

1.8%

'Click & Collect' online purchases made using a click & collect service that involves visiting the store to pick up items bought.

Stores vs Pure Play vs Multi-channel

Retail Sales – Stores vs Pure Play vs Multi-channel



Source: Mintel, CACI, Knight Frank

Consumer is king

Consumers are the driving force behind the evolution of online. For retailers, this is nothing new – consumers always set their agenda and only by being consumer-centric will they succeed. For the industrial sector, the reality is rather different and the sector is slowly transitioning to a B2C model.

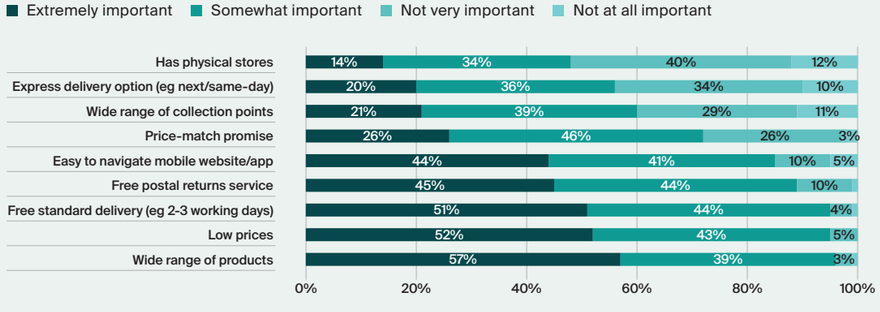
The single most significant factor of e-commerce is that it has dramatically changed consumer expectations. The rise of online has cultivated an 'anything, anytime, anywhere' on-demand consumer and the bar of expectation is higher than ever before. But at the same time, it has also destroyed the last vestiges of traditional customer loyalty and today's consumers are far more promiscuous than those from a pre-digital age.

As we have already stated, the rise of online presented a number of opportunities to store-based retailers. A key one was to broaden the number of items they stocked. Without the constraint of shelf and store space, most retailers significantly expanded their SKU count. The number of channels to reach customers also increased, as evidenced by our earlier analysis of the various e-commerce permutations and combinations that are available. The opportunity to sell more products to a much wider audience was an incentive for store-based retailers to embrace e-commerce with open arms.

However, there are a number of negative flipsides, not least increased fulfilment costs. E-commerce has prompted a sea-change in the interaction between retailer and consumer. In a pre-digital age, the relationship was largely on the retailers' terms – the shopper came to them and brought from them. Now the relationship has been turned on its head and it is the shopper that pulls the strings – the retailer has to deliver to the shopper. The cost of shipping products to a location of convenience for the customer – be that at home, at work or any store of his/her choosing – is much higher than if they came directly to the retailer. Although most retailers have tried to recoup some of these costs through delivery charges, there is still some degree of push-back from consumers. The impetus to shorten lead times is immense – and this is only serving to intensify pressure on already onerous costs.

Consumer Research – Factors important when shopping online

"How important is it that a retailer has the following features when shopping online?"



Base: 1,830 internet users aged 16+ who have shopped online in the last 12 months
Source: LightSpeed/Mintel, Knight Frank

The realities of an 'on-demand' consumer

Consumer research by Lightspeed (on behalf of Mintel) highlights many of these conundrums, not least the lofty expectations of the modern day consumer. Online consumers were polled as to "how important is it that a retailer has the following features when shopping online" across nine factors, rating each as 'extremely', 'somewhat', 'not very' and 'not at all' important. Five of the factors emerged as "extremely important", the other four were "somewhat important".

Expressed another way, all nine factors were deemed important rather than unimportant. In simple terms, consumers expect online retailers to carry a wide range of products at low, competitor-matched prices through an easy to navigate mobile website / app and be able to offer free standard delivery with express (next / same day) delivery options to a wide range of collection points, including physical stores. And also offer a free postal returns service. The world on a stick, essentially.

To single out two of these demands, having "a wide range of collection points" is "extremely" important for 21% of respondents and "somewhat" important for a further 39% (so collectively 60%). This is borne out in the behavioural elements of the Lightspeed research. Online shoppers were asked "which delivery options they had used to receive goods" and were not restricted to one response.

Although home delivery (87%) was the largest response by some margin, click & collect in-store (32%) reserve & collect in-store (20%), delivery to another location such as work (12%) and click & collect to a 3rd party location (12%) are all significant. The main point is that the cumulative total is substantially more than 100% (163%), underlining the fact that consumers are not wedded to a single online model – they regularly use more than one, depending on the need of an individual purchase. Home delivery is gradually losing 'share' of online fulfilment.

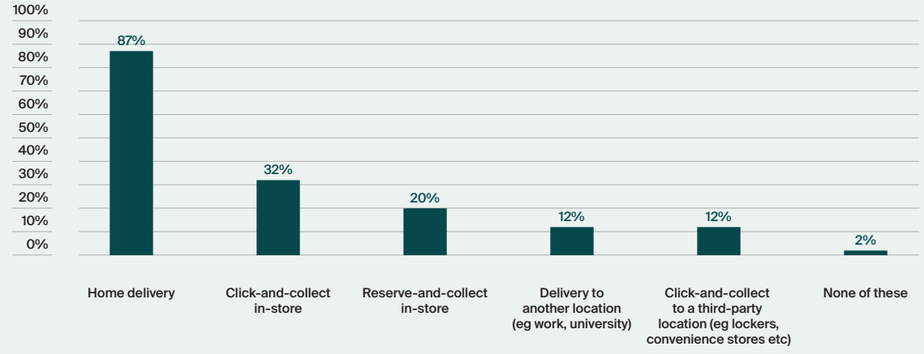
The issue of product returns is increasingly thorny. 45% of respondents regard a free postal returns service as "extremely" important, with a further 44% considering it "somewhat" important. Vital for consumers, very costly and supply chain-intensive for retailers. GlobalData is projecting that online returns will by grow by 27.3% over the next five years to total £5.6bn. Little wonder that ASOS is looking to review its returns policy if it notices "an unusual pattern of returns activity that doesn't sit right: e.g. we suspect someone is actually wearing their purchases and then returning them or ordering and returning loads".

But ultimately, the customer is always right.

Consumer – Fulfilment Options

"Which of these delivery options have you used to receive goods in the last 12 months? Select all that apply."

Delivery methods used over the last 12 months



Base: 1,830 internet users aged 16+ who have shopped online in the last 12 months
Source: LightSpeed/Mintel, Knight Frank

Pure play vs multi-channel

Pure play online retailers have long been regarded as having a substantial competitive advantage over their store-based peers. This advantage is both notional and cost-based. Online pure play retailers are not saddled with huge property costs, a massive rent roll exacerbated by the vagaries of service charges and business rates. More than that, they are operationally unconstrained by the baggage of a legacy store portfolio.

This logic only rings true up to a point. Pure play retailers may not have onerous property costs, but this advantage is partially eroded by substantially higher marketing costs. Without the benefit of a visible high street presence and guaranteed levels of passing trade, online-only operators have to shout that bit louder to make themselves heard. As the market evolves, it is also becoming increasingly clear that a large store portfolio is an important weapon in a wider multi-channel offensive.

As the online market slowly transitions away from home delivery, having an extensive network of potential pick up points increasingly aligns a retailer's fulfilment capabilities with consumer demands. It also plays to their ever-heightening expectations on product returns.

Next is one of the very few retailers that is able to provide any transparency on this, stating that over 80% of Next Directory returns come back through a physical store. By unquantifiable extension, many online purchases from multi-channel retailers (not just Next) are made with the comfort that products can be returned to a local store. If that physical presence is not there, the sale may transfer to another operator that is able to provide that safety net – or it will not be made at all.

As we have often stated, the future of retail is not about stores. Nor is it about online. It is about both and how they seamlessly interact. Stores remain a key cog in a multi-channel offensive – provided the right supply chain infrastructure is there to support them.

FUTURE GAZING

TOP 15 ONLINE RETAILERS IN UK – MULTI-CHANNEL MATRIX

						MULTI-CHANNEL CAPABILITY			
RANK	COMPANY	TYPE	2018/19 ONLINE SALES (£M)	SHARE OF ONLINE SALES 2019	FOOD / NON FOOD BUSINESS	HOME DELIVERY	CLICK & COLLECT	3RD PARTY FULFILMENT	COURIERS USED?
1	AMAZON	PURE PLAYER & MARKETPLACE	13,743	22.9%	NON-FOOD (AMAZON.CO.UK)	FREE SAME-DAY DELIVERY FOR AMAZON PRIME MEMBERS	VERY LIMITED – ONLY COMPANY-OWNED UK PHYSICAL PRESENCE IS 7 WHOLEFOODS STORES	AMAZON LOCKERS + LOCAL COLLECT LOCATIONS	AMAZON, ARAMEX, ARROW XL, ASM, DHL, DPD, HERMES, ROYAL MAIL, UPS, YODEL
					FOOD (AMAZON FRESH)	MINIMUM ORDER OF £40, £3.99 CHARGE FOR ORDERS BETWEEN £40-£60, ORDERS OVER £60 FREE. FREE SAME-DAY OR EARLY NEXT DAY DELIVERY TO AMAZON FRESH AND PRIME CUSTOMERS OVER £40	NOT PROMOTED	NOT PROMOTED	
2	EBAY	MARKETPLACE	8,132	13.5%	NON-FOOD	DELIVERY TIMES/COSTS VARY BY VENDOR	NO COMPANY-OWNED OUTLETS	CA. 3.5K EBAY COLLECTION POINTS AT SELECT ARGOS / SAINSBURY'S / COLLECTPLUS SITES	EBAY COURIER
3	TESCO	MULTI-CHANNEL	3,591	6.0%	NON-FOOD	TESCO DIRECT ABSORBED INTO TESCO.COM, SAME DELIVERY PARAMETERS	AVAILABLE TO ALL STORES IN TESCO NETWORK (CA. 3,500 SITES)	TESCO STORES ONLY	OWN DELIVERY SERVICE
					FOOD	SAME DAY DELIVERY OFFER, ORDER BY 1PM FOR DELIVERY AFTER 7PM	SAME DAY CLICK & COLLECT AT 300+ STORES (£25 MINIMUM ORDER)	TESCO STORES ONLY	STORE-PICKING AND OWN DELIVERY SERVICE
4	SAINSBURY'S / ARGOS	MULTI-CHANNEL	3,246	5.4%	NON-FOOD (ARGOS)	SAME DAY DELIVERY, ORDER BY 1PM FOR DELIVERY AFTER 7PM COSTING £3.95	CLICK & COLLECT FROM CA. 850 ARGOS STORES/ARGOS INSIDE SAINSBURY OR SAINSBURY COLLECTION POINTS	SAINSBURY'S + ARGOS STORES ONLY	ARGOS OWN COURIER
					FOOD (SAINSBURY'S)	DELIVERS TO 98% OF UK HOUSEHOLDS, SAME DAY DELIVERY POSSIBLE FOR SOME AREAS	CLICK & COLLECT AVAILABLE IN SELECTED STORES. SERVICE IF FREE FOR SPENDING OVER £40	SAINSBURY'S STORES ONLY	STORE-PICKING AND OWN DELIVERY SERVICE
5	JOHN LEWIS / WAITROSE	MULTI-CHANNEL	2,262	3.8%	NON-FOOD (JOHN LEWIS.COM)	NEXT DAY DELIVERY COSTS £6.95 FOR SMALL/MEDIUM ITEMS AND £19.95 FOR LARGE ITEMS. STANDARD DELIVERY IS £6.95 OR FREE FOR ORDERS OVER £50. FREE UK STANDARD DELIVERY TAKES 3 WORKING DAYS	CLICK & COLLECT IS FREE FOR ORDERS £30 AND OVER, OR £2 IF YOU PAY LESS. CLLCK & COLLECT STORES AVAILABLE AT ALL 50 JOHN LEWIS, 353 WAITROSE AND 50 LITTLE WAITROSE STORES	NEXT DAY 3RD PARTY PICK UP AT CA. 7K COLLECT+ OUTLETS FOR £3.50	INCLUDES ROYAL MAIL, HERMES, DHL, DPD
					FOOD (WAITROSE.COM)	WAITROSE RAPID DELIVERY – UP TO 25 ITEMS (FROM 2K SKUS) DELIVERED WITHIN 2 HOURS. MINIMUM SPEND OF £60 ON STANDARD ONLINE GROCERY	FREE CLICK & COLLECT ON ORDERS OVER £40 AT ALL WAITROSE AND LITTLE WAITROSE STORES	WAITROSE OUTLETS ONLY	STORE-PICKING AND OWN DELIVERY SERVICE
6	SHOP DIRECT GROUP	PURE PLAYER	2,023	3.4%	NON-FOOD	STANDARD DELIVERY £3.99, NOMINATED DAY DELIVERY £4.99. EXPRESS DELIVERY AVAILABLE AT HIGHER COST	NO COMPANY-OWNED OUTLETS	FREE CLICK & COLLECT AT CA. 7,000 COLLECT+ LOCATIONS PLUS CA. 10,500 POST OFFICES (WITHIN 1 DAY FOR VERY, 2 DAYS FOR LITTLEWOODS)	DHL, PARCELCONNECT
7	NEXT	MULTI-CHANNEL	1,919	3.2%	NON-FOOD	NEXT DAY DELIVERY FOR ORDERS BY MIDNIGHT (£3.99), PRECISE NEXT DAY TO HOME FOR ORDERS BY 8PM (£5.99). NEXTUNLIMITED MEMBERSHIP £20 PER YEAR	SHOP MY LOCAL STORE OPTION FREE, ORDERS READY WITHIN 1 HOUR. FREE NEXT DAY CLICK & COLLECT AT ALL 500+ NEXT STORES (ORDERS PLACED BEFORE MIDNIGHT)	NEXT DAY (FOR ORDERS PLACED BEFORE MIDNIGHT) AT PARCELSHOPS FOR A CHARGE OF £2.50	HERMES, BFPO
8	ASDA	MULTI-CHANNEL	1,745	2.9%	NON-FOOD	NEXT DAY DELIVERY COSTS FROM £4.50, STANDARD DELIVERY FROM £2.95 (WITHIN 5 DAYS)	NON-FOOD CLICK & COLLECT OFFERED FREE AT ALMOST ALL 635 ASDA STORES. SELECTED STORES ALSO HAVE LOCKERS	OTHER RETAILERS USE ASDA FOR CLICK & COLLECT EG SPORTS DIRECT, I SAW IT FIRST, MISSGUIDED ASDA PETROL STATION	OWN DELIVERY SERVICE
					FOOD	MINIMUM SPEND £40 + A VARIETY OF DELIVERY PASS OPTIONS. TRIALLING 30 MIN DELIVERY SLOTS WITH JUST EAT	GROCERY CLICK & COLLECT OFFERED AT CA. 500 ASDA STORES. SELECTED STORES ALSO HAVE LOCKERS	ASDA STORES ONLY	STORE-PICKING AND OWN DELIVERY SERVICE
9	OCADO	PURE PLAYER	1,599	2.7%	FOOD	NEXT DAY DELIVERY, MINIMUM ORDER OF £40, ORDERS UNDER £75, MINIMUM CHARGE OF £2.99 AND MAXIMUM CHARGE OF £6.99, STANDARD ORDERS OVER £75 MAY BE FREE. SMART PASS MEMBERSHIP - FREE DELIVERY (CHARGES APPLY DURING CHRISTMAS WEEK)	NO COMPANY-OWNED OUTLETS	OCADO PRODUCTS MAY BECOME AVAILABLE THROUGH M&S STORES AS PART OF TIE UP	OWN DELIVERY SERVICE
10	DIXONS CARPHONE	MULTI-CHANNEL	1,100	1.8%	NON-FOOD	SMALL ITEMS - STANDARD DELIVERY FREE, NEXT DAY DELIVERY SLOT 8AM-5PM £4, 8AM-12NOON £10, 5PM-10PM £10, WEEKEND TIME SLOT 12NOON-5PM £10	FREE SAME DAY / NEXT DAY CLICK & COLLECT AT 800+ CURRYS PC WORLD STORES. CARPHONE WAREHOUSE FREE CLICK & COLLECT AT 1,000+ STORES	CURRYS PC WORLD AND CARPHONE WAREHOUSE STORES ONLY	CURRYS PC WORLD – DPD, HERMES CARPHONE WAREHOUSE – DPD
11	N BROWN	PURE PLAYER	914	1.5%	NON-FOOD	JD WILLIAMS/JACAMO/SIMPLY BE - UNLIMITED FREE DELIVERY COSTS £9.95 FOR 12 MONTHS, STANDARD £3.50, NEXT DAY £6.50, NOMINATED £6.50	NO COMPANY-OWNED OUTLETS	FREE CLICK & COLLECT ON ORDERS >£40 AT CA. 3K MYHERMES PARCELSHOP	HERMES, DPD
12	AO.COM	PURE PLAYER	873	1.5%	NON-FOOD	NEXT DAY DELIVERY £10, DELIVERY WITHIN 2 DAYS FROM £5, WEEKEND DELIVERY FROM £5	NO COMPANY-OWNED OUTLETS	CA. 7K COLLECT+ – LOCATIONS (SMALLER APPLIANCES ONLY)	OWN COURIER
13	ASOS	PURE PLAYER	861	1.4%	NON-FOOD	PREMIER DELIVERY PACKAGE (£14.95) GIVES UNLIMITED NEXT-DAY DELIVERY FOR 12 MONTHS. NEXT DAY DELIVERY £5.95, STANDARD DELIVERY £3.00, FREE OVER £25	NO COMPANY-OWNED OUTLETS	COLLECT+, ASDA TO YOU, DPD, PICK-UP, HERMES, PARCELSHOP, UPS, ACCESS POINT	HERMES, DPD, GNEWT (ELECTRIC VEHICLE)
14	M&S	MULTI-CHANNEL	770	1.3%	NON-FOOD	FREE ON ORDERS OVER £30, OTHERWISE £3.50. USUALLY 2-3 WORKING DAYS, NEXT DAY CHARGED AT £4.99	FREE NEXT DAY CLICK & COLLECT AT >500 M&S STORES	CA. 7K COLLECT+ LOCATIONS (£2.50 CHARGE)	DHL
					FOOD	ALLIANCE WITH OCADO WILL BECOME OPERATIONAL FROM SEPTEMBER 2020	CURRENTLY RESTRICTED TO 'FOOD TO ORDER' (WITH FREE COLLECTION) AT SELECTED LARGER STORES	M&S STORES ONLY	GOPHR
15	QVC	TV SHOPPING	505	0.8%	NON-FOOD	STANDARD DELIVERY 7-10 DAYS, EXPRESS DELIVERY 2 WORKING DAYS IF ORDERED BEFORE NOON	NO COMPANY-OWNED OUTLETS	CA. 3K MYHERMES PARCELSHOPS	HERMES

✓ yes ☞ maybe ✗ no

Source: Mintel, Knight Frank

Seasonality

Another key factor in the online market is that it is highly seasonal – demand is not constant, with discernible peaks and troughs over the course of the year. Online demand peaks massively in November. In November 2018, around 21.6% of all retail sales were online, compared to a year-round average of 18%. December is the second busiest online month (19.8% of retail sales in 2018), with October also tending to be slightly above year-round averages.

The lulls in online demand are slightly more difficult to identify. There is inevitably some cooling in the post-Christmas period, with January and February seeing considerable drop off in online trade. Likewise, the Summer months of July and August generally see lower online penetration.

The demand spike in November is undoubtedly driven by Black Friday. Whether Black Friday is a positive event in the retail calendar remains a very moot point, but it has definitely shifted shopping patterns over the festive period. In its native US, Black Friday is the day after Thanksgiving and therefore always a public holiday. As such, it remains largely a store-based event. In the UK, it is a normal working day, so it invariably lends itself more to online retailing. Although most retailers jump on the Black Friday bandwagon to some degree, the two largest product categories by far are electricals and toys.

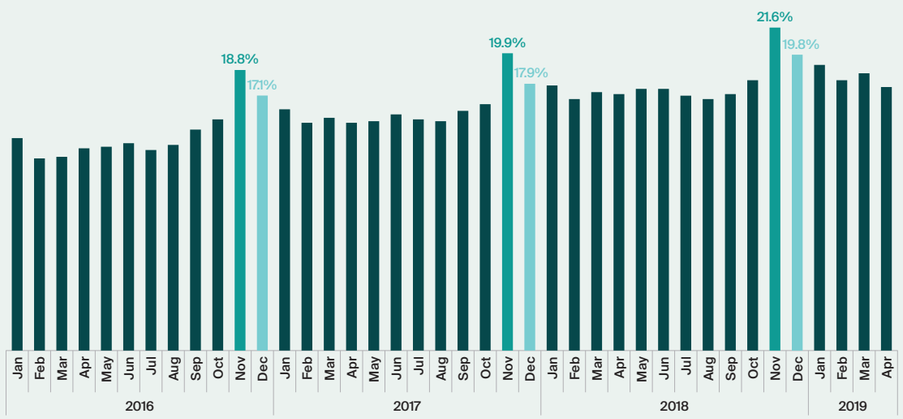
This throws other variables into the wider multi-channel / urban logistics equation – temporary warehousing to cope with seasonal demand spikes. Pop up shops are gaining in prominence, what about 'pop up warehousing' or 'warehouse space sharing' amongst retailers or third party logistics firms? With those retailers for whom Black Friday / Christmas doesn't represent their peak demand period (e.g. B&Q, Homebase, Carpetright etc) subletting warehouse (or indeed retail floorspace) to those for whom it most definitely is (e.g. Dixons Carphone, Argos, John Lewis etc?). And the latter returning the favour come Easter and the May Bank Holidays?

Of course, as yet this is largely unexplored territory, but is another example of need driving demand, with fluidity and flexibility the underlying concern.

Seasonal peaks add other variables into the wider multi-channel / urban logistics equation – temporary warehousing to cope with demand spikes.

Online Seasonality – Monthly Trends

Online as % of retail sales by month



Source: ONS, Mintel, Knight Frank

Industrial Implications – The 'Five Great Divides'

Disruption to traditional retail models will undoubtedly continue to drive demand in industrial markets. It is as much the complexity of multi-channel retailing and the rapidly changing expectations of the consumer that are fuelling market change in industrial, as it is simply market growth of online retailing.

The historic 'big box' industrial model is still largely geared towards a pre-digital store-based age – infrequent, bulk-based to a pre-defined network of stores. 'Big boxes' are not designed to fulfil single-item orders to a location dictated by the consumer within as short a timeframe as possible. Few are fit-for-purpose as order fulfilment centres, but they are far from redundant or obsolescent – on the contrary, they are still the lynchpin of retailers' supply chains. But increasingly they need the support of more strategically-located 'last mile' spokes. As such, greater importance resides with the parcel and delivery companies.

Of course, the industrial market has already moved considerably in response to these changing market dynamics, both in terms of demand and pricing. Prime stock is valued at 4.00%, although even keener pricing than this has been achieved in certain locations e.g. Havelock Terrace in Battersea with a NIY of 3.20%.

The 'gold rush' is still very much playing out, driven in part by a paucity of suitable industrial stock in 'last mile' locations. The attention has inevitably turned to other property uses that can be repurposed as industrial space. Ironically, this has brought retail into the spotlight, especially retail warehousing c.f. a number of Homebase stores within Greater London on the back of its CVA. The logic in this is sound – retail is over-supplied and in many cases struggling, urban logistics is under-supplied and booming. But the reality is more complex and a number of stars must align (not least rental values) for the conversion to become financially viable. It will work in some locations, but is by no means a panacea.

Not all urban logistics sites are created equal – some are more equal than others. But this vital fact seems to be lost in the general chase for space / stock. Is there enough discrimination between sites or are too many being put into the same bucket in terms of perceived 'last mile' potential and, by extension, price? Probably the latter.

We would identify 'Five Great Divides' of successful urban logistics. These are:

1. Consumer Demand
2. Supply (Imbalance)
3. Labour
4. Infrastructure
5. Technology

All of these are significant factors in appraising the validity and viability of a potential urban logistics site. Ideally, a 'last mile' logistics site will cross all five of these Great Divides and effectively tick all the boxes. In reality, very few will and compromises will have to be made. There are many great sites out there, but few are absolutely perfect. The data and methodologies we apply in rating sites against these 'Five Great Divides' is detailed later on in this report.

Industrial is only at the early stages of adopting a B2C mindset, but it is evolving fast. Retailers, for better or worse, have always been at the mercy of consumer whims. The nature of consumer markets is that nothing stands still for long and the goalposts are constantly shifting. Against this backdrop of change, increasing complexity, fulfilment fluidity and general flexibility, the demand for appropriate urban logistics space can only accelerate, rather than recede.

The continuing rise of online retailing. A huge challenge for physical retail (and Pure play for that matter), a huge opportunity for industrial as an enabler and solutions provider.

FROM BIG UNITS TO SMALL SPACES

10 KEY POINTS

There is no one-size-fits-all solution for urban logistics facilities. As retailers and logistics operators seek to perfect the 'last mile' delivery element of their supply chains, urban logistics are becoming increasingly diverse with more niche markets and applications.

Customer expectations are rising for online shopping deliveries. Urban logistics facilities such as cross-dock warehouses and parcel carrier hubs must locate close to their customer base in order to offer fast turnaround times and small delivery windows.

Activities that used to take place in retail stores are now taking place online and in the warehouse. As multi-channel retailers expand the online element of their business, their warehouse and logistics requirements are growing and evolving.

Smaller retailers may outsource their distribution. This enables them to be more agile and respond to changing customer needs.

Online retailing and rising customer demands for fast turnaround times are driving demand for large regional or national distribution centres. These very large centres tend to use automation to allow for more intense use of space and to speed up throughput.

Warehouse owners and operators are becoming increasingly aware of the green agenda. Sustainable building design and location can also help improve the working environment thus increasing staff retention rates as the draw on the local labour pool intensifies.

As companies and consumers demand environmentally-friendly and sustainable products, delivery methods are adapting. Bicycle and electric vehicle couriers are popular in urban areas and this is driving demand for small urban consolidation and dispatch centres.

Government policy is aiming to put the brakes on industrial to residential use changes and planners are viewing mixed-use schemes favourably.

High land values mean that to locate in urban areas, logistics facilities must reduce their footprint and use space more efficiently. More multi-storey logistics facilities are expected.

Some lower quality retail premises have many of the features required by urban logistics sites and retail to warehouse and logistics conversions or redevelopments are taking place.

Demand for urban logistics

Urban logistics is becoming an increasingly important part of supply chains for retailers and logistics operators, particularly as the Business to Consumer (B2C) market segment grows. As retailers and logistics operators seek to perfect the 'last mile' delivery element of their supply chains, urban logistics properties are becoming increasingly diverse with more niche applications and markets. The location, specification and size requirements for urban logistics are driven by a complex web of inter-related factors including; proximity to consumers, transportation connections and needs, storage needs / scale of operation as well as cost sensitivities.

'Last mile' logistics can account for 50% of a shipment's total cost (McKinsey), offering significant scope and incentive for logistics operators and retailers to perfect this part of the supply chain.

Rising customer expectations and turnaround times

Online retailers are increasingly offering expedited shipping. Several fast track services now offer same day delivery. Within Central London, some retailers are offering delivery within two hours. Urban customers in particular want instant gratification and expect to be offered very fast turnaround times for online purchases.

Multi-channel retailers have some advantage here as they already have a physical presence. Their shops and stock rooms mean they are able to hold some stock in these stores that can be quickly dispatched to customers. In order to compete, pure-play retailers must also hold some limited high demand stock within urban areas. Small urban fulfilment centres can allow them to store goods for rapid dispatch and customer delivery. These centres can also be used in the return flow of goods from consumers. Online retail return rates are high compared with brick and mortar retail; around 25% of online orders are returned compared with 8% in store.

Online retail return rates are high compared with brick and mortar retail; around 25% of online orders are returned compared with 8% in store.

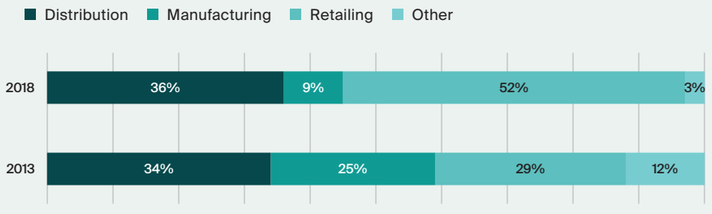
Particularly for parcel deliveries, customers are demanding trackable deliveries with short lead times and narrow delivery windows. Providers are increasingly offering services that "fit in" with customer schedules, for example DHL's On Demand Delivery service allows customers to schedule a delivery at a time to suit. These services require small depots within urban centres for short-term storage and vehicle dispatch.

E-commerce is driving big box demand

As multi-channel retailers expand the online element of their business, their warehouse and logistics requirements are growing and evolving. In 2018, retailers accounted for more than half of all big box take-up. Activities that used to take place in retail stores are now taking place online and in the warehouse.

E-commerce and the rise in B2C logistics is not only driving demand for small scale urban logistics, it is also driving demand for very large distribution centreswhich form a central point of hub-and-spoke distribution models. It is widely reported that e-commerce can require three times more space than traditional retailing, with additional space required for inventory. This is exemplified by Amazon, which utilises some of the largest warehouses in the UK.

Take-up by sector
Units over 100,000 sq. ft.



Source: Knight Frank, PMA

52%

Retailing accounts for 52% of take-up of industrial units over 100,000 sq. ft.

E-commerce can require three times more space than traditional retailing, with additional space required for inventory, automation and labour.

Large retailers with high volumes of stock will need to locate these centralised fulfilment centres some distance from consumers due to the large site requirements and the high cost of land in urban areas. These facilities enable retailers or logistics operators to centralise inventory but they also require the support of strategically located cross-dock hubs within urban areas in order to facilitate the 'last mile' element of B2C order fulfilment.

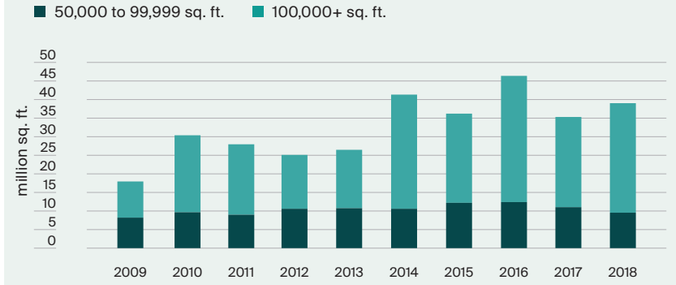
Only the very largest retailers can afford to build their own, customised delivery network and logistics infrastructure. Many retailers will outsource the whole order fulfilment process to a 3PL (Third Party Logistics) provider. Some large retailers may choose to build or own their own fulfilment centres but typically outsource delivery due to the high costs involved. They will work with a distribution company in order to reach customers via their logistics network. Distribution companies account for around 36% of take-up and this increased demand for space is in part, driven through more retailer partnerships and a rise in volume of retail sales goods being transported through their network. Distribution companies are actively taking space within urban markets in order to expand and improve these 'last mile' delivery networks.

Increased need for flexibility and on-demand services

Demand for flexible, on-demand services is driving and shaping the urban logistics market, just as we are seeing in other property sectors such as offices. Many smaller retailers are not able to own or occupy their own dedicated storage and distribution centres, they will typically utilise shared or on-demand logistics space offered through a 3PL provider. Larger retailers will also utilise shared or on-demand space through a 3PL, particularly when entering new markets, as they grow their market presence or await the construction of a new facility. Flexible, on-demand warehousing is becoming increasingly popular with retailers, they can benefit from economies of scale, increase their agility and respond quickly to changes in market demand, without the need for huge investment or lengthy time period involved with building their own facilities.

The 'last-mile' element of the supply chain is the most complex and costly for retailers and logistics companies. B2C deliveries mean many small orders to multiple locations. The lack of regular routes and delivery schedules combined with enhanced service offers such as one-hour delivery slots has led to a need for an agile workforce that can respond to fluctuating levels of demand. This demand has spurred development of crowdsourcing apps and growth of a logistics gig economy. Companies such as Amazon Flex and Hermes (courier service) utilise self-employed couriers This allows them to quickly respond to changes in demand or seasonal order spikes.

Industrial and logistics take-up by size (sq. ft)



Source: Knight Frank

36%

Distribution companies account for 36% of take-up of industrial units over 100,000 sq. ft.

Automation – rising requirements and fit-out costs

Growth and competition in the e-commerce and grocery delivery markets are stimulating an increasing need for specialist distribution centres. These large centralised fulfilment centres have high volumes of throughput and tend to make use of specialised automation solutions in order to maximise their efficiency. Automation can treble throughput, dramatically improving productivity.

Particularly in the grocery sector, investment in automation and technological advances are playing a significant role in shaping the market and early adopters have been quick to grow their market share. The margins on home grocery delivery are small or non-existent and the need to offer these services without generating a loss is a key motivator for grocery retailers to adopt greater levels of automation.

Higher levels of automation allow for more intense use of space with increased use of vertical space and multiple mezzanine floors within a building. Specialised robots can be designed to move at high speeds, along tracks, around multi-mezzanine floors or extend up to access heights that would be impossible or difficult and time consuming for humans. Use of robots is not yet widespread but we expect it to increase, and this will have implications for the fit-out and design of buildings.

Customised automation solutions can be expensive to install and require logistics operators to commit to invest more in their facilities. Occupiers are seeking more control over the development process as a way to maximise their returns and off-set some of the fit-out costs.

Automation means increased power needs. High power consumption rates are driving up operational costs. Installing solar panels or other renewable energy technologies may be a way of mitigating costs, but these also require significant upfront investment. Access to reliable, adequate power is an important consideration that can make some buildings or locations unsuitable for highly automated logistics facilities.

Urban logistics tend to have relatively low rates of automation compared with national or regional distribution hubs. Most will have very limited automation and operate as cross dock facilities that receive goods from large vehicles and facilitate the onward distribution to customers via smaller vehicles.

Sustainability and warehouse design

Warehouse owners and operators are becoming more aware of the benefits of incorporating sustainable design features such as photovoltaic systems, skylights, recycling facilities, bike racks and electric car charging points. They are motivated to maintain environmentally-friendly facilities, not just for economic or quantitative environmental reasons, but to improve the quality of the working environment for their staff.

Resourcing and staff wellbeing are becoming vital considerations for the logistics sector. High quality workplace design, enhanced amenities, increasing natural light, investing in social activities and promoting better physical and mental health are all ways employers are striving to better the working environment and improve their ability to attract and retain staff.

CASE STUDY

New Logic III, known as "The Tube" in Tilburg, The Netherlands is one of the most sustainable logistics buildings in the world, achieving an Outstanding BREEAM rating with a score of 99.4%. The building was developed by Dokvast and is the Dutch HQ for Rhenus Contract Logistics. The building features a futuristic design with an elliptical roof and a large amount of glass. Using sustainable materials, automatically dimming LED lighting, extra glass and roof insulation, heat pumps and solar panels; the building consumes less energy than it produces.

Aside from design, the location of the warehouse is an important aspect for sustainability. Operators want their distribution centres to be located close to transport links and their consumer base in order to minimise costs and emissions, not only for their delivery fleet but also for their staff commuting to work. According to the ONS, car ownership rates in UK are falling, particularly within London and other UK cities, and being able to commute on public transport is often a key consideration for workers.

Improvements in electric and autonomous vehicles are expected to transform cargo fleets. Tesla have announced the launch of their Semi electric lorry in the US in 2020. It is claimed to have a range of up to 600 miles and reach speeds of 60 miles per hour. As the speed and range of electric vehicles and autonomous driving capabilities improve, the locations and sites suitable for distribution and fulfilment centres may change as cargo can travel further without stopping (for driver rest or battery recharging) and at faster speeds.

Demand for small urban logistics space

Consumer demand for environmentally friendly, ethical and sustainable products and delivery methods is also helping spur growth of sustainable 'last-mile' delivery methods. Emissions charges, traffic congestion and parking restrictions are also driving up the time and cost involved for deliveries within city centre locations. Logistics operators are thus exploring alternative transportation modes and this is driving demand for new types of logistics properties.

An e-bike and trike logistics firm Zedify have recently opened a micro-consolidation centre or e-bike depot in London's Hoxton to house their electric cargo bike fleet. Located just outside of London's Ultra Low Emission Zone (ULEZ), parcels arrive at the consolidation centre from across the UK, where they are consolidated and sorted into delivery rounds for dispatch.

Multi-modal transport networks and urban logistics

Though multi-modal services are difficult to implement for the 'last mile', in France and Japan they are being successfully implemented for high volume freight movements as part of the "mile before last" section of the chain. This is before goods are brought into an urban area for onward distribution.

These multi-modal transport networks require specialised logistics facilities; their locations driven by the transport infrastructure they rely upon. There is great scope for multi-modal solutions in the UK, however the significant infrastructure requirements mean that such initiatives would likely need to be government driven.

In Paris, Sogaris have built a new dedicated urban logistics hub at Chapelle International, near the Gare du Nord station. This urban logistics project utilises rail freight to bring goods into the centre of Paris from a distribution hub in northern France, reducing the number of heavy goods vehicles in the city. The new centre acts as a distribution hub with goods delivered to their destinations via electric or hybrid vehicles.

What will demand for space look like in the future?

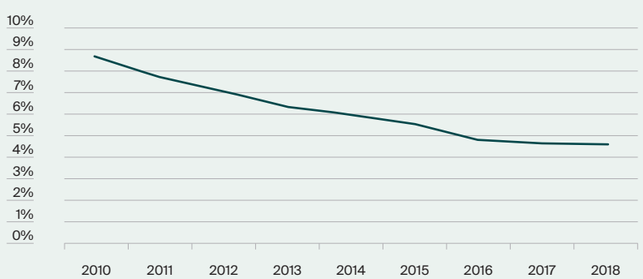
There has been much speculation around future delivery methods and drone deliveries are at the centre of these discussions. Amazon have announced their drone delivery platform Prime Air could be available to customers in some US markets within months, offering delivery of light weight products to customers within 30 minutes. However, safety and regulatory issues will need to be addressed before commercial drone deliveries become a reality for UK cities.

Assuming these issues can be solved, such services will have implications for urban logistics networks and the built environment. Infrastructure such as drone dispatch centres, landing ports and recharging pads will need to be installed within central areas of the city. In London, company Skyports are buying the rights to rooftops for the use of "veriports" (drone landing pads), and some new residential developments are embracing the opportunity to install drone-infrastructure on their rooftops.

Stock over time

Industrial floor space in the UK has been in decline, older redundant stock is being removed from the market as land is redeveloped. The reduction in floor space has been felt most acutely in urban centres where pressure to increase the supply of residential stock is strongest. Across the UK, the volume of available industrial floor space has fallen an average of 5% per annum over the past ten years, though the rate was higher in London and the South East. Older industrial stock is often unsuitable for modern logistics and the removal of this stock is helping drive down vacancy rates. The vacancy rate for warehouse and distribution was 4.6% at the end of 2018, down from 8.7% in 2010.

UK warehouse and distribution vacancy rate



Source: Knight Frank

Warehouse and distribution vacancy rate

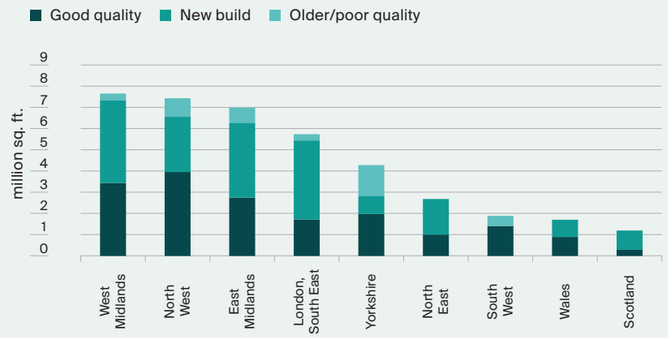
While out-of-date stock continues to be redeveloped, strong demand for urban logistics as well as large regional distribution centres is helping to boost development of new stock. At the end of H1 2019 there was a total of c.7million sq. ft. of space (over 100,000 sq. ft. units) under construction. Construction activity has increased recently, though most development is built-to-suit rather than speculative.

Demand for mega-distribution centres is driving some developers to build speculatively and the amount of speculative space under construction is rising. Though the availability of new stock has risen in some markets, vacancy rates remain low particularly in the most sought after markets.

Flight to quality

In markets where supply is most limited, space that is available tends to be in poor quality, older units. Across the UK, 20% of available space is lower grade stock, though this figure is much higher in Scotland, the North East and Wales. Good quality second-hand stock is also in short supply, accounting for less than half of available stock in most regions. High relocation costs and limited opportunities for new development encourage tenant lease renewals and has kept quality second-hand stock from re-entering the market. However, some recent business failures and lease breaks or expiries have led to an increase in the availability of good quality second-hand space.

Big box availability by market



Source: Knight Frank, PMA

Growth in build costs vs industrial land values
(Q1 2011 = 100)

Source: Knight Frank, UK Department for Business, Energy & Industrial Strategy

High relocation costs and limited opportunities for new development encourage tenant lease renewals and has kept second-hand stock from re-entering the market.

Urban land values and multi-storey warehousing

For logistics facilities to locate within or close to urban centres, they must compete with other land-uses and utilise land more intensively. In the South East, high land values are encouraging developers to use land more efficiently. As improvements in technology enable operators to make better use of vertical space and land values continue to rise (relative to build costs), warehouses facilities will expand upwards (both through increased eave height and multi-storey developments).

There has been a reduction in the land zoned for industrial land use across the UK, particularly around major urban centres, with developers preferring to convert aging industrial properties to higher value uses such as residential. A lack of large sites coupled with high land values has meant logistics providers must reduce building footprints whilst maximising the capacity of the site, driving the impetus for upward expansion.

Multi-storey logistics are only currently emerging in Inner London, where land values are particularly high and developers must compete with residential and other uses. Strong population growth forecasts for UK cities will drive further intensification of land use and we expect the numbers of multi-storey warehouses to increase.

Mixed Use urban logistics

Large swathes of industrial land have been lost to residential development in London over the past ten years. The Greater London Authority reported that London lost 16% of its industrial stock between 2001 to 2015. There has been an accompanying loss of industrial activities and employment. The impact of this has been recognised and the London Plan includes policies for preventing a loss of employment and industrial land within London, making mixed-use developments and intensification of industrial areas a priority. The plan sets out a framework to encourage more mixed use developments.

Some industrial and logistics activities are not typically compatible with residential areas or developments; lots of HGV traffic or logistics operations with anti-social hours would not be welcomed by residents. However, Travis Perkins builders' merchants partnered with Unite student housing on a scheme at Kings Cross, demonstrating that industrial and logistics schemes can work as part of a mixed use development. Modern multi-modal logistics hubs that can also offer excellent public transport links may also offer potential for desirable mixed-used developments.

Repurposing struggling retail parks or retail outlets

Rising demand for urban logistics has driven down yields. Industrial yields in London are currently around 3.5-4%, while retail warehouse yields are above 5%. At the previous market trough, both asset classes had yields of around 7.7%. The subsequent yield compression for London industrial has been largely structural rather than cyclical as demonstrated by the increase spread between the two asset classes.

Some retail parks have been struggling to attract or retain tenants; the vacancy rate for prime retail parks currently stands at 9% (Source: PMA). Even within relatively successful retail parks, landlords are struggling to maintain sufficient rental and occupancy levels. These retail parks are typically located within close proximity to consumer populations and transportation networks and thus make good candidates for some excess floor space to be repurposed for logistics and distribution.

Retail landlords could seek to fill vacant space within a park through converting or redeveloping a vacant unit as a consolidation and dispatch depot or collections centre. This type of facility could then be let to a 3PL (third party logistics provider) to service the dispatch, delivery and returns of customer orders for retailers located at the park. A landlord may accept lower or subsidised rents for this type of tenant / facility in order to offer preferential distribution rates to retail tenants within the park. This change of use could help fill vacant space and boost the offering and appeal of the park for retail tenants and thus help to support rents and occupancy rates. This type of combined retail and logistics park offering could become a part of the urban logistics landscape in the future.

Since the start of 2014, retail warehouse yields have offered an increasing premium over industrial. This highlights the pricing incentive to convert some retail warehouse stock (or indeed other asset classes) to industrial / urban logistics sites.

7 million sq. ft.

of new space under construction
(units over 100,000 sq. ft.)

Retail and light industrial to logistics conversions are already taking place in London, where poorly located and outdated factory outlets, car dealerships, retail warehouses or light industrial buildings are being re-fitted and repurposed into urban logistics facilities; as parcel service centres and grocery home delivery dispatch centres. DHL have recently converted a unit previously used as a factory outlet shop in Wandsworth, South West London. A former Toys "R" Us store in Croydon has recently been purchased for redevelopment as a distribution hub. Planning was granted in March 2019 to change the use of the 43,000 sq. ft. retail warehouse from A1 (retail) to B8 (storage and distribution).

There are currently 164 developments across the UK with consent granted to convert retail premises to storage and distribution uses (B8), 136 (83%) of these are within urban areas. There are a further 18 planning consents pending, all of which are within urban areas. These figures demonstrate that while the fortunes of many secondary retail assets have declined, demand for warehouse and logistics facilities is filling this space and we expect this trend to continue.

Weight of capital targeting the sector

Encouraged by strong returns, investor allocations for industrial and logistics properties has been rising at the expense of other sectors. UK industrial property has outperformed other property sectors as well as equities and commodities, over the past one, three and five-year horizons. The variety of long-term macro trends supporting future growth of the sector, combined with assets that generate stable income from long leases, continue to make a persuasive case for investment.

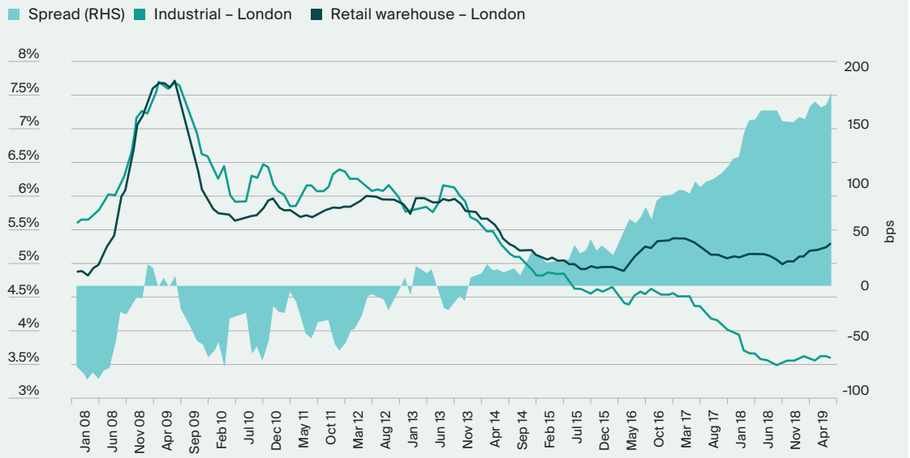
UK Industrial property returns have outperformed other asset classes

The weight of capital targeting the sector will help further development of new facilities and speculative construction and as a result the quality of industrial and logistics stock will continue to improve. Strong demand for high quality, well-located facilities combined with decommissioning of older stock will continue to drive rental growth.

Part of the sector's strong historic performance has been due to structural shifts and yields for the sector have adjusted accordingly. However, there is still scope to drive rental growth and thus logistics remains an attractive investment compared to other sectors. Rents for some urban logistics sites are starting to become competitive with office rents in those areas. These sites have strong rental growth potential, with rising urban land values and competition from multiple asset classes. We expect this to perpetuate demand for urban logistics and the trends we are currently seeing in the market.

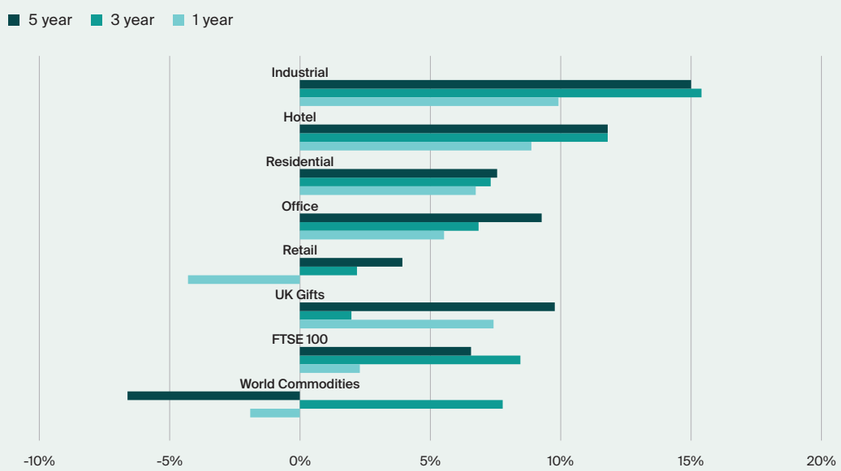
There are currently 164 developments across the UK with consent granted to convert retail premises to storage and distribution uses (B8), 136 (83%) of these are within urban areas.

Retail warehouse vs industrial yields in London



Source: Knight Frank, MSCI

Annualized total returns



Source: Knight Frank, MSCI, Macrobond

E-COMMERCE WAREHOUSE SOLUTIONS – WHERE'S HOT, WHERE'S NOT?

10 KEY POINTS

Industrial stock build before the digital era is not ideally fitted or located to cater for new e-commerce-driven demand.

The top 30 locations with the most online shoppers (one of the major variables in our Industrial Warehousing Model) are all located in London. This is escalating demand for space in what is already an undersupplied market.

Floorspace in popular urban locations competes for land with other sectors, including home builders. Lack of stock will continue to have a material impact on location choices and pricing.

Demand for Greater London and South East locations is further fuelled by faster internet connections, effective power supply and a skilled labour force.

The level of unemployment plays an important role. High scores achieved by Leicester and Outer London centres such as Croydon, Brent and Walthamstow are hugely driven by relatively high unemployment and a large and specialised labour force.

Locations in the West and East Midlands score highly due to proximity to large distribution hotspots. However, re-locating or opening of a new distribution centre closer to London and the South East may alter current dynamics.

Besides London, other strong locations are the areas around Northampton, Leicester, Ashfield, Staffordshire and Coventry, driven by a combination of a large and specialised working population, proximity to distribution centres and existing supply.

There is significant variation within regions and cities. Stakeholders should not just focus on general regional statistics, but rather look at specific local circumstances.

What makes a favourable location will always depend on the user/stakeholder. Levels of technological sophistication may demand less labour but more power/faster internet. Our Model can be specified to factor in these different needs.

Changing elements in terms of available floorspace, infrastructure, automation and delivery methods can hugely impact the outcomes of our Model. Different scenarios can be included to predict how this may change optimum location choices.

Warehouse location needs in the Online Era

Industrial warehouse demand today is largely driven by online shopping. Therefore, the best locations for last mile logistics such as parcel carrier hubs would logically be near to where online shoppers live and work. However, there was a world before the internet and a lot of the stock built before the digital era is neither ideally located nor fitted-out to cater for this new demand. Historically, location decisions for distribution and logistics facilities were driven mainly by supply side factors, land values and B2B (business to business) needs. Facilities were located in the centre of the country, near old industrial towns (to fill labour needs), and within close proximity to the motorway network (for transport links).

At the same time, broader technological developments are having huge implications on logistics operations and labour requirements. Workers increasingly need to have specific skills to operate machines and run complex logistics systems, while ongoing automation further disrupts the labour needs.

Transport still plays a major role as it allows quicker access for both workers and consumers, but infrastructure needs are becoming much broader, with power and fast internet becoming increasingly important.

All these factors are likely going to shape the industrial warehouse landscape in the future, as much as building the motorways did in the past. Being ahead of the curve and understanding where to buy or build for digital-driven industrial growth will be hugely beneficial for any stakeholder in the sector, be they developer, occupier or investor.

Past, Present, Future

The oldest industrial buildings on record that are still in use today were built in the late 18th / early 19th century, at the start of the industrial revolution. The industrial sites built in that era all fall under what we identify as the first era of industrial buildings, a period that extends all the way up to the 1970s. This pre-motorway era saw a focus of industrial development around London and other major cities with a (heavy) industrial sector and ready access to workers, such as Birmingham, Manchester and Glasgow. With Manchester and Birmingham in particular being at the forefront of the industrial revolution, both have been hotspots for industrial developments since the start.

The second era started after 1970, although the first motorway, the Preston Bypass in Lancashire, opened in 1958 and the first full-length motorway, the M1, opened in 1959. It was only in 1968 that the link was made between The North and The South of the country and the motorway started to change the pattern of the industrial property landscape. Industrial building developments were in full force and buildings of this era still account for around half of the stock currently in use. As manufacturing and exports started declining towards the end of this era, development slowly moved away from industrial shipping ports and focused more on warehouse space in the 'Golden Triangle' and near major cities. The effects of these trends took full force over the next 15 years.

This post-motorway era between 1999 and 2014 experienced the first impact of online shopping. However, due to the global financial crisis, it didn't fully take off until 2014. The trend of focusing on the Midlands and biggest cities intensified. This ongoing trend goes hand in hand with a move to more B2C business models as the 'Golden Triangle' serves as a distribution point from which every part of the country can be reached within four hours. However, due to increasing costs, some occupiers were forced to look further north for their distribution and fulfilment centres. For the same reason, development in London slowed down considerably as there was a shortage of space and there was competition with local authorities looking for sites to build homes. Transport hubs, such as Heathrow, continued to attract development and investment.

After 2014, when the impact of the financial crisis receded and online retail sales surpassed 10% of total retail sales, the sector really started to take off. With this growing demand from online retailers and rising need for B2C delivery, location choices are changing, with a stronger emphasis on parcel carrier hubs at one end of the spectrum and large fulfilment centres at the other.

Coupled with demand for greener and automation friendly spaces, we expect development of new stock in new locations going forward, as the market evolution continues.

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Being ahead of the curve and understanding where to buy or build for digital-driven industrial growth will be hugely beneficial for any stakeholder in the sector, be they developer, occupier or investor.

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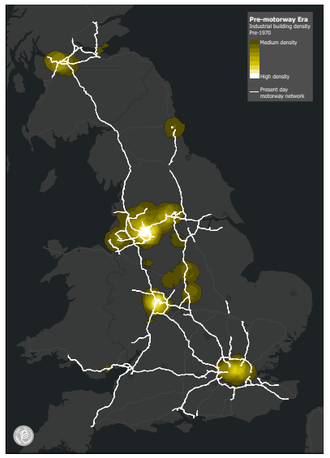
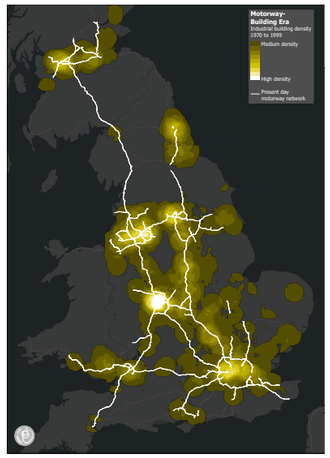
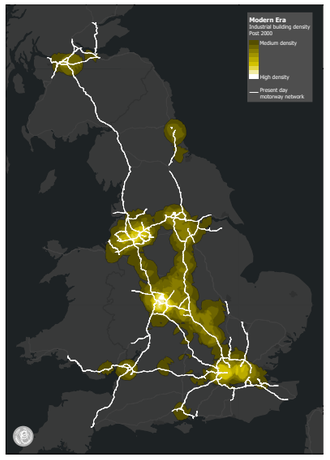


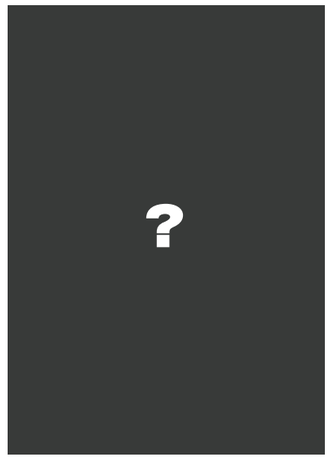
Pre-motorway (before 1970)



Motorway (1970-1999)



Post-Motorway



Online Era

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With this growing demand, location choices are changing, with a stronger emphasis on parcel carrier hubs at one end of the spectrum and large fulfilment centres at the other.

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Knight Frank's Industrial Warehouse Model

In an effort to analyse changing market dynamics and propose the best locations for new warehouses suitable for the future, we have developed a spatial Model.

In building our Model, we have used a set of criteria and a number of individual variables and datafeeds. As ever in the built environment, much inevitably comes back to infrastructure and accessibility. In location choices, the biggest questions have always been about how fast you can link to your suppliers, reach your customers and how many workers you can pick from.

It is no surprise that infrastructure and demographics play a major role in answering these questions. On the other hand, as in any supply and demand scenario, the most favourable locations are likely to come with the highest price tag and supply is also likely to be limited. For the purposes of our Model, this general scenario is adapted to factor in specific requirements fuelled by online shopping trends, general technological changes, current stock and price levels.

Model Inputs:

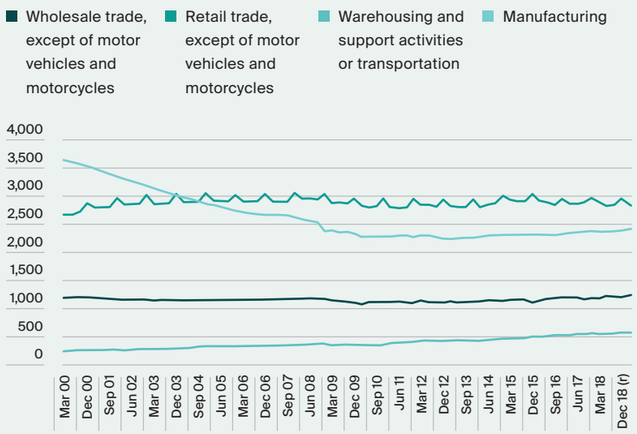
A. Consumer Demand

One of the major trends that is changing the industrial business model is ongoing growth in online shopping and, as a knock-on effect, the transition to a B2C model. Where previously industrial sites were located near to suppliers, or strategically located in the middle of the country or by major transport hubs, the parcel carriers carrying out the last-mile want to be closer to an ever-more demanding consumer, which is drastically changing the requirements for floorspace. In our Model we have included the percentage of high propensity online shoppers living in any given location, as well as neighbouring locations.

B. Labour Supply

The loss of labour in the retail sector is widely discussed in the media, with many headlines focussing on major redundancies. However, total retail spend is still growing and since part of the total spend is transferring to the online side of the retailers, labour needs may shift rather than disappear completely. The chart below shows these changing trends. Wholesale trade, manufacturing and warehousing transportation activities are back to or above pre-2008 levels. In contrast, retail jobs are experiencing a slowdown as a result of fall-out/CVAs since 2016.

Job growth by sector



Source: ONS

C. Changing labour markets

Besides general needs for a large labour market, specific skill requirements are changing. Due to the increasingly exacting demands of consumers, retailers and logistics companies are using higher levels of automation within their facilities to improve their operational efficiencies. New technologies play a major role in achieving efficiency gains, but these new technologies require, a different, more specialised, skilled worker.

Additionally, although low unemployment rates are generally seen as a good thing on a macro level, to have a healthy labour market, some level of unemployment is beneficial for companies in need of workers on a more micro level. Logistics occupiers tend to favour locations with a higher unemployment rate to have a workforce to tap into. To cover all these bases, in the Model we include total working population, unemployment rates and the number of special skilled workers.

D. Accessibility

Most online and multi-chanel retailers outsource delivery and the parcel carrier services they use can benefit from being located in close proximity to these large fulfilment centres. Additionally, due to the growing importance of automation and general digital transformation, speed of internet is becoming increasingly important. Both access to distribution centres and access to ultrafast internet are accounted for in our Model.

E. Supply

The Model further factors in levels of stock. Floorspace in popular locations competes for land with other property types including residential. Limited stock will negatively influence the attractiveness of the location in our Model. We acknowledge that limited stock can be both a positive as well as a negative criteria, depending on the stakeholder, but for the sake of our Model, we have looked at stock as a positive element. As this exercise is not aimed at one specific stakeholder, but is instead developed to look at the best location from a holistic standpoint, this seems to be the most appropriate way to incorporate supply into the Model. For bespoke work, we can customise the Model and change the direction and meaning of the input, to fit the requirements of the stakeholder.

F. Affordability

Industrial rents have picked up since the financial crisis in 2008, exceeding pre-2008 levels since 2015. With growing demand and limited available stock, further upwards pressure on rental values will continue for the foreseeable future. However, rental levels vary across regions and individual locations and this is reflected in the Model to incorporate the search not only for available sites, but also for space that is affordable.

Average prime UK industrial rents 2000-2018

£ per sq. ft.

Source: Knight Frank, PMA

FUTURE GAZING

TOP 30 HOTSPOTS

RANK (OUT OF 2737)	AREA	POSTAL DISTRICT	POSTAL NAME	REGION	KEY ONLINE SHOPPERS (%)	WORKING POPULATION	UNEMPLOYMENT RATE (%)	NO. OF MACHINE OPERATORS	INDICTIVE RENT (£/SQ FT)	TOTAL INDUSTRIAL FLOORSPACE (SQ FT)	ULTRAFAST BROAD-BAND (>100 MBPS)	DISTANCE TO DISTRIBUTION CENTRE (KM)
1	BRENT	NW10	WILLESDEN, ACTON, KENSAL GREEN, PARK ROYAL, BRENT PARK	LONDON	55.10	71,560	12.3	2,897	12	5,138,322	74.82	36
2	CROYDON	CR0	CROYDON, ADDISCOMBE, SHIRLEY, ADDINGTON	LONDON	36.10	117,141	8.7	4,245	11.5	1,932,491	74.82	71
3	NORTHAMPTON	NN4	BRACKMILLS, EAST HUNSBURY, WEST HUNSBURY	EAST MIDLANDS	49.70	35,571	4.4	1,622	6.5	11,600,875	54.36	21
4	HACKNEY	N1	BARNSBURY, CANONBURY, KINGS CROSS, ISLINGTON, HOXTON	LONDON	57.80	84,211	8.3	1,264	12	163,074	74.82	38
5	COVENTRY	CV6	HOLBROOKS, COUNDON, RADFORD, HAWKESBURY	WEST MIDLANDS	3.10	66,899	10.0	4,103	6.75	6,005,204	68.12	14
6	LAMBETH	SW16	STREATHAM, NORBURY, THORNTON HEATH, STREATHAM PARK	LONDON	65.10	69,237 W	7.8	1,750	15.5	-	74.82	77
7	MERTON	SW19	WIMBLEDON, COLLIERS WOOD, SOUTHFIELDS	LONDON	79.60	60,162	3.7	1,080	12	439,586	74.82	79
8	WANDSWORTH	SW11	BATTERSEA, CLAPHAM JUNCTION	LONDON	75.20	62,107	4.6	900	15.5	-	74.82	66
9	ENFIELD	EN3	ENFIELD HIGHWAY, ENFIELD ISLAND VILLAGE, ENFIELD LOCK	LONDON	10.70	42,169	12.2	1,868	12	2,622,542	74.82	3
10	HARINGEY	N17	TOTTENHAM, SOUTH TOTTENHAM	LONDON	23.00	51,945	17.1	1,680	12	906,654	74.82	17
11	ASHFIELD	NG17	SUTTON-IN-ASHFIELD, KIRKBY-IN-ASHFIELD	EAST MIDLANDS	6.30	55,553	7.8	4,040	6	3,885,042	54.36	4
12	SWINDON	SN3	SWINDON, STRATTON	SOUTH WEST	10.70	38,559	6.6	2,561	7	9,098,507	49.94	101
13	LEICESTER	LE4	BIRSTALL, BELGRAVE, BEAUMONT LEYS, THURMASTON	EAST MIDLANDS	3.60	74,425	10.5	6,267	6	3,870,816	54.36	29
14	BARNET	NW2	CRICKLEWOOD, WILLESDEN, NEASDEN, DOLLIS HILL	LONDON	69.00	54,848	8.7	1,707	12	398,833	74.82	37
15	WALTHAM FOREST	E17	WALTHAMSTOW, UPPER WALTHAMSTOWWW	LONDON	43.40	80,101	10.1	2,996	15.5	465,105	74.82	21
16	WANDSWORTH	SW17	TOOTING, MITCHAM	LONDON	79.30	51,446	5.2	1,104	15.5	88,428	74.82	77
17	LAMBETH	SW2	BRIXTON, BRIXTON HILL, CLAPHAM PARK, BALHAM	LONDON	67.60	46,830	8.0	862	15.5	106,758	74.82	34
18	EALING	W3	ACTON, EAST ACTON, PARK ROYAL, WEST ACTON	LONDON	70.30	41,784	7.6	1,118	15.5	693,834	74.82	55
19	HAMMERSMITH AND FULHAM	SW6	FULHAM, PARSON'S GREEN	LONDON	74.90	50,758	5.1	734	15.5	72,328	74.82	66
20	BARNET	NW9	THE HYDE, COLINDALE, KINGSBURY, QUEENSBURY	LONDON	40.30	50,376	8.1	1,957	12	198,651	74.82	34
21	WANDSWORTH	SW18	WANDSWORTH, SOUTHFIELDS, EARLSFIELD	LONDON	89.10	48,729	3.6	797	15.5	70,937	74.82	74
22	WANDSWORTH	SW15	PUTNEY, ROEHAMPTON UNIVERSITY	LONDON	67.50	48,490	4.8	828	15.5	-	74.82	73
23	ENFIELD	N9	LOWER EDMONTON, EDMONTON	LONDON	15.30	38,876	14.3	1,581	12	684,801	74.82	12
24	BRENT	NW6	KILBURN, BRONDESBURY, WEST HAMPSTEAD, QUEEN'S PARK	LONDON	76.10	54,228	6.5	951	12	-	74.82	41
25	HACKNEY	N16	STOKE NEWINGTON, DALSTON	LONDON	63.60	54,747	10.3	1,004	12	68,157	74.82	27
26	GREENWICH	SE18	PLUMSTEAD, WOOLWICH	LONDON	26.50	63,482	12.1	2,108	11.5	421,932	74.82	51
27	LEICESTER	LE17	LEIRE, LUTTERWORTH, SWINFORD, BITTESWELL, ULLESTHORPE	EAST MIDLANDS	40.70	15,757	2.2	634	6	9,484,015	54.36	11
28	LEICESTER	LE67	COALVILLE, IBSTOCK, MARKFIELD	EAST MIDLANDS	15.00	44,983	4.9	3,209	6	6,439,868	54.36	22
29	HAMMERSMITH AND FULHAM	W12	SHEPHERDS BUSH, WHITE CITY	LONDON	57.50	37,043	8.9	879	15.5	489,997	74.82	58
30	STAFFORDSHIRE	ST4	STOKE, FENTON	WEST MIDLANDS	9.00	43,028	7.3	2,364	7.75	7,519,825	68.12	14

Sources: ONS, PMA, CACI, Knight Frank

Key Online Shoppers are the ACORN Groups identified by CACI as high propensity online shoppers

Hotspots

- Least attractive
- Fairly attractive
- Attractive
- Very attractive
- Top locations

TOP 5 LOCATIONS FOR ONLINE SHOPPERS – LONDON

POSTAL AREA	LOCALE	% ONLINE SHOPPERS
W	MARYLEBONE, KENSINGTON, NOTTING HILL, SOHO, WESTMINSTER	71.4%
SW	FULHAM, VICTORIA, KNIGHTSBRIDGE, CHELSEA, CLAPHAM, BRIXTON	71.3%
EC	CITY, SHOREDITCH, ISLINGTON	63.4%
NW	BRENT CROSS, KILBURN, CAMDEN, EUSTON	62.0%
WC	COVENT GARDEN, CHARING CROSS, ST PANCRAS	59.1%

Source: Knight Frank

TOP 5 LOCATIONS FOR ONLINE SHOPPERS – OUTSIDE LONDON

POSTAL AREA	LOCALE	% ONLINE SHOPPERS
KT	KINGSTON, SURBITON, ESHER, COBHAM, EPSOM, WEYBRIDGE, EFFINGHAM, LEATHERHEAD	49.1%
GU	GUILDFORD, WOKING, FARNHAM, GODALMING, CAMBERLEY, PETERSFIELD, ALTON	42.9%
TW	TWICKENHAM, RICHMOND, HOUNSLOW, SPELTHORNE, STANWELL, SUNBURY-ON-THAMES	42.8%
RG	READING, NEWBURY, BRACKNELL, BASINGSTOKE, HENLEY-ON-THAMES, HUNGERFORD,	42.0%
AL	ST ALBANS, WELWYN GARDEN CITY, HATFIELD, HARPENDEN	40.5%

Source: Knight Frank

TOP 10 LOCATIONS FOR ACCESSIBILITY

POSTAL DISTRICT	LOCALE	DISTANCE TO LARGE DISTRIBUTION CENTRE (KM)
EN3	ENFIELD ISLAND VILLAGE, ENFIELD LOCK, PONDERS END, ENFIELD HIGHWAY (ENFIELD)	3
WS11	CANNOCK (CANNOCK CHASE)	3
OL3	DELPH, DIGGLE, DOBCROSS, GREENFIELD, UPPERMILL, DENSHAW (OLDHAM)	3
CM24	STANSTED MOUNTFITCHET (UTTLESFORD)	3
B7	NECHELLS (BIRMINGHAM)	3
ST5	NEWCASTLE-UNDER-LYME (STAFFORDSHIRE)	4
NG17	SUTTON-IN-ASHFIELD, KIRBY-IN-ASHFIELD, STANTON HILL, SKEGBY (ASHFIELD)	4
B6	ASTON (BIRMINGHAM)	4
MK10	BRINKLOW, KINGSTON, MIDDLETON, BOURGHTON, OAKGROVE (MILTON KEYNES)	4
DE55	SWANWICK, SOUTH NORMANTON ALFRETON, RIDDINGS, SOMERCOTES, NEWTON (AMBER VALLEY)	5

Source: Knight Frank

TOP 10 LOCATIONS FOR LABOUR/WORKFORCE

POSTAL DISTRICT	LOCALE	WORKING POP	UNEMPLOYMENT RATE (%)	MACHINE OPERATORS
CR0	CROYDON, SHIRLEY, ADDINGTON, WADDON, (CROYDON)	117,141	8.7%	4,245
LE2	OADBY, KHIGHTON, AYLESTONE, HIGHFIELDS, (LEICESTER)	91,400	9.8%	4,145
N1	KINGS CROSS, ISLINGTON, HOXTON, BARNSBURY (HACKNEY)	84,211	8.3%	1,264
E17	WALTHAMSTOW, UPPER WALTHAMSTOW (WALTHAM FOREST)	80,101	10.1%	2,996
E14	ISLE OF DOGS, CANARY WHARF, BLACKWALL, CUBITT TOWN (TOWER HAMLETS)	79,390	9.1%	1,441
LE3	GLENFIELD, NEW PARKS, LEICESTER FOREST EAST, WESTCOTES (LEICESTER)	77,737	8.4%	4,598
BN2	BRIGHTON, BEVENDEAN, KEMPTOWN, WOODINGDEAN (BRIGHTON AND HOVE)	77,317	10.1%	1,799
LE4	BRISTALL, BELGRAVE, BEAUMONT LEYS, THURMASTON (LEICESTER)	74,425	10.5%	6,267
BN1	BRIGHTON, COLDEAN, HOLLINGBURY, PRESTON, FALMER (BRIGHTON AND HOVE)	72,520	7.1%	1,279
NW10	WILLESDEN, ACTON, KENSAL GREEN, BRENT PARK, OLD OAK COMMON (BRENT)	71,560	12.3%	2,897

Source: Knight Frank

UK – KEY POINTS & OBSERVATIONS

Parcel carrier hubs benefit from being in close proximity to a large fulfilment centre. Therefore, the relocation of large retailer or 3PL facilities may hugely alter the Model outputs and outcome.

Large national distribution and fulfilment centres are mainly located in the middle of the country and thus locations in The Midlands, Yorkshire, Greater Manchester and North London score highly in our Model. There is also a spike around the Scottish cities of Edinburgh and Glasgow.

Online shopping propensities are highest around London and in the South East. Other hotspots occur in big cities in the Midlands and Scotland.

Working population is more evenly scattered around the country and largely follows general population densities. Hotspots tend to be in major city conurbations, with some degree of regional variation.

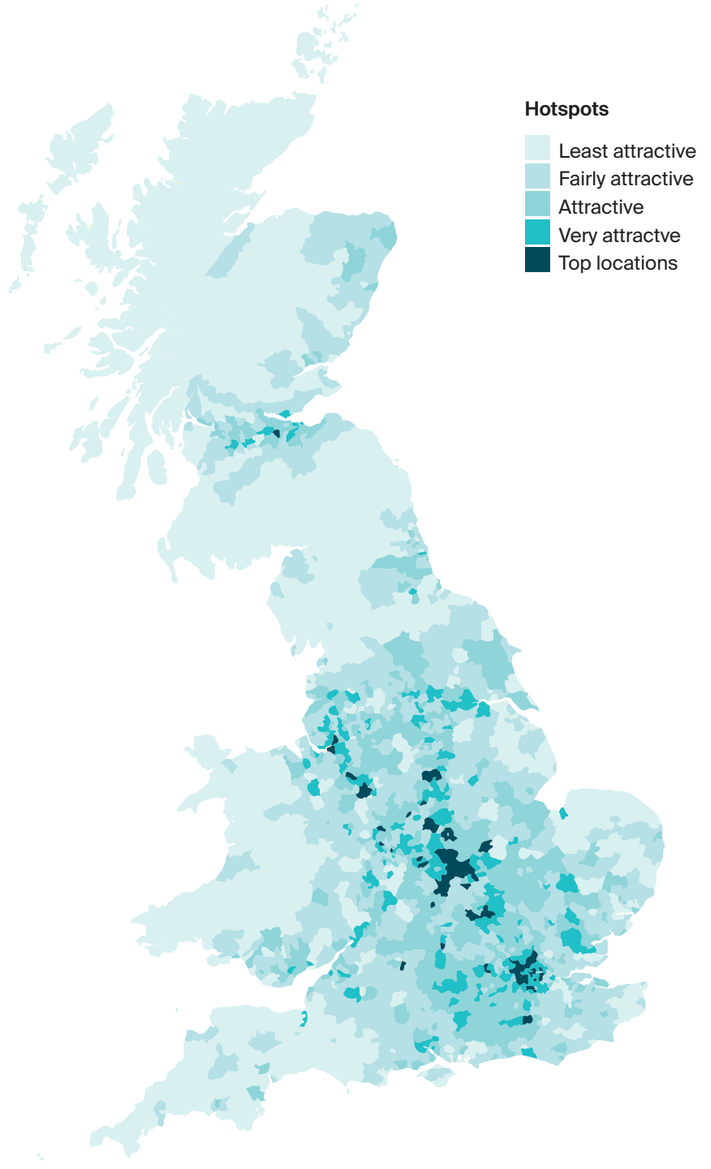
Specialised skills follow a different pattern from general working population, with a stronger presence in the major UK industrial towns.

Internet is fastest in London and the west of the country. Wales and Scotland have significantly slower internet connections.

Industrial rents are highest in London and the South East.

Total floorspace shows a very scattered spatial pattern, but with most space in the Midlands, mainly around Birmingham, Coventry and Leicester. There is considerable variation within regions and cities.

URBAN LOGISTICS HOTSPOTS



Source: Knight Frank

FUTURE GAZING

TOP 30 GREATER LONDON HOTSPOTS

RANK (OUT OF 2737)	AREA	POSTAL DISTRICT	POSTAL NAME	REGION	KEY ONLINE SHOPPERS (%)	WORKING POPULATION	UNEMPLOYMENT RATE (%)	NO. OF MACHINE OPERATORS	INDICTIVE RENT (£/SQ FT)	TOTAL INDUSTRIAL FLOORSPACE (SQ FT)	DISTANCE TO DISTIBTION CENTRE (KM)
1	NW	BRENT	WILLESDEN, ACTON, HARLESDEN, KENSAL GREEN, BRENT PARK	LONDON	62.0	71,560	12.3	2,897	12	5,138,322	36
2	CR	CROYDON	CROYDON, ADDISCOMBE, SHIRLEY, ADDINGTON	LONDON	38.1	117,141	8.7	4,245	11.5	1,932,491	71
3	N	HACKNEY	BARNSBURY, CANONBURY, KINGS CROSS, ISLINGTON, HOXTON	LONDON	58.2	84,211	8.3	1,264	12	163,074	38
4	SW	LAMBETH	STREATHAM, NORBURY, THORNTON HEATH, STREATHAM PARK	LONDON	71.3	69,237	7.8	1,750	15.5	0	77
5	SW	MERTON	WIMBLEDON, COLLIERS WOOD, SOUTHFIELDS	LONDON	71.3	60,162	3.7	1,080	12	439,586	79
6	SW	WANDSWORTH	BATTERSEA, CLAPHAM JUNCTION	LONDON	71.3	62,107	4.6	900	15.5	0	66
7	EN	ENFIELD	ENFIELD HIGHWAY, ENFIELD ISLAND VILLAGE, ENFIELD LOCK	LONDON	27.6	42,169	12.2	1,868	12	2,622,542	3
8	N	HARINGEY	TOTTENHAM, SOUTH TOTTENHAM	LONDON	58.2	51,945	17.1	1,680	12	906,654	17
9	NW	BARNET	CRICKLEWOOD, WILLESDEN, NEASDEN, DOLLIS HILL, CHILDS HILL	LONDON	62.0	54,848	8.7	1,707	12	398,833	37
10	E	WALTHAM FOREST	WALTHAMSTOW, UPPER WALTHAMSTOW	LONDON	42.3	80,101	10.1	2,996	15.5	465,105	21
11	SW	WANDSWORTH	TOOTING, MITCHAM	LONDON	71.3	51,446	5.2	1,104	15.5	88,428	77
12	SW	LAMBETH	BRIXTON, BRIXTON HILL, STREATHAM HILL, TULSE HILL, CLAPHAM PARK, BALHAM	LONDON	71.3	46,830	8.0	862	15.5	106,758	34
13	W	EALING	ACTON, EAST ACTON, PARK ROYAL, WEST ACTON	LONDON	71.4	41,784	7.6	1,118	15.5	693,834	55
14	SW	HAMMERSMITH AND FULHAM	FULHAM, PARSON'S GREEN	LONDON	71.3	50,758	5.1	734	15.5	72,328	66
15	NW	BARNET	THE HYDE, COLINDALE, KINGSBURY, QUEENSBURY, WEST HENDON	LONDON	62.0	50,376	8.1	1,957	12	198,651	34
16	SW	WANDSWORTH	WANDSWORTH, SOUTHFIELDS, EARLSFIELD	LONDON	71.3	48,729	3.6	797	15.5	70,937	74
17	SW	WANDSWORTH	PUTNEY, ROEHAMPTON UNIVERSITY	LONDON	71.3	48,490	4.8	828	15.5	0	73
18	N	ENFIELD	LOWER EDMONTON, EDMONTON	LONDON	58.2	38,876	14.3	1,581	12	684,801	12
19	NW	BRENT	KILBURN, BRONDESBURY, WEST HAMPSTEAD, QUEEN'S PARK	LONDON	62.0	54,228	6.5	951	12	0	41
20	N	HACKNEY	STOKE NEWINGTON, STAMFORD HILL, SHACKLEWELL, DALSTON, NEWINGTON GREEN	LONDON	58.2	54,747	10.3	1,004	12	68,157	27
21	SE	GREENWICH	PLUMSTEAD, WOOLWICH	LONDON	48.3	63,482	12.1	2,108	11.5	421,932	51
22	W	HAMMERSMITH AND FULHAM	SHEPHERDS BUSH, WHITE CITY	LONDON	71.4	37,043	8.9	879	15.5	489,997	58
23	SE	SOUTHWARK	BANKSIDE, SOUTH BANK, SOUTHWARK, BERMONDSEY, VAUXHALL	LONDON	48.3	66,059	6.3	1,066	11.5	563,087	52
24	NW	CAMDEN	EUSTON, CAMDEN TOWN, PRIMROSE HILL, GOSPEL OAK	LONDON	62.0	52,378	8.9	884	15.5	65,168	43
25	E	TOWER HAMLETS	POPLAR, ISLE OF DOGS, LIMEHOUSE, CANARY WHARF	LONDON	42.3	79,390	9.1	1,441	17.5	194,484	45
26	W	WESTMINSTER	PADDINGTON, BAYSWATER, HYDE PARK, LITTLE VENICE, NOTTING HILL	LONDON	71.4	41,993	6.3	419	17.5	0	53
27	SW	LAMBETH	STOCKWELL, BRIXTON, CLAPHAM	LONDON	71.3	37,534	10.2	791	15.5	65,000	61
28	W	EALING	EALING, PARK ROYAL	LONDON	71.4	38,305	5.0	682	15.5	0	53
29	W	HOUNSLOW	CHISWICK, GUNNERSBURY, TURNHAM GREEN, BEDFORD PARK	LONDON	71.4	34,915	4.1	521	15.5	188,168	59
30	E	NEWHAM	EAST HAM, BECKTON, UPTON PARK, BARKING	LONDON	42.3	61,336	13.4	2,401	15.5	710,594	33

Source: ONS, PMA, CACI, Knight Frank

Key Online Shoppers are the ACORN Groups identified by CACI as high propensity online shoppers.

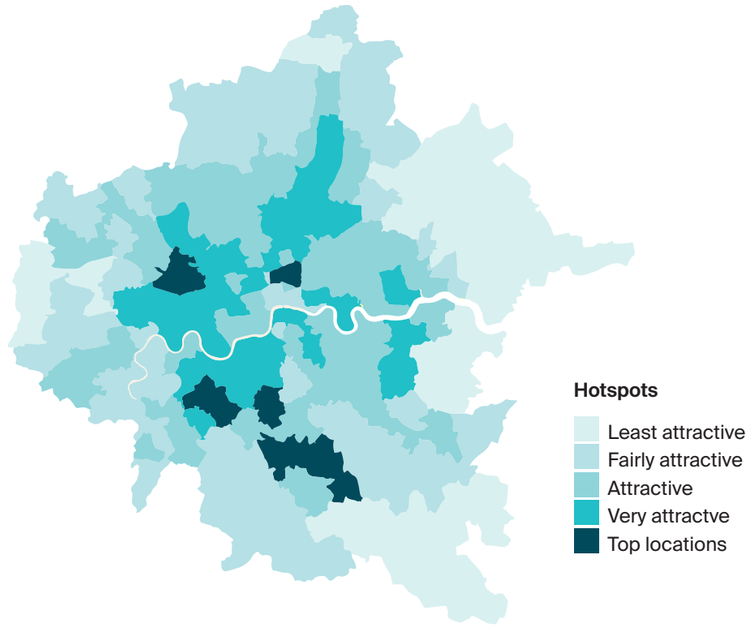
Hotspots

- Least attractive
- Fairly attractive
- Attractive
- Very attractive
- Top locations

LONDON: KEY POINTS AND OBSERVATIONS

- Online shopping propensities are highest in West and Central London.
- Working population peaks around Croydon – particularly in areas away from the town centre itself.
- Specialised labour force heavily clusterered around Croydon, Brent and Walthamstow.
- Distance to big distribution centres far better in North London and locations near key highways.
- Industrial rents highest in Central London and towards Heathrow Airport.
- Highest levels of supply concentrated around Acton, Hoddesdon, Croydon, Barking, Enfield and Heathrow.

HOTSPOTS



Source: Knight Frank

Focus on Greater London

London remains a paradox. It is both the location with the highest consumer demand/online shopping propensity, but is also witnessing the fastest decline in available floorspace. Finding the holy grail of urban logistics under increasingly high customer expectations is a major challenge. Using our Model to zoom in on London specifically helps identify the most favourable locations currently, as well as the opportunity to look at potential alternative scenarios and planning applications.

Our Top 30 most favourable London urban logistics locations are headed by Brent and Croydon, but for different reasons. The area of Brent, Acton and Kensal Green is desirable due to high levels of industrial floorspace, high unemployment and access to high volumes of online shoppers. Croydon ranks highly because of its large and specialised labour force and reasonably affordable rents for such a dense urban area.

Effective policies and planning could stimulate industrial development in highly desirable locations, or use the information to change one or more of the inputs to favour local conditions. Although varying in level of difficulty, all circumstances can be influenced by policy and planning decisions. For example, creating new, fitted-out urban logistics spaces or large distribution centres near urban areas will change accessibility and availability, and these channels may influence rental values. Demographics might be harder to change, but can be influenced by housing developments and specialised skill training.

It is clear, however, that due the changing nature of consumer behaviour, the industrial and logistics sector can no longer be hidden on remote industrial parks. Instead, it plays an important role in the holistic approach of creating smart cities of the future.

£13.50

Difference between highest and lowest per sq ft rent is £13.50. (£17.50 per sq ft highest rent for certain London neighbourhoods, lowest rent is £4.50 per sq ft in parts of Wales.)

Our Top 30 most favourable London urban logistics locations are headed by Brent and Croydon, but for different reasons.

71.4%

Westminster highest propensity online shoppers: 71.4% while country average is less than 22%.

Customising location choices

Although our Model is robust and underpinned by accurate and relevant data sources, the choice of Model inputs and weightings is subjective and based on our judgement. We have tried a series of iterations and applied different weightings, and while the order changes slightly, the Top 30 locations were fairly constant.

Additionally, what is seen as a "good" location will vary between developers, investors and occupiers. There will be some overlap, but even within the different sub-groups, motivations and needs may differ. This Model has therefore not been developed as a prescriptive guide on where to invest or develop, but rather as a base model that can be adapted to different circumstances and scenarios.

Besides modelling current dynamics, this Model can also be used to predict future scenarios. This can be done by changing and flexing elements such as total floorspace, locations of large distribution and fulfilment centres and changes in infrastructure. The Model can also be used in combination with other data sets that aim to identify solutions to create more floorspace in high potential areas.

Scenario 1:

An example is looking at the potential for multi-storey or mixed-use urban logistics properties that combine logistics with other property uses such as retail or residential. After identifying locations with highly desirable conditions on all other elements, but a lack of available and affordable stock, we can identify the stock of land that is zoned for industrial or retail use, but might not be fully utilised. To view the potential for skyward expansion, we can repeat an exercise already applied to existing housing stock, where we use 3D models of the city to identify potential development areas that would not alter London's character or interfere with other use classes, but can largely support the ongoing demand for urban logistics.

Scenario 2:

Another scenario is based on the earlier example of multi-modal logistics hubs. In this example, multi-modal transport networks link the centre of a city with a big distribution hub outside the city. The distance from urban areas to the distribution centres will reduce and will improve desirability of locations near the train stations on both ends. A scenario-based approach could model this for several train stations in London and outside to measure where the highest gains will be made. Additionally, this scenario has positive externalities such as a reduction in heavy vehicles driving into the city and the opportunity to increase the use of electric vehicles for the 'last-mile'. This trend therefore fits well within a greener future scenario.

Scenario 3:

To run the model for a specific stakeholder with a fully automated business process or drone dispatch ports, we can increase the weighting for power and fast internet. This same stakeholder might not be interested in the size of the general work force, but specifically in the workforce specialised in IT or attractiveness of the location to attract such a workforce.

The inputs for the model can be adjusted to fit the ever changing criteria for future urban logistics centres.

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