ADDLESHAW GODDARD

Blackstock

HOW SOON IS NOW?

The disruption and evolution of logistics and industrial property

Aberdeen Asset management

BMO Real Estate Partners
BMO Global Asset Management

BRITVIC

DELIN CAPITAL
ASSET MANAGEMENT

Doddle.

DP WORLD
London Gateway

Legal & General
INVESTMENT MANAGEMENT

Luther.

M&G INVESTMENTS

MAGPROPERTY

OXENWOOD
REAL ESTATE LLP

P3 LOGISTIC PARKS

PROLOGIS.

RFG
Rail Freight Group

caddick developments

CBRE

DIAGEO

Eddie Stobart

FABACUS™

GV GentVisick

KIER

MDS Transmodal Ltd

miller developments

network space

savills

TRITAX BIG BOX

VERDION

VTG

INDEX

1 INTRODUCTION AND EXECUTIVE SUMMARY

Changing perceptions: more than just a shed …

We call them 'sheds' but is that right, fair or proper? These increasingly technologically sophisticated centres generate (surprisingly) high employment and contribute hugely to the local and national economy. So should the phrase 'shed' be consigned to history but if so, what should take its place?

INTRODUCTION AND OVERVIEW

Addleshaw Goddard
Lee Sheldon
Joint Head of Real Estate Sector

Lee is a partner in our Funds and Indirect Real Estate Team. He specialises in advising both managers of and investors in UK, pan-European and global investment funds operating across amongst others the real estate, infrastructure and private equity sectors as well as supporting them on their downstream corporate wrapped real estate transactions including indirect acquisitions / disposals, joint ventures and reorganisations. Additionally, Lee is joint Head of our Real Estate Sector Group.

From 28 days to 24 hours later

In the dystopian London of the film 28 Days Later, by Danny Boyle, survivors of a deadly virus roam empty streets and looted supermarkets. The broken cityscape is an apt analogy for the UK's industrial property sector circa 2008.

Amid record vacancy levels, buildings were being demolished as landlords sought to avoid paying business rates on empty properties. Meanwhile, one of the industry's biggest companies was set to implode. SEGRO's acquisition of its main rival Brixton, turning it into a £5.5bn industrial powerhouse, exemplified the M&A opportunities buried in the market's trough. Acquisition fever returned in 2016 in spite of Brexit and elections in France and Germany on the horizon (the most notable transaction so far being GICs €2.4bn acquisition of P3 Logistics), but the market could not be more different from eight years earlier.

Informing Britain's industrial strategy

As our report will show, the landscape around industrial real estate is profoundly connected to every area of manufacturing, distribution and transportation - not just retail. And that is why Government needs to overhaul the way it views industrial development.

All too often, considerations for employment space and how future cities will deal with the growing demand from parcel delivery firms, light industrial or construction firms, not to mention online retail giants, fall on deaf ears. Yet as Britain steps into unknown waters around Brexit, the need for a coherent industrial strategy is more vital than ever. This needs to be joined up with considerations for new hard and soft infrastructure - whether airports, railways, roads or hospitals.

One aim of this report is to inform this process by offering suggestions that reflect a raft of experts from across real estate, transport, logistics and retail. Our conclusions outline how a more strategic approach to land use could better support investment across entire communities.

The other aim of this report is to evaluate the current sentiment within the market, highlighting investment and development experts across the UK and continental Europe to help identify emerging trends.

From bombsite to gilts

This reversal in fortunes from 2008 has seen sheds evolve to become sophisticated warehousing and distribution solutions which form part of the establishment. Institutional allocations are rising and in many cases, vacancy rates are lower than yields, which have compressed steadily amid rental growth. What this means for politicians is that there is significant weight of private capital ready and waiting to invest in providing space for business to take place.

To a large extent, the industrial property market's performance has been fuelled by a lack of supply: demand for space has outstripped non-existent speculative development which a risk-averse lending market still shies away from. As a result, the performance of prime industrial real estate is in many cases nearly in line with prime retail assets.

To underline the turnaround since 2008, IPD's annual performance data (see table across) showed industrial property delivered a 16.8 percent total return during 2015 compared with 4.1 percent in 2009, largely thanks to capital growth of 10.9 percent. As our in-depth data from Savills shows, the sector's turnaround is widespread and has occurred right across the country.

Industrial real estate is viewed by some investors as a bond-like investment, largely on account of the long leases agreed to by big box occupiers. Having large facilities close to transport links or with access to rail freight terminals, as offered at locations such as DIRFT or iPort, is now business critical for many retailers or logistics companies.

Many are willing to agree index-linked increases in rent on 20-year leases. From an investment perspective, that has made sheds far more appealing to institutions and pension funds unable to find yield elsewhere.

At a time when German 10-year bonds are offered with a negative coupon, even yields of 5 percent represent good value. One of 2016's biggest deals involved a private Korean investor purchasing an Amazon-let 1m sq ft fulfilment centre in Leicestershire from John Cutts' Mountpark Logistics for £126m, at a reported yield of 4.5 percent.

From a risk perspective, this is as good as it gets. But one perverse observation is that while investors looking at corporate bonds in many fast moving consumer goods 'FMCG' stalwarts would have invested at negative rates during 2015-2016,

IPD UK Annual Property Index

	Total return index Dec 2014	Total return index Dec 2015	Total return %	Income return %	Capital growth %	Annualised total returns %		
	Dec 1980 = 100	Dec 1980 = 100	1 yr	1 yr	1 yr	3 yr	5 yr	10 yr
All Property	2,041.2	2,308.1	13.1	4.8	8.0	13.8	10.5	5.7
Retail	2,376.1	2,606.5	9.7	5.0	4.5	10.8	8.3	4.2
Office	1,731.4	2,038.3	17.7	4.1	13.1	18.1	13.4	7.6
Industrial	2,861.0	3,341.1	16.8	5.4	10.9	17.7	12.5	6.4
Residential	8,237.8	8,922.9	8.3	2.8	5.3	11.6	11.0	9.6
Other	1,668.0	1,864.8	11.8	5.5	6.0	11.5	10.0	7.4

DATA: IPD 2015

investments in the industrial real estate those corporations occupy would typically offer more like 5-6 percent.

What's changed?

To put things in context, Boyle's film appeared in 2002. This was five years before the iPhone and 10 years ahead of 4G, at a time when 28 days was still the typical time for the delivery of goods. While smartphones, e-commerce and mobile technology are not the only drivers of change, they have been amongst the most significant. Their impact has resonated across every area of logistics, transport, manufacturing and investment.

The manner in which "28 days later" has been replaced by "24 hours later" or even "later the same day" has fuelled a raft of opportunities for new businesses: delivery companies, tech firms and transport firms. It has reformed the way in which supply chains are managed. The internet has brought with it both urgency and transparency that never existed before. And logistics companies have stepped up to play a more crucial role than ever before in their clients' businesses, taking on everything from production and transport to short-term finance.

The property sector has had to evolve radically. We have seen the likes of Hammerson, British Land, Land Securities and Westfield emerge successfully from this period of change by embracing an omni-channel and more leisure-focused retail experience. But industrial landlords have been big winners.

Warehouse portfolios that saw vacancy rates of 20-30 percent in 2008 are now let at record levels. And just as sheds have edged back from the precipice, the Armageddon many predicted for high street retail has not occurred.

Appetite for construction

Opportunities to buy million foot sheds let to Amazon are few and far between, sadly. But nonetheless, they underline why so much interest is falling on the logistics sector. A conservative estimate would suggest more than £17.5bn worth of space is now needed across Europe to fulfil current demand. And as more of the world comes online, this need will only grow.

In the UK at least fulfilling the increased demand will not be easy - there is not enough capacity on our roads to deliver everything, nor presently enough space in our cities for the urban logistics warehouses needed for last-mile fulfilment. The sector therefore needs to be innovative and responsive to the challenges ahead.

Transport has played an increasingly vital role in driving value from real estate, and not simply from the point of view of location. As we will explore, rail is being increasingly integrated into major developments - although not without considerable expense, delay and complication. And despite the obvious environmental benefits over road haulage, some expect the prospect of greener and perhaps even self-driving lorries to overtake any overhaul of Britain's rail network.

Technology too provides both an opportunity and a challenge as occupiers look to maximise efficiency through the automation of stock picking, ordering of supplies or the management of space and staff. This drives the need to modernise real estate, increasing demand and providing growth for the sector.

Adapting to change

Just as businesses need to adapt to new technology, so too must Government policy adapt to new business and social trends. Political soundbites around Britain's sharing economy, its Northern Powerhouse or Midlands Engine have to be matched by action.

In this environment of change, adapting antiquated and cumbersome planning systems and policies will be crucial to bringing through the development needed. As we will hear, there needs to be greater acceptance within Government of the role logistics will play in our future economic growth. Cohesive measures need to be put in place across the raft of policy areas which play a supporting role. If Britain is to genuinely work for everyone, then we must prioritise support not just for this sector, but for the wider network of critical elements supporting employment and commerce.

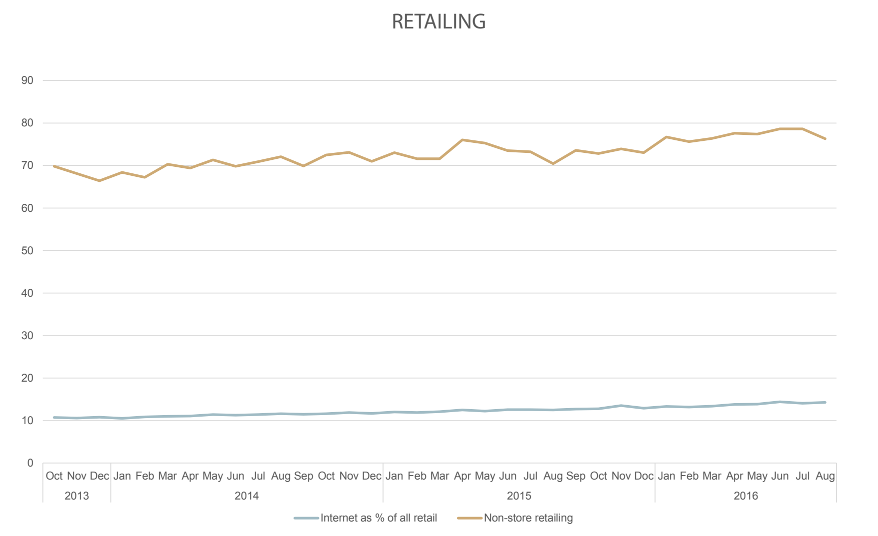
Regeneration and gentrification is seen as a double-edged sword in many urban areas. But seaside towns and industrial areas have seen little benefit and are often those best suited to house many of the developments talked about in this report. Unlocking infrastructure can usher in investment if we plan it correctly. Crucially, the delivery of new roads, railways and runways needs to happen soon and not 28 years later.

EXECUTIVE SUMMARY

The e-commerce revolution

Everything on demand

E-commerce has changed our world. We can sit in our armchairs and buy furniture, order our groceries or purchase a gift from the other side of the world and have them all delivered to our doorsteps in a matter of hours (or days in the case of the exotic gift). To allow this to happen, the logistics world - the warehouses that exist to store and process our orders and the network of transport, delivery or collection points that exist to get them to us - has seen dramatic and rapid changes.



E-commerce has seen a steady increase in uptake in recent years, increasing by just over 1 percent as a proportion of all retail each year since 2013. DATA: ONS

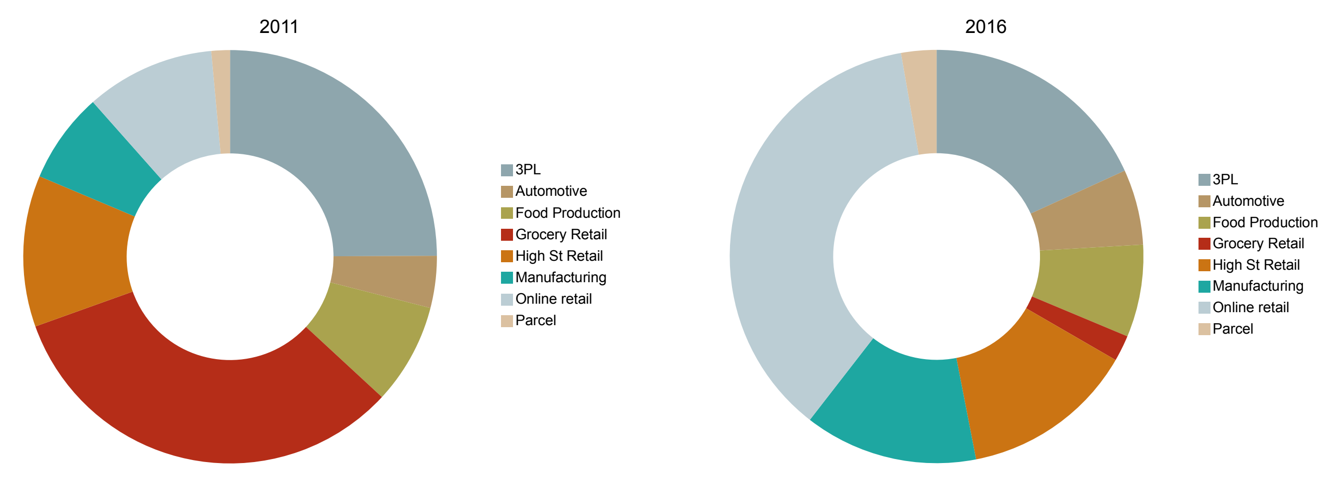
This report examines the scale of those changes and the implications for consumers, logistics providers and the investors who build and own the warehouses that allow the growing internet retail sector to fulfil its customers' increasingly immediate needs. We also look to the future, and the technology and developments that will shape the retail and logistics sectors over the coming years.

Challenge for retailers

The UK has become a crucible for the fast-growing trend towards instant delivery. Living in a small, dense nation, with an online retail penetration rate far higher than in other European countries, helped along by widespread Smartphone, 4G and Wi-Fi access, British consumers are more likely to be online and within easy reach for delivery.

As of August 2016, according to the Office of National Statistics, online sales constituted 14.3 percent of UK retail, and are projected by the Centre for Retail Research's Retail Futures 2018 report to grow to a 21.5 percent share of retail sales by the end of the decade. That is good news for retailers with an online capability, but it will continue to place competitive pressure on the nation's high streets, shopping centres and retail parks.

There is increasing competition between online retailers, with the likes of Amazon and Argos emphasising the speed of their delivery to win custom. This speed comes with considerable extra cost for additional warehousing and delivery fleets (as we will see below) which is a cost that only the biggest companies can absorb.



The data on the share of space leased by occupier type shows the pronounced shift towards online retail over the last five years. DATA: Savills

Opportunity for shed providers

The growth in internet shopping has benefited those property companies and institutional investors that develop and own warehouses and logistics centres. More facilities are needed in easily accessible locations and differing sizes - from big box floorspace measured in football pitches, to small local delivery centres for the last mile of the journey. For the biggest retailers, their demands for their big boxes are precise. They want advanced ‘four-dimensional’ automation that can pre-pack complex online deliveries in the most efficient order possible, customised to work with state of the art robotics, and typically with multiple mezzanine levels to double or even triple the floorspace available inside the building.

These demands have created an asset class of individually tailored and expensively kitted-out sheds, with commensurately sized rents, almost unrecognisable from the simple warehouses with racking and hangers that were standard for the industry just 20 years ago.

From a cost to a profit centre

For retailers with the wherewithal to own their own buildings, sheds have evolved from assets that used to be a necessary cost, to ones that are now a vital source of their company’s profits. Moving more of their operations to industrial property for online sale fulfilment allows retailers to cut overheads such as labour costs and expensive retail rents - although the transfer of delivery costs from the consumer to the retailer means that “location, location, location” and accessibility to the consumer is fundamental to delivering these costs savings.

The impact on industrial property

Growth in demand

The move towards online retail has brought with it an increased demand for industrial property. According to research by Prologis and Aberdeen Asset Management, three times as much warehousing space is required for online fulfilment compared with store-based fulfilment, and for every €1bn spent online, an additional 775,000 sq ft of warehousing space is required.

This fits with Savills’ data showing that take-up for online retailers for UK sheds space in 2016 so far is almost equivalent to take-up for the rest of the decade: 8.5m sq ft of space has been provided in the year up to June 2016, compared with 9m sq ft of space between 2010 and 2015.

Growth in size

There has been a sea change in occupier preferences, with four times as much take-up in 2015 being built bespoke to the occupier’s requirements, rather than speculative development. Occupiers are increasingly looking for bigger sheds, both to future proof their operations and drive economies of scale. The first half of 2016 saw five deals made for sheds over 500,000 sq ft, compared with a long-term average of seven 500,000+ sq ft deals per year.

Growing in appeal

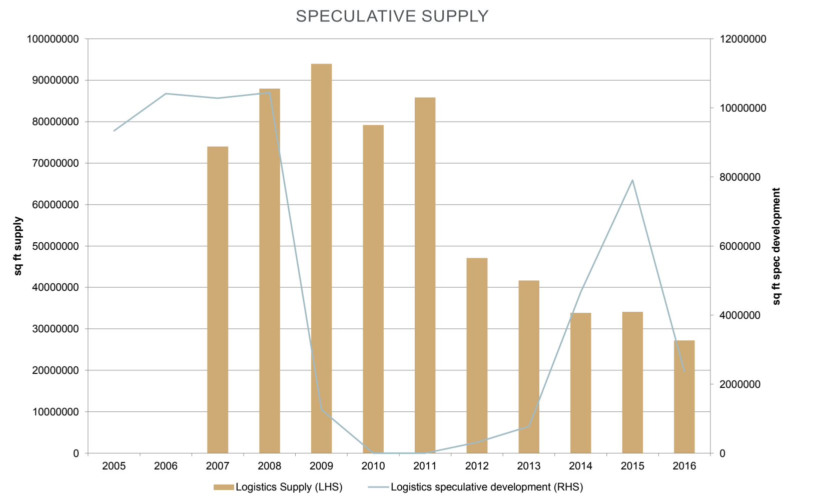
But just as you cannot have a conversation about industrial property without mentioning Amazon or Tritax Big Box, so too do smaller, cheaper multi let industrial properties have an increasing appeal. With low capital values relative to floor space which are mostly below rebuild costs; low refurbishment costs given their simple build and a broad base of potential occupiers, they are often view as lower risk that other asset classes.

Just as international occupiers demand huge spaces for national or regional distribution centres, so locally-based businesses require more modest amounts of industrial space. While higher yields often reflect the lower covenant strength of tenants, many multi let occupiers will potentially be major businesses.

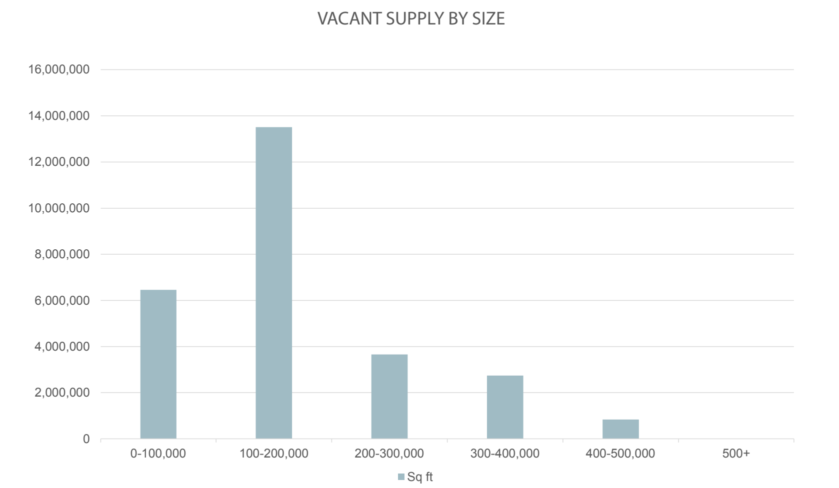
Of course the bulk of multi let, by volume, will be small properties which are nevertheless attractive to income investors who would be unlikely to get a 8-9 percent return anywhere else. Larger investors are continually on the hunt for large portfolios which enable substantial capital to be deployed.

As our report shows, increased appetite from 3PL business, parcel delivery firms and those manufacturers re-shoring work closer to home will all drive demand for multi lets. And as technology such as 3D printing makes local manufacturing cheaper and more workable, there is a huge amount of potential for hubs of activity to spring up.

The online retail boom is a partial reflection of Amazon’s highly aggressive purchasing policy. DATA: Savills

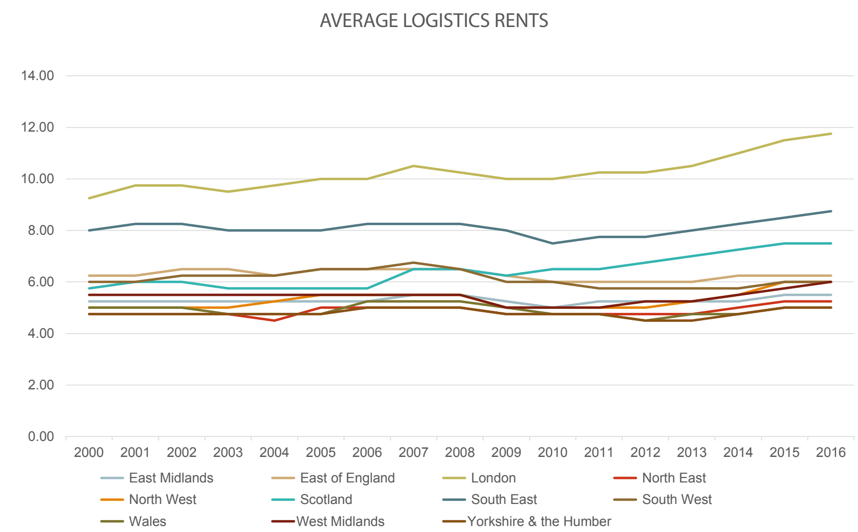


The strong growth of the logistics sector this decade has fed off the glut of space built speculatively before the crash. DATA: Savills



The remaining space is typically in smaller size brackets, focused in the Midlands. DATA: Savills

Growth in rental value



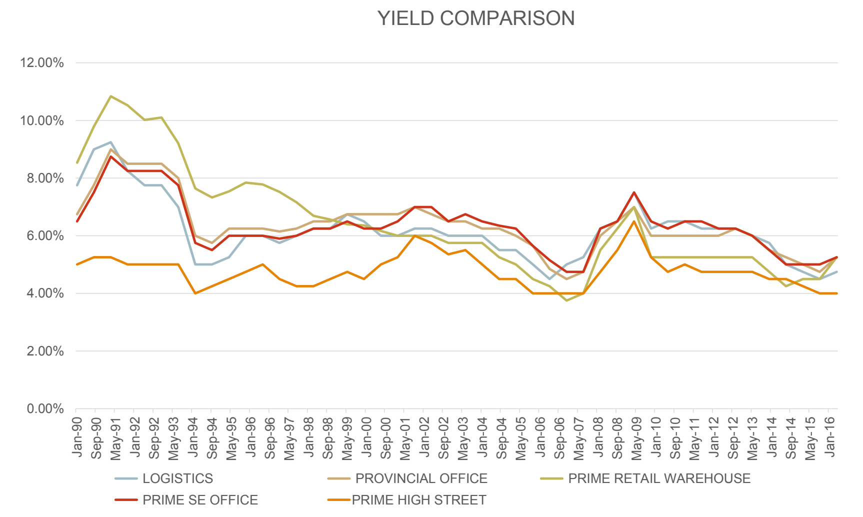
The rental surge is particularly pronounced in London, the South East and the Midlands. DATA: Savills

As the economy recovered following the recession, the demand for warehousing space began to eat into the massive cache of oversupply generated during the speculative boom leading up to the financial crash. UK supply has fallen from its 2009 peak of 94m sq ft of space to 27m sq ft (mostly lower quality, smaller units), and vacancy rates for units over 100,000 sq ft are currently less than four percent in all of the core distribution markets in the UK.

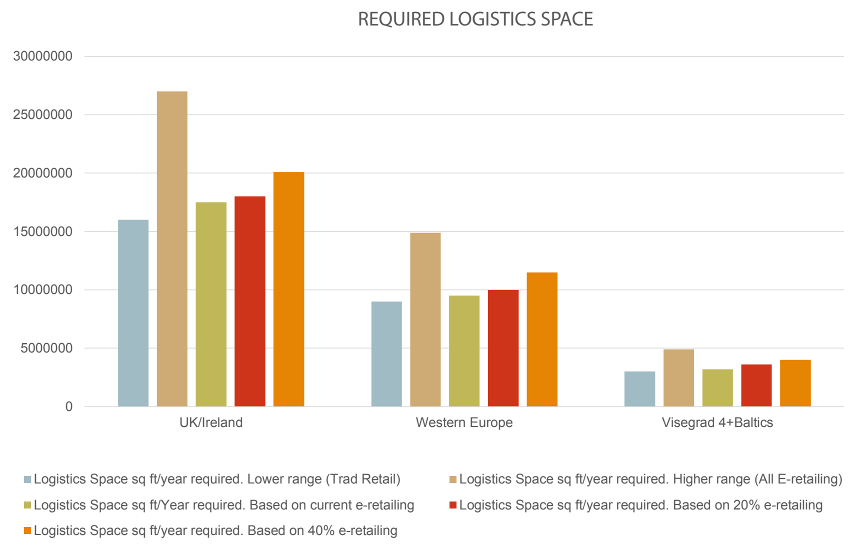
The shortage of space is not the only thing pushing up property and rental values. Online retailers will pay a premium for well-located sites with advanced fit-outs that allow them to get an edge on their competitors' fulfilment times, particularly 'last mile' sites located near urban conurbations. Prime smaller sheds in areas such as Enfield now command average prices of £11/sq ft, compared with £8.50/sq ft just four years ago. Furthermore, occupiers are now much more willing to sign up to longer leases of 20 or more years, to spread the expensive investment in technology over a longer-term period.

Growth in investment appeal

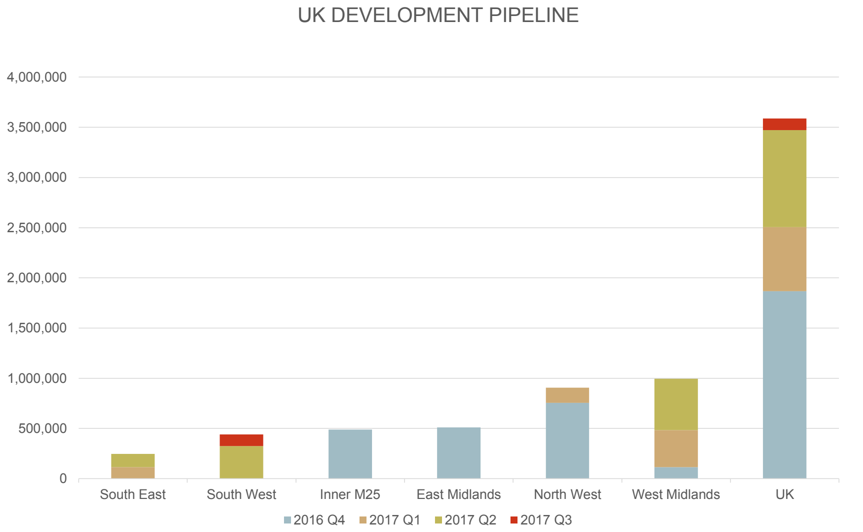
The result of all these trends has been to turn warehouses into a bond-like asset. With long leases being taken by reputable companies, and the opportunity to invest large amounts of funds in shed construction - over £100m for some of the biggest buildings - the asset class is now highly attractive to institutions such as pensions funds, which are on the lookout for reliable long-term income returns. With UK Government bonds trading at near-zero yields, and many companies offering negative yielding corporate bonds, the five percent on offer from prime logistics provides especially advantageous returns for risk levels similar to bonds.



Logistics and prime retail warehouse yields have been roughly comparable to office and high street yields in recent years, despite arguably being less likely to see tenant default. DATA: Savills



With over 18m sq ft of new warehousing space required annually to meet 20 percent e-commerce retail requirements, the current development pipeline falls far short of requirements for the UK. DATA: Colliers.



With over 18m sq ft of new warehousing space required annually to meet 20 percent e-commerce retail requirements, the current development pipeline falls far short of requirements for the UK. DATA: Savills

Urban logistics

Shortage of suitable land for logistics

With the UK having 424m sq ft of existing warehousing space, most prime locations for logistics have long since been developed. Developers face a conundrum: many of the sites remaining that are conveniently located by motorways suffer from other problems, such as high remediation costs for brownfield, or poor utility connections, which both pose a threat to scheme viability at the development stage. Compounding the issue is the UK's notoriously restrictive planning system, which restricts development on the green belt, as well as the typically limited popularity of proposed greenfield industrial developments for logistics with locals.

According to Colliers' estimates, to keep pace with an e-commerce sector making up 20 percent of UK retail, the UK/Ireland market will require 18m sq ft of logistics space to be built annually - far ahead of the 3.5m sq ft projected to be built over the next 12 months by Savills. Therefore, measures to unlock viable land are of vital importance, with proposals including the streamlining of local planning systems to empower the fast-tracking of uncontroversial applications, as well as the establishment of funding similar to that provided by the Homes and Communities Agency, to assist industrial developers with the remediation of land.

Pressures in urban areas

While sheds are an essential component of e-commerce, deliveries depend on the 'last mile' fulfilment. Finding suitable sites in cities for such local distribution centres can be very difficult because of high land values, the general availability of suitable sites, and the acceptability of having transport-heavy occupiers located in, or near, residential areas. However, urban hubs will become even more essential as e-commerce continues to grow and delivery times shorten, so solutions must be found. Last mile solutions may be included in mixed-use developments featuring residential, but their acceptability will largely be a matter of sensitive design and limitations on the size of vehicles that can be accommodated.

Whether the surge in investor interest in the prime logistics end of the sector will also be experienced in the growing ‘urban logistics’ sector is yet to be seen, but there is little doubt that the smaller boxes serving this need will come into their own as a subsector of the asset class.

Re-use of trade and retail parks

One potential source of urban logistics space could be the re-use of vacant units on multi-unit trade parks - some around the M25 are now worth more than nearby retail parks, with the devaluation of retail land. Retail parks could also be used, taking advantage of their large sites, 24/7 operations, massive car parks and the fact they look like sheds. The investment case cannot be made quite yet, because of how land for retail parks has been priced. There has to be a certain rental level to compensate for high use value, and industrial rents have not reached that level. The current temptation for asset holders will be to convert underperforming retail to residential or office space (if possible), given the much higher rents on offer. However, if parcel distribution growth continues at 20 percent per annum, things could certainly change in the next two or three years, particularly in advantageous locations.

Transport

The dominance of roads

Transport is a pivotal consideration in logistics. Road freight makes up nearly 90 percent of total UK inland freight transport by distance, but the network is increasingly congested, leading to a 2mph fall in average UK vehicle speeds in the five years leading up to 2015. Additionally, the Road Haulage Association has announced an unmet need for 60,000 HGV drivers. Late deliveries increase costs for third party logistics firms (3PLs), an incredibly competitive sector with notoriously tight profit margins.

England’s road network will see £15.2bn of investment in over 100 schemes to add 400 extra lane miles of capacity by 2021. However, road widening schemes are notoriously susceptible to ‘induced demand’ (where people take journeys they would not have taken otherwise because the extra capacity now exists) filling in any capacity gains fairly quickly, particularly as the number of road users continues to grow.

The case for, and against, rail

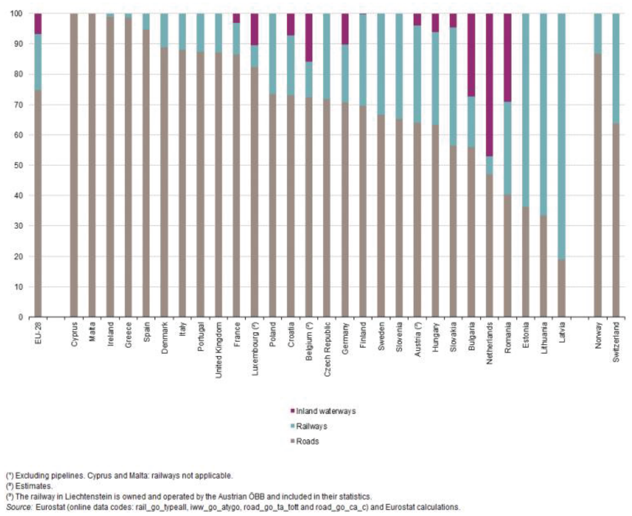
Some are looking to the European logistics sector’s greater use of rail as a potential inspiration. Rail freight costs are competitive over longer distances where they begin or end at a rail terminal, but are more expensive than pure road freight if goods have to be transported by road to the rail terminal at one, or both, ends of the journey.

However, the rail network has its own congestion and capacity issues, and infrastructure investment is sorely needed. The growth of the Central and Eastern European logistics market, after extensive EU investment in road, rail and sea connections, shows the potential such investment can unlock. Poland, for example, now has a direct 11-day rail freight connection with China, dubbed ‘the new Silk Road’.

Network Rail is investing more than £25bn into the UK rail network by 2019 in order to ease congestion issues. Although rail freight is in direct competition with passenger rail for any additional capacity, the completion of HS2 and Crossrail should free lines enough on the West Coast and East Anglia Main Lines to allow more freight to be delivered through Felixstowe and London Gateway ports to the Midlands.

However, scepticism remains as to the extent rail can be a popular option for UK logistics. It currently constitutes around 12 percent of UK freight by distance, and, given the density of the UK delivery network, many consider it unlikely that rail will be able to present a simpler and cheaper option than delivering by road for distances of less than 100 miles.

EUROSTAT MODAL SPLIT

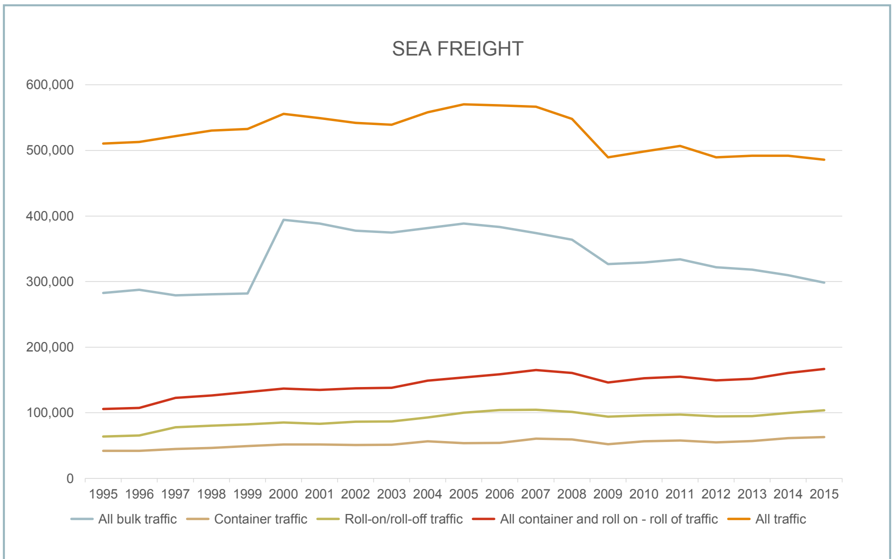


Rail/road freight split across Europe by distance, as of 2013. The UK’s use of rail freight lags far behind other nations. DATA: Eurostat

Ports and multimodal hubs

One way of reducing the costs of rail is by delivering hubs that allow direct rail delivery. As a result, some developers are building multimodal logistics parks with dedicated rail termini, such the iPort in Doncaster.

Sea freight has grown steadily over the last 20 years, with container traffic to the UK standing at an all-time high figure of 63.2m tonnes in 2015, compared with 42m tonnes in 1995, the earliest available data point. This expansion - which has accompanied a 40m tonne increase in roll-on-roll-off freight for vehicular transport - has been enabled in part due to the decline in liquid and



Sea freight has consistently declined by thousand tonnes delivered over the last twenty years, though container traffic and roll-on-roll-off freight has increased substantially as a proportion of all freight
DATA: ONS

dry bulk traffic, primarily for fuel. However, port capacity has been limited by rail capacity out of the ports - a phenomenon which spurred the development of larger sheds in the North during the ‘00s to take advantage of spare capacity at ports such as Grimsby, compared with Southampton.

As such, rail capacity improvements for ports such as Felixstowe have been prioritised, and new port developments such as London Gateway have made the installation of extensive logistics parks and multiple railheads pivotal to their schemes.

Future trends

Rental growth and lack of supply

The short-term future for the logistics market looks fairly predictable. Continued rental growth in the UK seems to be a given for the foreseeable, with rents remaining stable in Europe without the pressure of land constraints. The flood of speculative development before the financial crash, which has steadily been taken up over the last eight years, is unlikely to be repeated, particularly as the trend towards bespoke pre-lets is decreasing the appeal of riskier investment in building generic sheds without a tenant. The Investment Property Forum’s forecasting across commercial real estate has projected that industrial logistics property will be the only sector to see rental growth next year.

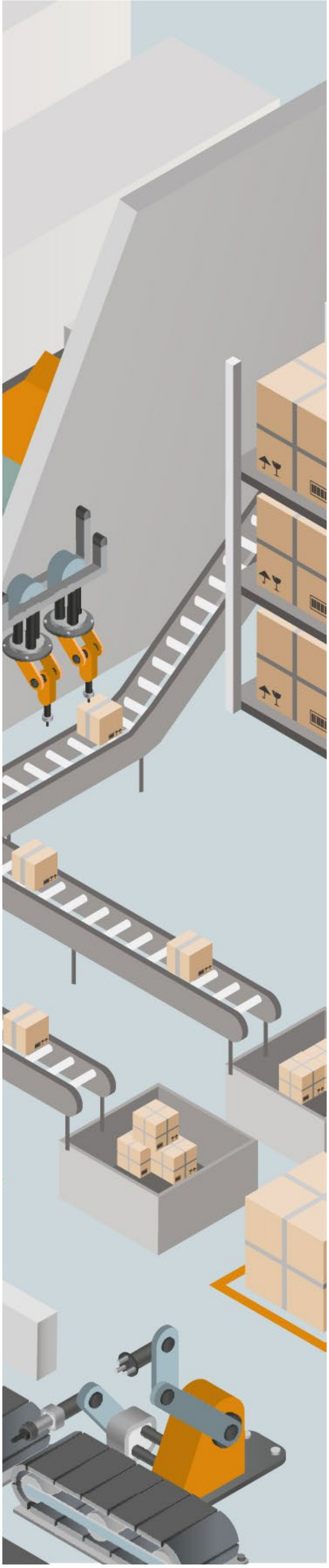
Competition from Europe

The UK market is particularly influenced by its land constraints, which is good news for land and rent values, and vacancy rates, which are some of the lowest in Europe. However, it limits the opportunities for investors. Some are increasingly looking over the Channel. Western European sheds, particularly in Benelux, offer occupiers a stable base in often comparatively favourable tax regimes, with access to skilled labour. The Central and Eastern European market has seen a boom in recent years in the wake of extensive European Union infrastructure investment, with occupiers attracted by a mix of low labour costs and good connectivity with Germany and the rest of the continent.

Skyscraper sheds

Up until now, the prevailing view among UK-based investors is that multi-storey facilities are difficult to fund and even harder to build. The X2 facility near Heathrow - which has four, 6 metre high units on each of its two levels - was built by now-defunct Brixton. While it was the UK’s first ramped warehouse, few have sought to replicate it.

However, the combination of technology, increased rents, a lack of available land and changes



in occupier demand could be able to change all that. Across Asia, 20-storey high warehouses are commonplace. While we are unlikely to see anything of that scale right away, the advent of modular construction and artificial intelligence could fascilitate both the build and operation of more complex facilities.

Amazon is already having a multi-storey warehouse built for it in Tilbury, and with automation and use of robotics growing quickly, the potential for retail and logistics occupiers to make better use of space is huge. Parcel delivery firms and others whose business requires being close to urban areas will be the main drivers.

Although the cost and construction risks with such facilities will be far too high for any speculative development, multi-storey sheds will come to represent the ultimate “build to suit” facility.

Some of Asia’s tallest warehouses

Kowloon Bay	Sunshine Kln Bay Cargo Ctr
Tsuen Wan	Global Gateway (Ramp access)
Tsuen Wan	Kerry Cargo Centre
Kwai Chung	ATL Logistics Centre
Kwai Chung	HK International Distribution Centre (HIDC)
Kwai Chung	Modern Terminal Building (MTL) (Ramp access portion)
Kwai Chung	NWS Kwai Chung Logistics Centre
Tung Chung	Airport Freight Forwarding Centre
Shatin	Evergain Centre
Shatin	Grandtech Centre
SS/ Fanling	Kerry Sheung Shui Godown
Tsing Yi	Interlink
Tsing Yi	Asia Lo

Sharing economies of scale

While multi-tenanted developments are commonplace, shared facilities - where two tenants or more share a single big box - are less popular. In a climate where investors see strong demand for large-scale pre-lets, a more complex approach to obtaining the same income stream is unlikely to be preferable. But as the market evolves, we may well see more occupiers sharing.

Facing the strain of costly technology upgrades and staff costs, the potential to reduce these risks and move manpower around to deal with peaks and troughs in demand makes sense. It’s already something occupiers do and is more commonplace in Europe. And while figure regulations and other historic red tape are cited as barriers to it happening more in Britain, we believe such problems will fall away.

Environmental concerns

As a sector so dependent on road transport, the logistics sector inevitably emits a substantial amount of emissions. The sector is estimated by the Freight Transport Association to be responsible for 30 percent of all transport emissions, and approximately seven percent of UK carbon emissions all in all.

From a real estate perspective, the Minimum Energy Efficiency Standards due to come into effect from April 2018 are a potential concern, with re-letting of assets with an Energy Performance Certificate rating of less than E forbidden from that point. All existing leases for properties rated at less than E will be terminated in April 2023. However, developers and investors are moving towards building greener sheds, as well as incorporating clean energy generation methods such as solar panels or waste processing schemes into their assets.

Market disruption - known knowns in transport and data

Some infrastructure proposals seen in recent years would at first seem more suited to a sci-fi movie than as long-term solutions for running containers to sheds. Nevertheless, should any of the proposals prove viable (both technically and in cost), they would undoubtedly transform logistics as we know it.

1. Google is famously testing a prototype for the driverless car, which it predicts could be road-ready by 2020, but from a logistics angle, operators may be more interested in the trials for ‘HGV platoons’ currently being funded by the UK Government. These platoons would involve driverless convoys of up to 10 trucks closely following one truck with a human driver.

2. Prohibitively high development costs and disagreement even within China on their viability as a rail solution mean that we are probably unlikely to see transcontinental 270mph magnetic-levitation train lines connecting East with West any time soon.

3. More creatively, Switzerland has seen proposals for subterranean sheds connected by Elon Musk’s much hyped 760mph ‘Hyperloop’ concept - something which would certainly be one interesting answer to the UK’s land constraints crisis, if it comes to fruition.

However, as much as it is easy to get excited by the transport technologies of the future as logistics solutions, it is worth recalling that the UK’s HS2 project is not forecast for completion until 2033. Given the substantial development times involved, infrastructure investment may be better focused on delivering capacity improvements using technology we already have in hand, before considering investing in unproven technologies still under development.

From a data perspective, network upgrades such as 5G will doubtless encourage further penetration for online retail. Efficiencies could be driven further by co-ordinated logistics technology platforms, which would increase the viability of existing sheds customised to bespoke technological fit-outs. In addition to this, a standardised platform which saw widespread use would open the possibility of the big data generated by the platform being used to identify further efficiencies in supply chains, both within automation and within national and regional logistics networks.

From a market disruption perspective, manufacturers and wholesalers - particularly of generic goods less likely to receive substantial mark-up from branding - could emulate the Asian market and start selling directly to consumers. By cutting out the retail middle man, this would generate substantial increased demand for sheds as fulfilment centres, particularly near ports delivered to by international manufacturers.

Disruption - known unknowns

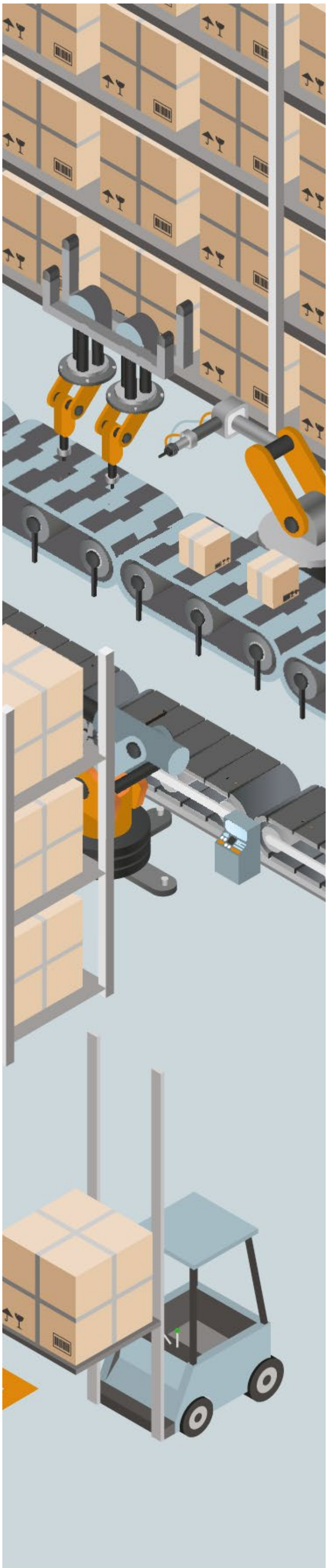
Brexit is the clear standout known unknown. However, the general assessment of the sector is that e-commerce will continue to grow, even if the retail sector as a whole sees a downturn from the outcome of exit negotiations.

Third party logistics firms are already making use of the Internet of Things (the widespread networking and monitoring of a firm's physical assets, such as vehicles or pallets) as a way of improving the efficiencies of their supply chains by reducing empty capacity in their delivery, or calculating how delivery routes could be made more efficient to reduce distances between dropping off for one customer and picking up from another. How the Internet of Things can develop further to generate even more efficiency for the sector is not known; what is considered inevitable is that it will do so.

Of course, there is the ultimate disruptor that is the free market: for every Blackberry, there is an Uber. Plenty of unknown unknowns will no doubt emerge from the constant tumult of start-up innovators.

Conclusion

The fundamentals for industrial real estate are strong and at the prime end, the asset class has become almost economically countercyclical - seeing growth when other sectors of the market are faring less well. Technology will undoubtedly put more power into the hands of both consumers and occupiers, changing the way people buy goods and how companies manufacture and move them around. No one can yet predict the full impact of emerging innovations - be they driverless vehicles, robotics or big data. But if the last few years have taught us anything it is that anything can change. Sheds are evolving to meet the demands of their own customers - be they manufacturers, delivery firms or e-commerce giants. With the right political support, the sector can play an increased role in driving our economy and become an ongoing driver of returns for investors.



POLICY RECOMMENDATIONS

Following extensive research and discussions with industry-leading real estate, logistics, transport and retail experts, we have set out 12 policy recommendations to feed into the Government's industrial strategy and support further refinement of transport and planning policy.

1 Government must recognise the importance of logistics and industrial property to the country's economy

The success of the country's economy is, in large, part dependent on its manufacturing and retail sectors, which together make up 21.3 percent of the UK's GDP, contributing £331bn towards the economy and employing seven million people (22.6 percent of the workforce) all in all. These companies are dependent on industrial property and warehousing, well funded road and rail networks, and a tax system which encourages investment. While it is vital that there are sufficient homes for our growing population, the need for industrial space must not be overlooked purely because it is not seen as a short-term vote winner.

Industrial and logistics buildings provide a wealth of employment opportunities, both in the low-skilled jobs historically associated with the sector and the increasingly highly-skilled, specialist jobs created from modern manufacturing, logistics and e-commerce. The sector is a vital source of employment outside London and the south east, particularly in the Midlands and North, and in coastal areas that have been largely forgotten at the expense of our cities.

There needs to be a top-level acceptance of the role these sectors will play in our future economic growth. Additionally, there needs to be cohesion in the measures taken across the raft of policy areas which play a supporting role. If we are to have a Britain that works for everyone, we must prioritise support for industry.

2 Councils should be made to designate land for industrial use

While nobody could deny the need for housing across many communities, historic businesses and uses (which have less aesthetic appeal), are pushed to the boundaries of our cities. It has been routine for old industrial sites to be replaced by supermarkets or homes, following compulsory purchase orders (CPOs). This can be seen in east London, where the Olympics regeneration district saw many former industrial uses also face CPOs. We need a balanced economy that has the right mix of homes and employment space.

The new housing and planning minister should encourage local authorities to prioritise properly thought-through employment policies. Housing policy trumps employment policy within local planning, which is not necessarily always the best priority. There should be far greater curation of uses, and this must be intertwined with greater clarity at a national level.

We should also consider what different types of industrial sites are now needed. The changing nature of the economy means the built environment also has to change. How we resolve this will take careful consideration. But, crucially, we must recognise that if consumers want products within 24 hours, 60 minutes or virtually instantly, then infrastructure, real estate and transport will have to support this.

The federalised structure of Germany and Holland's zonal planning structures and building regulations both make development and planning much more simple on the continent. There is much Britain can learn from these countries that would serve both to increase investment and to reduce public sector expense.

3 Government should work in conjunction with the private sector to bring forward more public land for designated uses

There is a shortage of land identified for industrial use. The sites that are still available tend to be either greenfield (which can be controversial, and therefore difficult to develop), or a long way from key junctions. The problem has been exacerbated with the turnaround of the economy, better fortunes for manufacturing and the rapid growth of internet retailing. This growth in demand for industrial space, and the dwindling supply, has seen rents rise, putting pressure on business costs. The Government needs to encourage local authorities to identify more land for industrial development, and in suitable locations near to transport networks and junctions. Finding uses for public land could create long term income for cash-strapped councils as well as Government departments.

Finding innovative ways to create joint ventures with investors to provide big box warehousing or local distribution hubs, could generate significant value for the long term.

4 Government should look to directly support development by SMEs

Many sites that could potentially support industrial development are unlikely to be unlocked because of the lack of infrastructure - such as roads, power or sewerage - and the prohibitively high cost of providing it. The Regional Development Agencies (RDAs), abolished in 2012, were an important source of funding for infrastructure. They bridged the gaps between local authorities, an important way of recognising that infrastructure spending often benefits adjoining council areas. The financial power available now to Local Enterprise Partnerships is very limited compared to that of the RDAs.

The Government needs to consider a greater role for the Homes and Communities Agency, which has £4.7bn of grant funding available for affordable housing, to kick-start industrial development with a similar kind of budget for land assembly, remediation (cleaning up sites) and above all, installing vital infrastructure that could offer many broader benefits to both employment and housing delivery.

Given that funding is limited, the other route ministers can take would involve debt guarantees that could better support the financing of difficult schemes such as pre-let and schemes built to suit occupiers form the majority of new developments. Measures in the housing market to underwrite development finance and then syndicate it to the bond markets provide both a good investment for fixed-income buyer, and a lifeline of funding for those needing to access more reasonably priced finance.

5 Invest in and empower local planners

Developers and ministers routinely criticise local planning for being slow. The complexity of the planning process, and the many contradictions between national policy declarations and local concerns, are exacerbated by the shortage of planning officials and lack of Government investment in the profession.

Government should give greater delegated powers to planning officers so that non-contentious applications can be dealt with and approved without unnecessary delay. Above all, it needs to better resource the system. Developers are largely content to pay a surcharge to support quicker processing of applications and a better, more rigid structure to enable this to happen in a transparent fashion should also be prioritised.

6 Properly coordinate transport infrastructure

We must ensure that major projects contribute to the logistics network effectively, and that growing needs are supported through what we are creating.

We should also clearly set out the routes of major projects at an early stage, avoiding costly delays at planning, and allowing investment to be deployed early. We have a plethora of National Policy Statements on energy and transport, but not one of these sets out any site-specific policies, apart from on nuclear power.

Policies around Nationally Significant Infrastructure Projects, when national policy statements apply, are too vague and open to interpretation.

The final part of this is reforming the Development Consent Order (DCO) process, which applies to significantly sized infrastructure projects such as airports, harbours, railway alterations, and construction of rail freight interchanges. The DCO process is long, complex and expensive, which is a disincentive. There's almost an incentive to keep things small and simple so they stay within the local planning regime.

Additionally, the recent decision to build a third runway at Heathrow must go ahead without further delay. The government should do everything in its power to expedite this long overdue expansion.

7 Better road transport

The Government has already invested significantly in road improvements over the past six years, particularly on the M1 and M6, and has committed to further investment, but the pace of investment must not be slackened. The number of road users is continuing to rise, mitigating the improvements that have been delivered.

In addition to road improvement, we propose that Highways England collaborates more closely with Network Rail to better integrate capacity between road and rail considering how we can better use off-peak periods during the night. A single strategy delivered by Highways England and Network Rail would better serve the needs of logistics businesses.

8 Using finance and technology to drive increased rail freight capacity

The Department for Transport's own national policy statements make the case for rail freight being greener and more efficient. While many companies with the scale to benefit do use it, for the majority it is too expensive and the complexity of access rules it out.

Due to the relatively short distances covered domestically (compared to those on the continent), and the high cost of access, rail transport is not a viable option for many companies. The situation will become worse as passenger numbers increase and the line space available for freight diminishes. HS2 and 3 will free up lines in the centre of the country, but they will not benefit many of those moving freight from coastal ports to central hubs.

There are several things that should happen:

a. Harmonise access contracts so they can function alongside real estate leases

At present, there is a disparity between the amount of time an occupier, such as a supermarket, can rent a warehouse and the length of time it can contract to access the rail freight network. Leases for major distribution facilities are routinely in excess of 20 years, because of the vast expense occupiers incur in fitting out the sheds with complex plant and technology. However, the lack of certainty around rail access massively undermines confidence. After all, why invest in a huge facility reliant on rail access when that access is not guaranteed? We need to harmonise these disparate areas of regulation so they better support investment.

b. Better use of technology to manage the network and incentives to create new rolling stock

At present, rail freight is subservient to commuter trains on the network, and the need to operate in the gaps between passenger trains is often made more difficult by delays, sometimes caused by damage to the track from excessive loading. By incentivising the use of more modern freight carriages - either through the tax system or through Network Rail's Track Access Charging System - we could see less damage occurring on our railways, which would increase capacity. There is little incentive to invest in new rolling stock. This needs to be better coordinated.

c. Rationalise charges

If the Government wants to move more freight off the roads and on to rail, it will need to ensure that the charges paid for accessing the rail network are fair. Currently, there is not a level playing field, as the free road network is obviously more attractive for most transport companies.

If the Government wants to attract private investors to fund new rail infrastructure, it will need to guarantee the return for investors. Infrastructure investors normally expect their payback to come over time from the charges paid for the new services. This is harder for freight, because the charges paid are essentially governed by regulation, and if they do increase, customers would be to likely to move back to road rather than pay them.

9 Focus on skills

One of the biggest risks to many of Britain's business sectors is our future pipeline of skills. This is in evidence both in the road haulage sector, which currently has an employment shortfall of 60,000 hauliers, and similarly in construction, which faces an estimated shortfall of 700,000 workers over the next five years.

However, technological advances that can help to overcome these gaps are in evidence. One such example is in Sherburn-in-Elmet near Leeds, where LGIM is creating the world's biggest modular housing factory, which will be able to factory produce housing units and reduce building times by 70 percent. Techniques such as this will allow the construction industry to focus more on off-site development. Modern methods could generate huge investment for regional areas, revitalising and creating new industrial space and creating significant employment.

There has to be some overarching Government acceptance of the need for wholesale reform of the construction sector and we call on ministers to adopt all the findings from the recent Farmer Review, using this as the basis for the construction sector's own industrial strategy.

10 Making business rates transparent and fair for all ratepayers

We call on the Government to keep its previous promises around radical reform of business rates. The business rates regime has become increasingly onerous, largely because it is the only tax which increases in times of economic downturn. On top of this, recent changes to the appeals system as set out under the 'Check, Challenge, Appeal' system have led to a far less transparent system, restricting the basic rights of rate payers to understand the basis upon which their original bill was calculated. This avoidance of full disclosure is not only unfair, but also potentially damaging to economic growth. We need Britain to be perceived as being open for business and fully transparent: while we seek to attract companies with low corporate tax bills, the increasingly punitive nature of business rates will have them seen as a stealth tax.

Business rates generated £27.8 billion across Britain for the Treasury last year. With the forthcoming 100 percent devolution of rates to local authorities, ministers will not be keen on any measures that reduce revenues and increase the need for supplementary funding for councils. However, making the system fairer doesn't necessarily need to involve collecting less money. It means more frequent revaluations as well as ensuring that those who have seen their property's value decrease and are eligible for a reduction are properly reassessed to keep bills in line with property values as much as possible.

a. Exemptions for speculative schemes

For any speculative development, the Government should not levy rates until the building has a tenant. This would encourage more investment, leading ultimately to higher tax revenues occurring more quickly. The charging of business rates on empty properties is a disincentive to the speculative development of industrial and logistics property. Some local authorities delay entering speculatively built properties in to the national rating list until the building has been occupied, removing the empty rate risk and making development more likely. The Government should set national guidelines for this rather than just leaving the choice up to individual councils.

b. Levelling the playing field

There has been discord from ratepayers around the disparity between industrial online retail occupiers such as Amazon and traditional high street bricks and mortar retail. However, unlike all other non-domestic properties, industrial stock is valued on the basis of the equipment inside and the rise of mezzanine, high-tech and multi-storey sheds could lead to a levelling out in the difference between industrial and high street retailers rates bills.

c. More frequent revaluations

The consultation earlier this year on increasing the frequency of property revaluations for calculating rateable values for business rates was a welcome first step. The current frequency of revaluations once every five years (with next year's updated valuation to be the first in seven years) presents many taxpayers in London and the South East with steep increases in their rates bills, which would be more manageable if there were shorter periods between each business rates revision. A switch to a more regular system would soften the blow, particularly as the sharp increase in the value of logistics assets since the last revaluation in 2008 could potentially tip businesses with tight profit margins into the red.

11 Continuing EU funding after Brexit

Currently, various forms of funding and grants are available from the EU to assist with major infrastructure projects that encourage the development of industrial and logistics property. This finance will no longer be available once the Government signs Article 50 and formally begins the leaving process. The Government must commit to at least matching existing grant funding once the UK has left the EU. As a net contributor to the EU of £8.5bn, an increase in infrastructure grants taken from this funding would be one method of stimulating growth and attracting investment during any potential post-Brexit economic uncertainty.

12 Create an industrial forum to identify sites and overcome barriers

National Policy Statements are produced by the Government for infrastructure and utilities, such as energy, water, and transport networks. Currently, the only national policy statement that features site specific policy is the Nuclear Power NPS. All the others, such as wind energy, have high level guiding principles for locations but remain open to the whims of ministers.

With logistics space being vital to future economic growth, a national forum recommending particular sites as suitable for either logistics use, or for infrastructure to assist logistics transport, would be welcome.

Contact

Jonathan Powling
Joint Head of Real Estate Logistics

020 7160 3245
jonathan.powling@addleshawgoddard.com

Catherine Fearnhead
Joint Head of Real Estate Logistics

0161 934 6379
catherine.fearnhead@addleshawgoddard.com

2 INVESTMENT AND DEVELOPMENT

Market perspective

A European and global view

Tipping the scales

Addleshaw Goddard
Jonathan Powling
Joint Head of Real Estate Logistics

Jonathan is a Partner in our Funds & Indirect Real Estate Group and co-leads our Real Estate Logistics Sector team. Jonathan acts for investors, managers and developers on all aspects of fund establishment and investment, specialising in 'corporate wrapped' joint ventures, acquisitions and disposals of commercial real estate portfolios.

A decade ago, we rarely saw investment deals for logistics assets from all but a few dedicated investors - institutional investors were drawn instead to higher yielding retail and office properties. Today, the picture is different - 'sheds' are in fashion in more ways than one - yield compression is being driven by rental growth (at last) which itself is propelled by an ongoing imbalance of lack of supply versus increased demand, driven by the rise in e-commerce and the change in consumer habits. Retailers invariably don't need more shops - they need more warehouse space which is technically advanced, often bespoke and capable of meeting the demands of their consumer.

Lessons have been learned from previous investment cycles. Developers and investors are reluctant to take risk on speculative builds - with pre-lets, forward fundings, or forward commitments to buy build-to-suit assets tenanted by 'institutional-grade' tenants over a 15, 20 or 25 year period being the most sought after investments in recent times.

With long-dated capital attracting negative interest rates in the safe havens of Government gilts and corporate bonds, it's not surprising that logistics assets occupied by the likes of Sainsbury's, John Lewis, Amazon, DHL and Dixons Carphone are attractive. For institutional investors and many pension funds with increasing liabilities as people live longer, the opportunity to access long-term index-linked returns is too good to pass up.

Such longevity also provides some comfort to occupiers with responsibility to meet spiralling fit-out costs (often exceeding the investor costs for the build) incurred in making the buildings fit-for-purpose - either by the automated technology it uses or the specific design features introduced to increase efficiency or enable last mile fulfilment. Living with young children, my mind imagines warehouses filled with sorting mechanisms akin to those in Monsters Inc., but even this is out-dated in terms of the intelligent technology contained in modern logistics assets.

For investors then, the identity of the occupier (or potential occupier) is, more often than not, fundamental to their investment decision. While some shoppers may scoff at the prospect of being seen in discount shops, for investors, the financials and wider economic benefits underpinning a forward funding deal for a new distribution centre for this type of occupier are comparable with a similar deal with Sainsbury's or John Lewis. In late 2015, Standard Life Investments' Long Lease Fund invested £30m to forward-fund a 335,275 sq ft distribution centre off the M6 near Wigan. Set to be Poundland's North West regional hub, the discounter agreed a 20-year lease creating 800 jobs locally.

In addition, the old adage of "location, location, location" is no less important to fund managers looking at logistics assets than it is to the nation's favourite residential property hunters. Whether it be a big box warehouse in the Midlands, or a small urban unit within the M25 - connectivity to road, rail and sea is important to investors, developers and occupiers alike.

Increasingly scale is everything, as the likes of Prologis, Peel, Tritax and SEGRO have proven beyond any doubt. The merger in September 2016 between Peel Logistics and Evander Properties followed a tie-up between Roxhill Development Group and SEGRO plc, aimed at unlocking more than 10 million sq ft of big box sheds across the Midlands and South East.

Just as these joint ventures are helping British-based firms scale up, we're likely to see significant consolidation and M&A activity globally as more investors seek to get a foothold in the market while others cash out. We've seen this exact same pattern occur in student accommodation, which saw £6 billion of inflows during 2015 as investors looked to access similarly long-dated income. We also now have the €2.4bn acquisition by GIC of P3 Logistics as evidence that the market is moving this way.

In the centre of this activity, there will be an increasingly important role for those involved in deal structuring to provide investors with the flexibility they need to be able to scale up or scale down at any given moment. Complex ownership structures established across a number of jurisdictions (once the preserve of the most sophisticated investor) have become a common feature of the market as investors seek the perfect blend of optionality and tax efficiency,

However, whatever investment routes are taken, expect real estate logistics assets to continue to outperform. IPF's UK Consensus Forecasts, which Addleshaw Goddard is proud to sponsor, already highlights this. With that in mind, I look forward to seeing increased activity that may see an even greater level of stability in the sector.

A shift in shed requirements has led to big changes for the logistics sector

M&G Real Estate
Paul Crosbie
Investment Manager and Head of Industrial & Logistics

M&G Real Estate is one of the world's largest property investors, managing over £25.9bn of assets over 110m sq ft of space globally. Paul Crosbie, Investment Manager and Head of Industrial & Logistics, oversees M&G's £2.3bn industrial portfolio.

In what ways have tenants' requirements evolved in recent years for warehouses?

Industrial property has certainly advanced in recent years. A modern day warehouse occupied by Amazon is completely different to a warehouse a supermarket operator would have used 20 years ago, both in terms of the design and fabric of the building and the technology used within. Traditionally, developers have built warehouses to 10 metre eaves heights, but more efficient racking methods and the introduction of automation has led to occupiers demanding taller buildings. Twelve metre eaves quickly became the standard and now, if we are to develop over 30,000 sq m units, 15 metre eaves is really the desired minimum height.

As warehouses have grown upwards, tenants are able to utilise this space more efficiently with additional mezzanine floors. This requires an increase in floor loading capacity to accept these extra weight points. We are increasingly experiencing tenants asking for bigger yards - a minimum of 50m for anything over a 10,000 sq m unit is ideal, with additional space needed for separate staff parking which means site densities are less.

The other big change is the emergence of 'urban logistics'; smaller units located close to conurbations for last mile delivery fulfilment to homes, as well as catering for the high street emergence of click and collect. This will continue with the expected levels of growth of e-commerce going forward.

What has that meant for finding suitable locations for development?

Increased space requirements make it more difficult to find locations for new sites, but the loss of employment land to higher alternative uses has had the biggest impact upon supply. The best locations are still very much the same as they have been - big boxes are generally based along the major arterial motorway networks, with small and medium size units located close to conurbations. The new Government appears to be pro-growth and is likely to promote investment into infrastructure. This is reassuring, as HGV transport is likely to remain the dominant form of freight transport in the UK, simply because distances to travel are not that far. In fact, we could expect to see driverless trucks in the medium term.

Do you see multi-storey warehouses as seen in the Far East taking off in the UK?

As well as surmounting the issues of finding locations to develop, how to use the land more efficiently (once sourced) becomes a key question. As mentioned, we are already seeing taller buildings with stronger floor loading as occupiers install three or four mezzanine floors. This, in practice, is effectively a multi-storey warehouse, but in the eyes of the occupier is just more efficient use of space - looking at cubic capacity, not just floor area. So why not multi-storey industrial?

Where I think this is likely to come through is in urban locations with the obvious example being inner zones of Greater London. The demand for last mile facilities is increasing; e-commerce is still growing and, in these areas where supply of land is so restricted, as pressure builds as a result of increasing demand for alternative uses, namely residential. A standard industrial unit, which is typically limited to a single ground floor unit, is not the most efficient use of high value land in an urban location - especially when compared with residential property, where multiple floors of at least four storeys are standard in inner cities.

Not only do we think urban areas are where we could see the emergence of multi-storey warehouses, they may come in a separate form - mixed-use developments. Combinations of ground floor warehousing with residential housing above is more likely to become widespread in urban logistics. The common worry with mixed-use developments involving logistics is noise disturbance to residential occupiers. However, urban logistics involving courier style van-based movements is likely to be more acceptable to planners and residents.

We are likely to see more innovative methods to unlock brownfield development sites and the emergence of multi-storey and mixed-use development in core strategic urban locations. The development cycle is far more considered this time around and location is everything.

What has been your experience of re-letting?

Obviously things become easier if you have a high quality unit in a good location, but more often than not, location wins over quality. Industrial assets may be quickly and relatively cheaply refurbished and modernised if the fundamentals are in place - eaves heights, parking and yard depth. A little capital expenditure can go a long way towards repositioning an asset and making it more presentable to the marketplace.

How has the increase in demand for bespoke fit-outs affected your development plans?

We have around 3m sq ft of industrial space either recently completed or under construction. Approximately half of that was built speculatively, including Logistics North at Bolton, Imperial Park at Coventry, and Optimus Point at Leicester.

When considering speculative development risk, the main objective is to create the most flexible unit possible in order to appeal to a wide variety of end occupiers. We do this by making an informed judgement on the likely needs of operators in the area. Taking the buoyant West Midlands automotive sector as an example, we must be prepared to accommodate occupiers from the manufacturing, e-commerce and logistics sectors. A manufacturer has far different requirements in comparison to a retail logistics operator. The goal is always to build to the best institutional-grade quality to allow for maximum flexibility.

We often find, in pre-lets, that tenants will carry out specific works on doors or other elements of the asset to suit their specific needs. Tenants are more likely to sign up to leases if they know the essentials are in place so other elements can be modified afterwards. Location, a minimum 15 metre eaves height and strong floor loading are essential. Future proofing buildings in this way means we have higher build costs up-front, but it makes it easier to secure tenants.

Are financing structures evolving for logistics schemes? Is the current financial climate an opportunity for the sector?

The traditional method of the funder buying the site alongside a developer and then funding the development on a monthly draw down whilst accruing rolled up interest is probably still the most effective route. The biggest variable in the underwriting is determining the market yield to apply. Prior to the EU referendum, the spread between yields applied to existing up and built assets and those applied to speculative development appraisals had been squeezed to around 50-75 basis points. Prime yields and indeed the spread were under pressure for prime opportunities in the South East.

Immediately post-referendum, the appetite for risk has changed. Available funding from institutions for speculative schemes has slowed, so we may see that yield spread widening. That spread may well change as confidence in the economy and property markets are restored.

The industrial sector is seeing a number of transactions taking place at pre-referendum pricing - such as our own sale of Union Square, Trafford Park at 5.1 percent NIY, which demonstrates that capital is holding up at the prime end of the logistics sector. We wouldn't say that this sector is immune, but arguably industrial assets should be among the most resilient in value during this period of Brexit volatility, due to the underlying demand-supply dynamics. The continued rise in e-commerce means the occupational market has strengthened and proved resilient. As we enter a 'lower for longer' interest rate and return environment, the investment case for industrial property remains compelling.

All of these factors present an interesting opportunity to not only buy well located assets, but also to continue developing high quality product in supply constrained locations.

Combinations of ground floor warehousing with residential housing above is more likely to become widespread in urban logistics.

The £50.5m Imperial Park scheme near Coventry is one of M&G's speculative developments, providing 575,000 sq ft of Grade A space in the West Midlands

Big is beautiful: why investors are chasing prime industrial assets

Tritax Big Box
Bjorn Hobart
Partner and Deputy Fund Manager

Tritax is a fund manager that oversees Tritax Big Box, the UK's only REIT which funds the development of large sheds over 200,000 sq ft. The Tritax Big Box portfolio holds 33 assets, valued over £1.6bn. Partner and Deputy Fund Manager Bjorn Hobart is responsible for sourcing assets for the fund.

We've seen increasing yield compression across prime industrial property over the decade. Are sheds the "new retail" or simply over-priced?

There has been a definite convergence of the yield profile of logistics space over the last ten years. However, it is important to note the increasing polarisation we're seeing in the sector, along the same lines as that seen in retail during the last cycle. We have a two-tier market. In the same way as you couldn't compare Brent Cross shopping centre with a regional high street, similarly not all logistics assets are the same. Only those best in class assets achieve the prime yields achieved by prime retail because the fundamentals are similar: strong buildings, tenants with good covenants, great locations and long leases with indexation or real prospects of rental growth.

From a Tritax perspective, in the assets we buy we see a distinct trend that explains the convergence on logistics yields. Industrial is, in many ways, the new store space for retail occupiers. With the high street increasingly becoming the "showroom" for retailers, their logistics space is becoming the hub that fulfils the purchases, whether bought in the shop or online. Before, a high street retailer would typically have had a ratio of 60:40 retail floor space to backroom stock space. Now it may be closer to 80:20 - having less product held in the storeroom, but relying on logistics assets to rapidly supply the stock.

Retailers are able to substantially reduce their property costs by rationalising portfolios. Those, that have successfully evolved, like Dixons Carphone and Sainsbury's (following its Argos takeover) will be well placed to survive any bumps ahead.

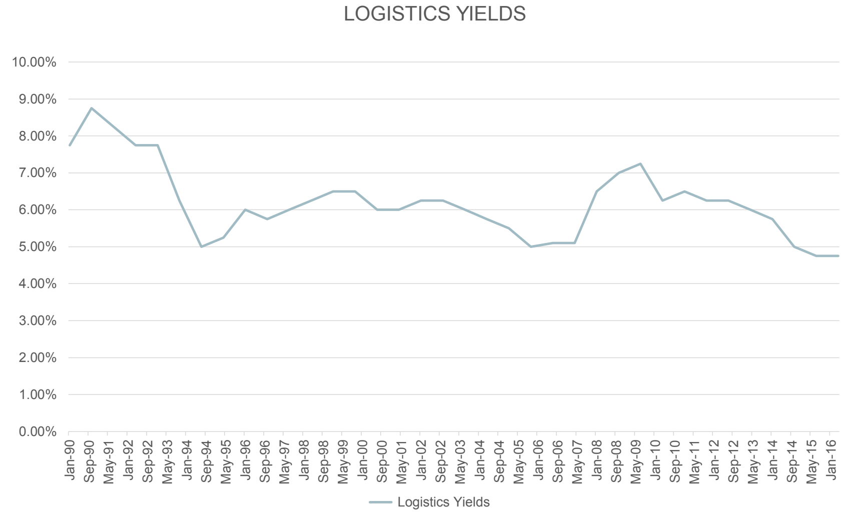
The shift in costs is two-fold, however. Firstly, from the amount a retailer spends on property compared with transport for delivery, but also in who pays for the transport. Before the e-commerce boom, the customer would foot the bill: they would be the ones making the journey to and from the shop. Increasingly, those are now delivery costs being borne by the retailer.

The knock-on effect of this is that retailers are focusing on gaining economies of scale to reduce the cost per unit of getting an item to the consumer. So that means adding automation to reduce the number of employees handling an item, but also looking for ever larger sheds so they can store greater volumes. Investors are keen to tap into this opportunity and the supply-demand imbalance in the market has pushed up prices. Against the backdrop of negative interest rates and a huge amount of volatility across the equity markets, being able to own assets yielding over 5 percent is seen by many as highly attractive.

The Dixons Carphone national distribution centre at Newark shows the versatility of modern logistics assets, housing the firm's main service repair centre as well as its supply chain operations

We were delighted to be one of the only listed property companies to successfully raise finance this year when our new share placing attracted £200m of investment. We believe this underlined the attractiveness of prime industrial property as an increasingly counter-cyclical asset.

The strong growth of the logistics sector this decade has fed off the glut of space built speculatively before the crash. DATA: Savills Q3 2016



DATA: Savills Q3 2016

Are there other ways in which occupiers are driving efficiency?

To take an example of an asset we recently acquired, Dixons Carphone's 726,000 sq ft National Distribution Centre at Newark not only serves store supply, home deliveries and returns, but half the building is a tech hub home to the firm's main service repair centre. What we're beginning to see is more creativity in how occupiers use their logistics assets. They aren't just being used for the distribution of goods throughout the supply chain, but sometimes to house data centres and IT hubs for these firms that monitor the goods and efficiency of that supply chain. The advanced automation operating in a lot of these assets means a lot of these assets rely on much more skilled employment than the logistics sector required in the past. More occupiers are taking advantage of that to consolidate their need to attract skilled workers, and are creating technical centres of excellence at their warehouses that serve critical functions for their whole business.

What kind of effects are those trends having on lease conditions?

Those trends have a particular interplay with the supply-demand dynamics of the market at the moment. There are not readily available big warehouses over 400,000 sq ft that occupiers can just move into. As well as that, there is huge scarcity of sites where you can build a big box over 400,000 sq ft. That site will also need to be near a readily available skilled workforce and once you have that site, the company will also need big upfront capital expenditure outlay for the automation technology and fit-out required. It involves a huge time and cost commitment from occupiers.

What is the outlook for the big box market in the next few years?

When you combine the desire for certainty from occupiers in longer leases and indexation of rents with the strong covenants typically on offer, it adds together to make big box a particularly attractive investment class currently. It's offering strong, robust, sustainable income that provides bond-like returns to shareholders almost regardless of movements in capital values. At some point soon the value of industrial may go down, but the income from rent will remain.

Even if consumer spending levels off post-Brexit, households will likely continue to shop with the kinds of companies that occupy big box sheds. We still have growth potential even aside from index-linked leases, thanks to open market reviews where rents have grown. As such, we are confident big box is well placed as an investment.

We have a two-tier market. In the same way as you couldn't compare Brent Cross shopping centre with a regional high street, similarly not all logistics assets are the same

Industrial is the high street of the future

Legal & General Investment Management (LGIM)
Jonathan Holland
Senior Fund Manager

LGIM is one of Europe's largest asset managers, with its property fund LGP the UK's fourth largest, holding £18.1bn in assets. Senior Fund Manager Jonathan Holland, who has over two decades' experience in the logistics sector, manages LGIM's £1.7bn Industrial Property Investment Fund.

From an investment perspective, how has the sheds sector changed?

The sheds sector is certainly more sophisticated than it was, from an occupational and investor's point of view. Ten years ago industrial was considered the poor relation in terms of the commercial property investment asset classes, but now it's seen as reliable through all parts of the cycle, and the outlook is particularly positive. E-commerce is forcing up occupancy rates and the supply-demand imbalance is driving record growth - the strongest we've seen in a generation - and it should continue for the next few years.

For investors such as LGIM that take a long-term view, to what extent does a short-term supply imbalance make much of a difference? Are you confident these aren't just blips, given the sector performs akin to corporate bonds now?

The two sides of the industrial sector need to be considered separately: logistics warehouses, versus standard smaller multi-let units.

If you look at big sheds, you typically have bond-style income, long leases, and stable rents, all backed by good covenants. These assets are very attractive for annuity and investment funds, and you have strong growth coming through with an attractive demand/supply imbalance.

Multi-lets are at other end of the spectrum. They've generally got different characteristics, such as short leases, weaker covenants, and they need to be managed hard to deliver performance. But they are where we're seeing record growth in the sector at the moment. In London, floor space has decreased by 30 percent since 1980. There's a strong correlation between rental growth and decreased floor space. That trend is only going one way, particularly with alternative uses taking up some of the industrial supply.

Given the increasing demand and restricted supply of units, can existing sheds be re-used, or are occupiers only interested in bespoke properties?

E-commerce should lead to demand for more industrial floorspace, particularly last mile delivery. A lot of the existing kit is functionally obsolete for that purpose, so it needs to be adapted or demolished and new space built. However, the demands of the space are different now. First of all you need large yard areas to cater for the large vehicles coming in and out, and a large number of loading doors, because you've got to support fast throughput for those types of units. You've also got to cater for smaller vehicles that will deliver direct to consumers.

What is the landscape now for development, including speculative development?

Looking back, 2010 was the peak supply of floorspace - 25m sq ft was available and 10-12m sq ft was taken-up per annum, of which 50 percent was typically bespoke/pre-let. The available supply today is below 5m sq ft, and there is an undersupply of floorspace in certain size bands in certain regions. However, there is definitely a reluctance of funds and other investors to speculatively develop this cycle. They are much more cautious,but, more positively, if the supply and demand characteristics are right, you can ultimately achieve an early win.

More industrial land needs to be allocated, but this is difficult, particularly with local authorities in the South East, where the word 'logistics' has connotations of low numbers of jobs and not much employment benefit for the locality. The majority of modern warehouses are intensely occupied and staffed buildings employing a significant number of people. Amazon, for example, employs thousands at its warehouses, to the benefit of the local economies.

However, occupiers want units that fit their purposes, both now and in the future. Building a bog standard warehouse is easy and lots of buildings built 10-15 years ago are still as functional now as they were then. What we're seeing now is growing demand, which will increase in future, for multi-storey warehousing like the property we have funded for Amazon in Tilbury, which has a number of floors, and, through the use of technology, can be used much more intensively than traditional warehouses. Increasingly, we will see the development of single warehouses with integrated mezzanines that allow a very intense use of the site and support the future use of electronic picking systems.

Is there scope to standardise designs for tenants like Amazon?

Some tenants will have designs of units they prefer for the tech they use and will want to replicate that design throughout. It's up to the occupier's preference. From an owner's point of view, it would be ideal for all designs to be uniform, but the occupier is boss! Some synergy would be fantastic, but typically an occupier taking a shed larger than 400,000 sq ft will want a pre-let nature, bespoke design.

How much is sustainability a consideration once more?

It is a key part of our investment

process and philosophy, and a core area that has to be addressed in any proposal for our portfolios. We set annual sustainability objectives at an asset and fund level, and every managed asset in our portfolio has an in-depth sustainability plan detailing every possible sustainability improvement. We seek to achieve a minimum BREEAM sustainability rating of Excellent on all new-build schemes and major refurbishments, and look for assets that are ideally top of the range in terms of their energy performance. We have a target to reduce our energy, carbon and water usage by 20 percent by 2020, compared with our baseline. As of 2015 we have managed to reduce emissions across all of our properties by 17 percent, with electricity and fuel use reduced by 15 percent and 23 percent respectively. So, not only is sustainability a consideration: it is one we're keeping real pace on.

Sustainability gets similar interest from an occupiers' perspective. Larger occupiers are particularly keen to hit their corporate and social responsibility targets too, and they want to know how they can make their supply chains as green as possible.

What scope is there for renewable energy generation on industrial assets?

From an LGIM perspective, we look across our assets to see what we can do in terms of putting green features in, and we design our schemes with sustainability in mind. In terms of renewable energy generation, we recently received permission for a scheme in Castle Bromwich near Birmingham, which will process 105,000 tonnes of waste each year into sustainable energy for sheds and other commercial users nearby.

There are other ways of greening assets as well. Warehouses are ideally suited to greening, as their typically large flat roof areas are perfect for fitting photovoltaic solar panels - which also have the benefit of having shorter payback times nowadays.

Where do you broadly see the sector in the next ten years?

Ultimately, the high street's loss is the industrial sector's gain. Industrial is the high street of the future - your new high street equivalent may be that multi-storey shed in Tilbury, which is where the goods are being distributed and sold online direct to consumers.

What we know is that suppliers will need to adapt to the way consumers shop. In ten years time, the market will clearly be different, but it would be a surprise for sheds to be in a worse position than now. There will no doubt be increasing pressure for suppliers to find units closer to urban centres. Certainly, that is where I can see rental pressure coming over the next few years.

E-commerce is forcing up occupancy rates and the supply-demand imbalance is driving record growth - the strongest we've seen in a generation - and it should continue for the next few years.

LGIM's Alchemi scheme in Crick, Northamptonshire is one of a growing number of sheds with solar panel installations

Mid-sized spread

BMO Real Estate Partners
Chris Nicoll
UK Head of Industrial and Logistics

BMO Real Estate Partners, formerly F&C REIT, is a property investment boutique, which manages a global portfolio of £6.9bn on behalf of individuals, professional investors, property trusts and institutional clients, with £1.4bn held in UK commercial real estate assets. Chris Nicoll is BMO's UK Head of Industrial & Logistics.

What are the kinds of assets you have focused on investing in?

Within BMO Real Estate UK we are responsible for circa 10 million sq ft of logistics and industrial floor space. Over the last five or so years we have primarily purchased urban logistics and mid-box assets (50 - 100,000 sq ft): partly due to their relative pricing against the larger big box facilities (100K sq ft +), but also due to a strong belief in the strength of this subsector.

Prior to that, we had acquired a good number of core logistics hubs on prime parks such as DIRFT (Daventry International Rail Freight Terminal) in Daventry and Hams Hall in Birmingham at very attractive levels. Since acquiring these investments they have outperformed many of the prime assets within the house from other sectors over the same period. This is hardly surprising given the way that pricing in the big box sector has rocketed in recent years. It's hard to comprehend, but there's been a nearly doubling in value within the last 8 years. The big box sector now attracts both institutional and overseas money, which wasn't always the case, and this is very much reflected in the level of yield required now to invest in this market.

The repositioning of logistics values ahead of some regional offices and a swathe of some in and out of town retail assets has been one of the biggest surprises of the last decade. It is very much dependant on location, but as an investor you could now have a secure 15-year income stream attached to a warehouse leased to a retailer, which is valued at a lower yield than that same tenant's commitment on a retail facility.

With the double digit returns of the last few years no longer forecast, some investors are moving further up the risk curve to provide their target returns, but this isn't a path that we have chosen to follow.

Large scale boxes have seen rapid growth in response to the rise of e-commerce sales. With the high street shrinking and retailers expanding their point of sale, these big box requirements have driven logistics demand; with occupiers increasingly seeking warehouses over half a million square feet. The speed of this expansion does also mean there is the potential for correction and contraction in the optimum size of facility as the retailers focus on their supply chain and final mile delivery which should result in a more finessed and efficient service.

Whilst not discounting the larger prime facilities, this is partly why we think that the size bracket for mid-size boxes - 50,000 to 100 - 150,000 sq ft is sustainable and may have greater longevity than some off pitch and poorly specified logistics units.

We have focused on the edge of medium to large conurbations, as not only will they be set to benefit from "just in time" delivery operations, they are also well placed for employment and these assets aren't simply limited to logistics use.

The pricing for mid box assets has now aligned with their bigger brothers and, for the foreseeable future, it is very difficult to envisage any returns from the logistics sector seeing a large shift outwards relative to other sectors.

To what extent has the switch from bricks and mortar high street retail to e-commerce fulfilled from logistics facilities generated a 'soul swap' between industrial and retail assets from an investment perspective?

They will always be very different asset classes, but investors now understand their relationship much better, and much of the snobbery associated with owning a "shed" has disappeared.

With long term commitments being made by retailers required to source Design and Build facilities, and with a desire to amortise the cost of extensive fit out over a reasonable term its now possible to secure a 15-year lease to an established retailer without any great concerns about a large fall in the rental rate at the end of the term. I don't think that retailers are universally committing to the high street or shopping centres for quite the same length of term across the UK, so you could argue there has been a transfer in attitude, but a decent high street will always hold more soul, and may be a safer investment in terms of long term strength in location.

There is also danger in assuming that the exponential growth of logistics houses will simply continue. Though e-commerce is generally predicted to see greater penetration from its current circa 15 percent of all sales in the UK, it will inevitably plateau at some point.

There are other factors that may slow and potentially reverse what looks like a very straightforward growth story. Enhanced supply chain efficiencies could eventually reduce the requirement for floor space. If, say, a product is produced overseas and can be delivered straight from port to person, (potentially switched directly from one vehicle to another) it cuts out the need for one or even two holding facilities.

The high street offers a social as well as retail experience, so there will always be a place for both.

How much are funds typically looking to get into logistics holdings?

A traditional balanced fund might have historically aimed for about 20 - 25 percent of their holdings to be invested in industrial property, multi-let estates offer a granularity of income, were high yielding and generally attractive in terms of offering solid non-volatile performance.

Institutional funds now recognise that logistics facilities have a size and massing that enables a large scale investment to be made in a single asset and are more comfortable taking in logistics property into their portfolios. With limited obsolescence and depreciation plus a healthy forecast of rental growth they may seek to increase this historical weighting, but the competition for prime stock is fierce.

There are now specific funds for big box investment, as well as many overseas investors specifically attracted to the UK given that its geography is very well suited to e-commerce logistics. This, coupled with a very genuine current lack of supply and projected rental growth in the industry should only serve to hold relative pricing at a very strong level for the foreseeable future.

The repositioning of logistics values ahead of some regional offices and a swathe of some in and out of town retail assets has been one of the biggest surprises of the last decade.

Getting the fundamentals right

Oxenwood Real Estate LLP
Stewart Little
Co-founding Partner

Oxenwood Real Estate is an investment firm co-founded in 2014 by Stewart Little and Jeremy Bishop, formerly of LondonMetric. Oxenwood's £135m logistics portfolio covers 1.7m sq ft across five sheds, with further logistics expansion planned.

How are you seeking to differentiate yourself from others in the market?

We're looking to exploit tenant markets and we typically hunt what we define as medium-term income, around three to eight years. We will also buy vacant buildings, and embrace void risk in occupational markets that we consider supportive. Being a relatively new business, we try to be nimble in our acquisition process, and openly try to create a 'partnership' approach with occupiers where, if tenants like the buildings and want to work with the landlord, they can participate.

Our strategy is simply to follow occupiers to locations that are strategically significant for them. We're less geographically focused or directed than some other investors. There's no doubt the South East will have tremendous growth prospects - particularly if the Government's decision to build a third runway at Heathrow goes ahead. But as growth and demand spreads out, there's the pressures of needing labour on tap and the need to access large sites, which will mean new locations have to be opened up. Crucially, demand is growing for bigger sites where occupiers have the freedom to create bespoke facilities that suit rapidly changing businesses. This is creating opportunity and opening new markets for investors such as ourselves.

Where do you see the landscape for financing projects now?

Post-Brexit there's been a drying up of development financing. Obviously it's different if it's pre-let or occupationally de-risked, but the financing piece is interesting for us. We look to work with best in class development partners and we have seen an increase in funding opportunities post-Brexit. Through my lens, the UK institutional investment houses have retreated from the speculative development piece, which I think will cause a further ripple to further tighten supply of new build in the sector.

How do you see the leasing market evolving?

Occupiers, just like investors, want greater certainty. Within our customer base we see a trend for occupiers seeking longer leases without exposure to market surges on rents, which allows us to create indexed income and remove the 'shocks' that could potentially frighten the occupier. We have had a number of examples of this within the last 12 months or so. The occupiers are rapidly moving to a model that sees these buildings as a profit centre rather than the 'necessary evil' of 15 years ago, and as a consequence we find occupiers from the retail sector (or related sectors) very proactive. As warehouses become increasingly integral to retailers' businesses, and a bigger slice of companies' property costs, so it follows that firms will want to shore up cost certainty.

My one caution relates to the necessary innovation with the wider supply chain which may result in an additional need for occupiers to retain flexibility within buildings as size needs move up or down. For example, I could envisage accepted heights of buildings today being outdated quickly as we innovate to higher technology within buildings, but with a reducing floor plate - particularly in the digital occupier market.

Do you see an opportunity to re-work big box retail parks for services, value add and mixed use?

In short, yes. Undoubtedly there are opportunities in some retail parks. The problem parks have is that the rents seem too high, albeit it is some time since we were active in this sector. That needs to be corrected, and I think it will be. I think retail parks will always offer convenience and perhaps their rejuvenation will stem from click & collect and a hand in hand approach with the e-tailing phenomenon.

What do you think some of the unsolved challenges are for retailers of all kinds?

The two obvious points are reverse logistics (dealing with returns) and the impersonal nature of internet shopping. Solving these quandaries requires innovation, and I can see a need for retailers to push hard to promote click & collect in order to maintain/lengthen the shopping experience, and create the personal interaction and/or related shopping in store. We now have Amazon, Doddle, et al who will pioneer that last mile piece. But the property market tends to meet demands of occupiers, rather than necessarily innovating itself. We've seen this first hand working with the likes of the 3PL operators.

The cost of debt remains low and markets continue to binge on QE. How do you see this impacting pricing over the next year?

We're firmly of the view that debt is always a 'cost' of the vendor and fluctuations in price or availability rapidly flow to value. As a result of intervention, we have experienced an inflow of equity into markets generally, but perhaps exceptionally into logistics and warehousing. As a result of wider economic conditions, the pursuit of income does not show signs of abating, and the logistics markets offer high grade income 'in spades'. There is a worthwhile debate as to the degree to which we operate in an 'asset bubble' caused by QE, but when we strip things back to the fundamentals of income, we see very robust occupiers and excellent income credentials in the sector.

Do you think the Government needs to give greater credence to supporting coastal regeneration?

Some of these places are in severe stagnation, if not worse. I just question what the appetite is to really help. Investment is going to be from the private sector, but there ought to be change and further support.

I look at what Peel is seeking to achieve in Liverpool. It is going to try to reopen the Manchester Ship Canal and serve Manchester. In Paris, logistics operators use water to get to downtown Paris, and barges are used in Holland and Germany. Many of the solutions we need to unlock are perhaps more obvious than we think. The fundamentals of global trade remain constant, whether you buy your goods via an app, a tablet, or from a stall in a market town.

Oxenwood's medium term holdings include a £13.7m Biggleswade distribution centre let to 3PL firm Bibby until 2022

Trophy assets: a new perspective

Addleshaw Goddard
Catherine Fearnhead
Joint Head of Real Estate Logistics

Catherine is a real estate Partner advising developers and investors on the development, pre-letting and funding of a range of asset classes. She also advises landlords and corporate occupiers on a range of landlord and tenant matters. Catherine co-leads our real estate logistics sector team and advises clients such as Omega Warrington and Prologis.

When investors talk about "trophy assets" they invariably mean landmark buildings such as the Gherkin in London or the Waldorf Astoria in New York. While industrial property might lack the glitz and glam of a Manhattan hotel, it is increasingly coming up trumps in offering investors long-term income from strong covenant occupiers.

Such investment has many benefits for communities, but these aren't always recognised by local authorities or through the planning system. 'Sheds' are seen by many as providing low density, unskilled employment - so why should local authorities accommodate this industry when they under pressure to provide skills and housing?

While it's easy to consider the employment provided inside a shopping centre many people don't properly consider the wealth of roles, the number of opportunities, or the level of skills required in today's distribution centre.

The emergence of a whole new breed of business over the last five years, driven by changing digital demands, combined with rapid technological advancements have transformed the humble warehouse beyond all recognition. The growth of e-commerce has resulted in the growth of the economic contribution this property class can make. The concept is rather simple: if more items are purchased online, then we need more space to store and ship them and more employees to service them.

Critics would argue that with increasing automation, less manpower is needed. But the reality is that more complex technology demands a higher level of skill as well as generating more throughput which, itself, requires more manpower. The other consideration is that technology is also driving manufacturing closer to home. While this may hurt the already embattled shipping sector, the ability of manufacturers to produce goods closer to the point of sale will cut costs and place increasing demands on the real estate sector, which is why so many developers are looking to future-proof their schemes.

In the North West's own landmark scheme, Omega Warrington, the online giant The Hut Group is a shining example. The owner of MyProtein and Zavvi is creating 2,000 new jobs while investing £100 million into a 836,000 square foot distribution and manufacturing centre. The new jobs will cover technology, engineering, digital, graduate and supply chain roles.

These come in addition to thousands of jobs being created by other major occupiers such as Travis Perkins, Brakes, Hermes and Asda at Omega South. And with jobs come housing. Last May, planning permission was also secured for 1,100 homes, along with shops, restaurants, and a hotel, at the southern end of the 550-acre Omega development zone. It is the perfect example of what happens when a local authority, like Warrington Borough Council, works with private investors and the HCA to make something happen.

Similarly, the support of Doncaster Council helped bring forward Verdion's iPort, a £400 million inland port project offering a new strategic rail freight interchange (SRFI) supporting businesses from across the region as well as the new six million square foot of Grade A logistics warehousing on site. It's a prime example of how the public sector can go the extra mile to harvest institutional investment with a developer who is prepared to be ambitious.

The development of warehouses has also come a long way, from state of the art multimodal facilities to better designed warehouses. Sustainability is firmly on the agenda for developers and occupiers and not just because of minimum energy efficiency regulations forcing owners to upgrade poor performing buildings.

In truth, major occupiers demand better and the market has begun to shift itself. Planning may require a BREEAM score of "Very Good" while consumer brands - and their customers - are far more aware of supply chain costs and emissions. As more businesses shift to warehouses, scrutiny over environmental impact and risk will only grow. This is undoubtedly a good thing.

In January 2015, Prologis completed a 1 million square foot distribution hub for Sainsbury's at Prologis RFI DIRFT. Combining a national import centre and long-hold facility, the building has its own 400m intermodal terminal. It is not only one of the largest, but also one of the most complex logistics buildings to be delivered in the UK.

The desire by Sainsbury's to centralise the logistics operations for its general merchandise business is commonplace among many retailers. Economies of scale are driving change and the ability of major companies to use rail further supports their commitment to reduce both costs and their environmental impact.

Multimodal schemes provide occupiers and investors with substantial benefits but they also open up a whole new sphere of regulation. Connecting to a public rail network is governed by the Office of Rail and Road (ORR), which is primarily focused on passenger trains, is complex and highly regulated.

One of the biggest challenges is the regulatory open access arrangements needed to secure rail movement. Permitted arrangements are typically on a five-year basis, which works outside of the UK where 4 or 5 year lease terms are the norm. However in the UK a major occupier is likely to have invested in a 20 or 25 year lease to spread the upfront investment over a longer term. Open access arrangements do not sit comfortably within the familiar institutional lease environment. We think that needs to change and that central Government needs to take a joined up look at how we create capacity, drive investment and encourage the kind of innovative development seen by many leading industrial developers.

So while the front pages of broadsheet newspapers will doubtlessly continue to swoon over swanky apartment blocks and glass-clad office towers, many investors securing long-term investments tied to future online growth may well take a different view of what a trophy asset looks like.

The emergence of a whole new breed of business over the last five years, driven by changing digital demands, combined with rapid technological advancements have transformed the humble warehouse beyond all recognition.

Fitting out and fitting in: how developers are making speculative development and mixed-use logistics schemes work

Kier Property
Phil Sutton
Director

Kier Property is one of the UK's leading developers and the firm behind the Logistics City brand, aimed at delivering last mile logistics units of up to 250,000 sq ft. Phil Sutton, director of Kier Property, is responsible for future developments.

In what ways have you seen industrial asset requirements evolve and change in recent years?

Traditional industrial specifications are being challenged by the emergence of the retail influence in the logistics sector.

Retail and logistics operators are evolving their operational requirements, which are influencing how they want a building to function. Rather than trying to adapt a traditional building, we are seeing more operators engaging earlier with developers to secure a facility that is tailored to their needs.

An example of this is the amount of returns being generated through online fashion retailing, leading to some operators establishing dedicated buildings to deal with returns specifically. These are often multi level buildings with multiple loading facilities catering for lorries, vans and high volume traffic movements. Cross-docking and even loading doors on all elevations have become more prevalent thanks to the rise of home shopping/delivery.

The increase in e-commerce has led to a growth in the parcel delivery sector, which has very specific requirements. Parcel delivery occupiers generally look for lower density designs with circulation around the entire building, which is rare for a traditional industrial layout. Often there is docking and loading access at all levels, and their buildings tend to have lower eaves heights, as high storage volumes are less of an issue due to the speed in turnaround of stock in the building.

Due to the variety of specific requirements for property, developers have been unwilling to try to second guess what this growing part of the market requires. Institutions were initially reticent about the bespoke designs because of the marketability of the asset at the end of the term. Operators have responded by offering higher rents and accepting longer lease terms to compensate the developer and balance the residual appraisal.

When it comes to speculative development, how are you accounting for the increase in bespoke demand?

The majority of the industrial/logistics sector still requires standard building designs, which is allowing the speculative development market to continue. At Kier Property we will engage with the market from the outset and often work in partnership to deliver a tailored solution. Where the market is strong but no specific tenants have been identified we will often develop part of the site on a speculative basis, leaving part of the site available for specific requirements.

Our Trade City and Logistics City brands are often speculative developed products but, where possible, we will incorporate flexibility within the design to allow for the buildings to be adapted. For example we try and avoid bracing in the bays next to loading doors to allow the tenant to add further doors if required. We also look to provide a floor slab with the potential to take additional loading to accommodate extensions to the mezzanine structures.

These kinds of considerations are vital, as it is challenging to secure pre-lets on buildings of less than 100,000 sq ft. Often, we have had to work with occupiers when we're already on site, adapting the buildings thereafter. We achieved this at our West Thurrock 'Logistics City' development with the builder's merchants 'Selco', who have taken a 36,000 sq ft distribution unit as part of the 165,000 sq ft site. We varied the planning to meet Selco's requirements for an extended yard area for their external storage and building dimensions. The rest of the development is being built out speculatively.

Kier's Uxbridge scheme was developed speculatively for the firm's Trade City brand, with units being built to different sizes to offer flexibility to potential occupiers

Some of Kier's schemes are making use of mixed-use arrangements. How have you made mixed-use work, given the friction between different use classes?

The key is getting the right blend and structure in a mixed-use development. Our Reading Gateway scheme is a 20 acre mixed use development site. The front 12.5 acres facing the A33 accommodates commercial uses including; retail, hotel, car showroom and industrial. The rear 7.5 acres are set aside for residential development.

Residential and industrial are two asset classes that present the biggest potential problems when adjacent to each other, so we had to be careful in how we went about designing the scheme; particularly in managing the interfaces between the different use classes to prevent residents being disturbed. The industrial units on the site are more retail-based and are aimed at accommodating trade occupiers, who don't typically operate on a 24-hour basis. These units are smaller and mostly serviced by vans and compact lorries, avoiding the need for a heavy logistical operation. The intensity of traffic movements that you typically see in traditional distribution operations is much less. In addition, the industrial area is separated from the housing with a designated road, with the access road serving as a demarking boundary for the different use classes.

Vertical separation is easier to design when developing mixed use schemes. Roads and landscaping can all be used to create buffering and separation but also a graded integration of uses.

At Sydenham we have a successful mixed-use development that includes an out of town retail park next to a 'Trade City' estate. The site has a large retail frontage, but also includes a trade park at the back of the retail park. The two uses are both successful in their own right but also feed off each other. There is definitely more scope for this mix of uses, as retail crosses into the distribution market and hybrid units evolve.

What can be done to unlock more site opportunities and speed up development?

While I am keen to see the green belt protected, there are opportunities for farmland near motorway junctions to have the planning use restrictions relaxed to enable industrial/ logistics development. This allows development for this use to be established in suitable locations near motorway links and away from residential areas.

To assist with the delivery of development, the planning system needs to be improved. Even with simple applications, a lot of local authorities are under-resourced and ultimately can't react quickly - partly because the planning process is still very bureaucratic. For example; when building an industrial scheme in an established industrial area, it could be approved through delegated authority, instead of going before a committee.

One way of expediting the planning system could come through having minimum criteria. For instance, on an industrial estate, if the density is less than 50 percent and the heights don't exceed 10 metres the officer should have the delegated authority to grant permission. CIL charges are already prescribed and a standard contribution could be levied to support highways. This would alleviate the ambiguity, speed up the planning process and assist the delivery of bespoke building solutions.

Kier's Uxbridge scheme was developed speculatively for the firm's Trade City brand, with units being built to different sizes to offer flexibility to potential occupiers

The Caddick case study

Caddick Developments
Myles Hartley
Managing Director

Caddick Group is a leading multi-sector property development and construction business. Myles Hartley is managing director of the company's Developments arm, which is completing the £100m Crosspoint33 scheme near Wakefield, which once finished will serve as a new regional distribution centre for TK Maxx.

Caddick Group has always had its roots in industrial and logistics property. In the early 1980s, our chairman, Paul Caddick, built the business building sheds along the M62 for a number of household names including Panasonic and Morrisons. From the beginning, we've taken pride in always seeking to exceed expectations in terms of both design and delivery.

Obviously a strong pipeline of development land is a crucial part of the equation. Our route to success has always been our ability to secure land holdings early, typically taking raw sites through the site allocations and planning phase through to delivery of the development. As a multi-sector company, our network is larger and the breadth of knowledge we've built up across planning, infrastructure, construction and transport give us a lot of in-house expertise.

Many larger developers can struggle making quick decisions. Despite being a large business, our private ownership structure and strong balance sheet enables us to make quick decisions. I've always found this nimbleness to be a key advantage when acquiring new opportunities.

For example, being able to quickly estimate the costs of servicing and remediating a site to create 'oven-ready' development land is key. Whether it's the cost of installing power networks or drainage, or remediating brownfield sites, many people outside of our sector do not appreciate the wealth of complexity in development.

Our most recent example of this was Crosspoint33 near Wakefield, a large greenfield site where we had secured a planning allocation for B8 use in 2014. In 2015, we signed up retailer TK Maxx on a significant pre-let to provide their new UK processing & distribution centre. The company, owned by US parent TJX which is, by some measures, the world's largest clothing retailer, required a new 635,000 sq ft facility for TK Maxx, having outgrown its existing Normanton site nearby.

The challenge was the timetable: the new facility had to be operational by early 2017 which meant we needed to start on site during the summer of 2016, only 7 months from initial discussions. The location was suitable but we had no planning consent and a raw site with no services or infrastructure. That meant we had seven months to agree a deal, submit a complex planning application, design and cost the development/infrastructure, ensure the design was technically sound and break ground.

Thanks to a huge team effort, all this was achieved and we were able to start on site in September 2015. Much progress has been made during 2016 and the scheme is due to complete in January 2017. We had a significant advantage as Caddick Group includes Caddick Construction. Being able to bring in a contractor from day one with the design team enabled us to twin-track the design and development. It meant we could provide optimum solutions for drainage and levelling the site as the design progressed. This saved a huge amount of time and meant we could start onsite immediately after we completed the design and obtained planning consent.

The nature of the site location posed particular design issues. Whilst very well connected by road and perfect for logistics, the site had no services infrastructure (drainage, power, gas, water). We had to take on the huge technical challenge of bringing in these solutions from over a mile away in all directions. This might not have been so difficult had we not had to drill under the A1M motorway for the service ducts.

The Crosspoint33 scheme is ideally located in the M62/A1(M) corridor, but the site was poorly connected for utilities

The local authority, Wakefield, also played a hugely supportive role in making this scheme happen. Wakefield Council set a superb example of how a proactive local authority can work with private sector developers to create something of huge value for the local economy. They were very keen to see the jobs remain in the area and were willing to engage early with sensible conversations about the challenges we faced. We worked with the council during the pre-application process to ensure the planning package could be agreed as quickly as possible. It was submitted and approved within nine weeks of submission, extremely rare for such a major application and testament to the level of Council support and engagement.

In part, this was down to the council's recognition of the economic benefits of the project and its determination to keep the employer in the district. Wakefield showed a huge amount of ambition and supported us to help secure a £750,000 grant from Leeds Local Enterprise Partnership to contribute towards the £7 million cost of installing the new site infrastructure and access road upgrade.

More funding of that kind would be invaluable for bringing forward future such projects. The "easier" sites have long since been developed: remaining sites tend to be either greenfield (and lack nearby infrastructure) or are further away from key highway junctions. Both types of sites often require huge initial outlay spending to fund the infrastructure that will make them viable. We need more public sector funding for key infrastructure to help unlock difficult sites, in much the same way as the HCA is able to assist unviable residential developments.

Funding to support developers in overcoming initial infrastructural barriers would be a real boon for the sector but more importantly, for our economy. The RDAs, abolished in 2012, were a great source of funding for infrastructure, but the financial power available to LEPs is unfortunately not on the same scale.

The Homes and Communities Agency has £4.7bn of funding available for grants for affordable housing. The industrial sector may be a perceived vote-winner in the way housing is, but the economic contribution is significant. A similar scheme to support employment development would be fantastic.

We need more public sector funding for key infrastructure to help unlock difficult sites

The Crosspoint33 scheme is ideally located in the M62/A1(M) corridor, but the site was poorly connected for utilities

Omega Warrington: Miller Developments view

Miller Developments
Chris Gardner
Development Director

> Miller Developments is a leading UK land and property developer, with a portfolio of £2bn. Miller, in partnership with RBS, fought off tough international competition to land the £1bn 30-year regeneration project for Omega Warrington from English Partnerships. Chris Gardner is development manager for the firm.

After winning development status back in 2003, we submitted an outline planning application, which was granted in 2007, for approximately 3.1m sq ft of mixed offices and distribution along with the associated infrastructure. This was further extended in May 2014 (on Omega South) by a further 2.7m sq ft of consent for a mix of logistics and manufacturing uses.

Unfortunately, the recession happened not long after permission was granted; the office market dropped off a cliff and the distribution sector was nowhere near as active, particularly for the big sheds Omega would provide. Things started picking up for us in 2012 with our first occupier demand on the north site. There had been an upsurge in online retailing and, with it, a demand for bigger sheds. Since then the development has progressed well, and we've now built beyond 3m sq ft of distribution space on Omega over the last four years, and continue to do so.

The logistics market has changed a lot more than we could have ever envisaged when we began work on Omega. The industry is much more hi-tech, with a lot more skilled and office based jobs as well as the usual fork lift truck drivers and shelf stackers. Already around four to five thousand jobs have been created, creating a much more robust employment market in the area.

Occupier needs have changed too. Each one has its own very specific fit-out purposes and requirements, so each of the buildings we have delivered so far is bespoke, tailored to the occupier's business. Our sites have everything from massive deep freezes to big automated racking systems. Outside the buildings we have to provide for cross-docking, loading bays and circulation space around the building. Such specific requirements mean that it would be difficult, these days, to build a speculative building that is going to appeal to a large percentage of the market.

Despite the slow beginnings, today there is no lack of demand. The North West, in particular, is very well placed geographically to serve the majority of Britain from the motorway network. That network is the key thing to help the logistics industry deliver the growth that the country needs.

The industry is much more hi-tech, with a lot more skilled and office based jobs as well as the usual fork lift truck drivers and shelf stackers

The Omega scheme forms a major expansion of Warrington, delivering 575 acres of mixed-use office and industrial development along with 1,100 new homes for the area

Direct rail termini can be a boon for logistics parks

Verdion
John Clements
Development Director

Verdion is a European real estate investor and developer, specialising in logistics assets. John Clements, Development Director of Verdion, talks through the firm's £400m iPort scheme, which will link 6m sq ft of logistics space with a dedicated rail freight terminal.

Regarding the investment for iPort, is it straightforward institutional funding?

Most of our projects are majority funded by HOOPP (Healthcare of Ontario Pension Plan), one of Canada's largest private pension funds, which owns $64bn in net assets and counts just over 300,000 members. The industrial market in Europe is an attractive diversifier from their perspective. The e-commerce revolution has given industrial a much higher profile as an asset, and along with the improvement in construction standards over the last 10 years, it has made it a better quality asset class that is far more sophisticated than it was before. With long leases on high quality buildings backed by strong covenants and rental growth through indexation, the returns in the logistics sector are far more interesting than many other asset classes currently, so it's a very appealing sector for investors.

What were some of the challenges involved in getting the iPort off the ground?

Getting a hold of the right land in the right location is one of the biggest challenges for any UK logistics scheme. For the iPort, there was the additional acute challenge that it is a 337 acre site built on greenbelt land. Ordinarily, it would be impossible to secure permission for a development that size entirely on greenbelt land unless very special circumstances are proven.

There were two key reasons why we were able to do that. The first is that the project was a priority for Doncaster Council. They were keen to enable more investment in both warehousing and rail freight in the town which already has many significant warehouse employers as well as a strong rail heritage and skill base. The project has also allowed Doncaster Council to kick-start development of housing in the area on brownfield land. The council were very co-operative and helpful in pushing the scheme through, and we have an excellent working relationship with them that has been crucial to the project's success.

Secondly, we were instrumental in enabling the construction of a major new access road from the M18 to the airport in partnership with Doncaster Council, which cost circa £100m in public-private funding. Making a significant contribution to the infrastructure investment sent a strong signal that we were committed to the project and the area, which helped expedite both the approval for the road and the planning application.

Are there additional planning barriers involved with rail projects?

It is challenging; rail is a very specialist sector. It requires extensive and expensive planning to connect a new rail terminal to the national rail infrastructure, and a good working relationship with Network Rail.

However, we strongly believe it is worth it as rail is likely to become a more important transport mode over time. Road congestion will only get worse in the coming years, so it is likely we will see a tipping point where rail becomes more interesting to more warehouse occupiers. At iPort the terminal won't just be for the use of occupiers on the logistics park, but also for companies in the wider region, so it's something we're working hard to facilitate. There is also likely to be a more impetus for the Government to look at how it can improve the capacity on the network and improve the attractiveness of rail freight.

Verdion has a Europe-wide presence - what are your broader thoughts on the European market?

We have a strong European presence which focuses on Germany and the Nordic countries as well as Benelux and Central Europe. The one big trend that stands out is the explosion in development in Poland, the Czech Republic and Slovakia over the last 10 years. There has been a huge amount of activity there

Once fully operational, the iPort scheme will bring an estimated 5,000 new jobs to the area creating facilities which will also serve Western markets and supply chains. Those same drivers of e-commerce and outsourcing from high street retail to industrial distribution centres are also present in the European market, with the key difference compared to the UK market being land ownership. There is generally a much better supply of land and a far easier planning process in mainland Europe.

What can the UK Government do to encourage further logistics development?

Anything to make the planning process easier, or which supports infrastructural development and unlocks financing would be very welcome. Politically, logistics is not the most attractive sector, particularly in the South East of the UK, and generally falls by the wayside compared with residential.

Germany is a good example of a country that has done a good job of allocating land, designating parks for industrial usage, and fast-tracking planning for land set aside for commercial use. There are ways we could emulate their approach: mandating more council-owned land for logistics use, for example.

Land supply is becoming such a difficulty in the Midlands and the South that the designation of more land specifically for logistics and industrial use is looking inevitable. Otherwise, development will end up being pushed further and further away from cities - which would mean higher prices for consumers and more traffic on the roads.

There are ways we could emulate their approach: mandating more council-owned land for logistics use

Once fully operational, the iPort scheme will bring an estimated 5,000 new jobs to the area

Challenges in the UK Logistics market

Savills
Kevin Mofid
Director, Commercial Research

Savills is a FTSE 100-listed global real estate services provider, with more than 700 offices across more than 60 countries worldwide. Kevin Mofid, head of UK commercial research, talks through the current state of the UK logistics market.

Recent television commercials by Argos and Amazon demonstrate just how much the retail industry has changed in a short amount of time. The commercials in question both did not advertise a product, but a service, in this case speedy delivery to wherever you, the consumer may be. The infrastructure required to deliver to customers within an hour is vast and requires, in the short to medium term at least, much more warehouse space.

According to the latest ONS figures 14% of all sales are online and this is only set to rise. Forecasts vary but Verdict predict that online sales will account for 17% of retail sales by 2020, reaching £67.2bn. This will help to keep demand for new warehousing high as research by Prologis suggests that for every extra €1bn spent online an extra 775,000 sq ft of warehouse space is required.

However there are a number of challenges associated with this anticipated roll out of warehouse space, the first being supply of warehousing for potential tenants to take.

In just seven years the supply of warehousing (above 100,000 sq ft) across the UK has decreased from 94m sq ft to just 27m sq ft meaning that occupiers have very little choice when looking for new warehouse space.

With the memory for the Global Financial Crisis still fresh in many developers, investors and bankers minds the delivery of warehouses on a speculative basis has not been sufficient to keep up with demand. Indeed, in the current development cycle from 2013 onwards 15.9m sq ft of space has been delivered, compared to over 40m sq ft feet in the pre crash cycle from 2005 to 2009.

In turn this has driven occupiers to take an increasing proportion of build to suit units, accounting for 49% of transactions in 2016 so far compared to just 15% in 2009. The knock on impact for occupiers will be that rents and lease terms will increase as developers need this commitment to bring schemes forward, indeed rents for distribution warehouses are expected to increase by a further 5% on average by 2020, with many prime markets expected to see even greater gains.

The continued uncertainty around Brexit will undoubtedly have an impact on the market. Early indications suggest that speculative development will continue to be restrained, meaning continued low choice for occupiers. In the investment market investors continue to be attracted to the long secure income logistics assets provide, however the lack of suitable investment grade stock has the potential to see investment volumes fall.

Lastly, the availability of labour could be set to become a key driver for future hotspots of warehouse development as labour intensive operations for online fulfilment look for suitable areas to locate.

In the investment market investors continue to be attracted to the long secure income logistics assets provide, however the lack of suitable investment grade stock has the potential to see investment volumes fall.

A commercial property trends perspective: aberdeen asset management view

Aberdeen Asset Management
Graham Porter
Head of UK Property Research

Aberdeen Asset Management operates across 25 countries, holding £301bn in assets to serve the investment needs of private investors, advisers, and institutions. Graham Porter is the firm's Head of UK Property Research, responsible for Aberdeen's market analysis and forecasting for its UK funds.

From an Aberdeen Asset Management viewpoint, what have been the major changes in retail logistics and what can we expect going forward?

Our research has been focused on identifying the big themes and structural shifts in property. As we will hold most assets we buy for 10 years minimum, taking a long-term view is key.

Looking ahead, a major consideration is the fact that up to three times as much warehouse space is needed for online fulfilment as store-based fulfilment, assuming constant sales. Products broken into units, more plant and machinery, packaging areas and returns processing all contribute to this. Although some are expecting it to plateau, we are still seeing robust growth in online retail sales, even among mature retailers. Increased Smartphone penetration and the eventual arrival of 5G will prove strong drivers of future growth.

Additional demand for warehouse space comes from the third parties that make these distribution channels function. Parcel operators like Hermes, DPD and DHL take these online orders from retailers and disaggregate them at their own hubs, before then shipping them to 'last mile' facilities, where they are dispersed to consumers. These new links in the distribution chain are expanding rapidly.

Going forward, online fulfilment facilities will become more efficient, but the need for automation to process orders will still place limitations on the space for product storage, while vehicle movements will be greater. They will therefore continue to be more space-hungry than store-based fulfilment warehouses, both within the warehouse and in terms of yard space.

How much capacity can be gained through using unified systems?

There's huge scope for efficiency gains and unification could ultimately reduce space requirements. Few retailers have fully optimised supply chains, which is why they're continually investing in them, and omni-channel retailing has only made this more complicated.

Linking stock to consumers intelligently and efficiently will require huge investment. But with retailers' margins being squeezed - all the more by sterling's post-Brexit fall - many are unlikely to commit.

As an asset class, how long will industrials continue to outperform?

It largely depends on what happens to the market post-Brexit, and how that impacts on values. The currency fluctuations we saw in the immediate aftermath of the referendum result may start to bite retailers in the New Year. Secondary retail may find it difficult to adjust to those effects, but prime retail would likely be better placed to deal with it.

As long as income is secure, real estate owners still have a yield that is relatively attractive when compared with bond yields and cash. It is where income is less secure and landlords may lose the tenant and be liable for empty rates and service charges that problems may occur. Performance is perhaps likely to vary by quality of location and the building - factors determining its lettability - rather than by sector.

Distribution can generally rely on strong covenants and good underlying demand. Some new construction may be cut off if the economy does weaken, which could see supply reduce quicker than the demand side. That could maintain the current upward pressure on industrial rents.

The weaker the market is in general, the more chance there is of the industrial market continuing to outperform, simply because of the structural nature of the demand drivers. Even if the economy was declining and retail sales were falling outright, online retail would likely still be growing, despite that decline. In a strong market, more cyclical property assets such as offices would likely outperform. But even then, distribution is likely to still be ahead of retail. We have a positive outlook because we see the demand side as being far more robust for logistics than for other property types.

Is there any additionality, or are we just seeing a move in demand from one asset class to another?

The shift from our perspective has been investing more of our clients' money in industrial than other sectors, not applying additional capital that is specifically targeting industrial. But some overseas investors have been injecting capital into large, prime logistics assets, so investment demand has been strengthening for the sector.

It's not just warehouses investors are looking at. Multi-lets - industrial estates with multiple small units under single ownership - are increasingly attractive, with sales from trade counter operators and builders' merchants - Screwfix, Howdens, the Travis Perkins brands - seeing strength growth. Some multi-lets now almost function like quasi-retail parks.

With the lines between logistics and retail increasingly blurred, how over-rented are retail parks?

Fashion-led retail parks in particular are susceptible to becoming over-rented. Rents achieved before the financial crash were driven by rapid expansion by fashion retailers and very low vacancy. The kind of £50 plus rents on some fashion parks are very difficult to justify nowadays. Since the referendum, there's been limited interest in buying these assets at prices that imply levels of growth few people are expecting.

Can we create additional value by better integrating facilities with transport infrastructure?

At the moment there isn't the capacity on the rail networks to make rail freight more efficient than road in terms of cost, so it focuses on coal, aggregates and other products where the large volumes and excess weight demand rail. Supermarkets are the principal retail users of rail freight, again due to volumes. But if HS2 frees up space, we could reach a point where sufficient journeys can be made by rail for it to make more sense for consumer goods too.

However, HS2 is a long way off, and the problem with rail is that it might be replaced by newer, cleaner technologies. For example, 'platooning' (a procession of lorries where the first is human-driven and others are linked digitally and towed along) could emerge as a serious competitor to rail, especially if electrically powered.

Looking ahead, a major consideration is the fact that up to three times as much warehouse space is needed for online fulfilment as store-based fulfilment, assuming constant sales.

A regional view

Gent Visick
Andrew Gent
Director

Gent Visick is a Yorkshire-based commercial property consultancy which offers a range of agency, investment and strategy consulting services for the North of England. Andrew Gent, director of Gent Visick, is responsible for the sale, letting and acquisition of industrial and warehouse property.

Is the role of Yorkshire changing when it comes to sheds?

Historically, the Yorkshire logistics sector was centred on the M62 corridor, connecting Hull with Manchester. What we have gradually seen over the last two decades is the M18 corridor, connecting Rotherham and Humberside, coming into its own. The M62 corridor remains a fairly strong market, given its convenience for distributing to the conurbations of West and South Yorkshire - Sheffield, Doncaster, Leeds et al - but there has been a particular shift towards big boxes in that particular M18 South Yorkshire market.

In general, the Yorkshire sheds market is still typified by a lack of supply. The analogy some refer to is that it is like a sweet shop that doesn't have any sweets! Partly, that's a legacy of the financial crisis. In the medium size shed market there was a lot of oversupply from 2008 onwards that took about seven years to be taken up. In contrast with the North West and the Midlands where there has been a lot of development activity, there has been relatively little speculative development in Yorkshire, apart from some limited development in the Leeds Enterprise Zone and in Doncaster.

What we've also seen is the rise of 'super-sheds' in excess of 500,000 sq ft, serving as regional distribution centres for established retailers. We saw the first of these back in 2003 with B&Q's landmark 800,000 sq ft distribution facility in Doncaster, which was a move driven by the lack of capacity at southern ports such as Southampton. Development in Yorkshire became strategically advantageous, as ports like Grimsby were relatively underused in terms of traffic, particularly from Northern Europe. In Yorkshire we have, on average, seen a supershed deal every year and a half since, with the likes of Poundland, TK Maxx and IKEA following B&Q's example, and most recently Amazon recently securing a 1.08m sq ft pre-let at the iPort in Doncaster.

Firms are taking advantage of the economies of scale that come from units of this size in the Yorkshire region, giving them greater leeway on the transport costs of getting those goods to market.

The Doncaster iPort logistics rail terminal is a key scheme you have advised on. What was the initial process in how it came into being?

The idea of a rail freight terminal with associated logistics space was one favoured by Doncaster Council as it had freight supply in every other mode. The nearby Robin Hood Airport with one of the largest runways in the country provides opportunities for air freight,the M18 corridor is key for road freight, whilst the area has easy access to the east coast's ports for both container and roll-on-roll-off traffic. However, a fully up-to-speed modern rail terminal was missing, so it became a priority for Doncaster Council.

The iPort will be providing a dedicated and fully-provisioned 35-acre strategic rail freight terminal, which (once completed) will cater for 775-metre long trains. Associated with that will be 6 million sq ft of logistics space.

The concept is that the iPort will allow companies who currently ship freight by road from ports, such as Felixstowe, to seriously consider the alternative of rail freight. Once the terminal is in use we hope to be able to facilitate shared-user trains for occupiers at the iPort creating further opportunity for economies in the supply chain. As well as that, the terminal will serve other companies in the local area who want to consider either importing or exporting by rail. The terminal will connect to the East Coast Main Line, so freight can be imported or exported to anywhere in the UK, provided it is connected by rail - to Felixstowe, Southampton, even the Channel Tunnel.

What role did the council play in the scheme?

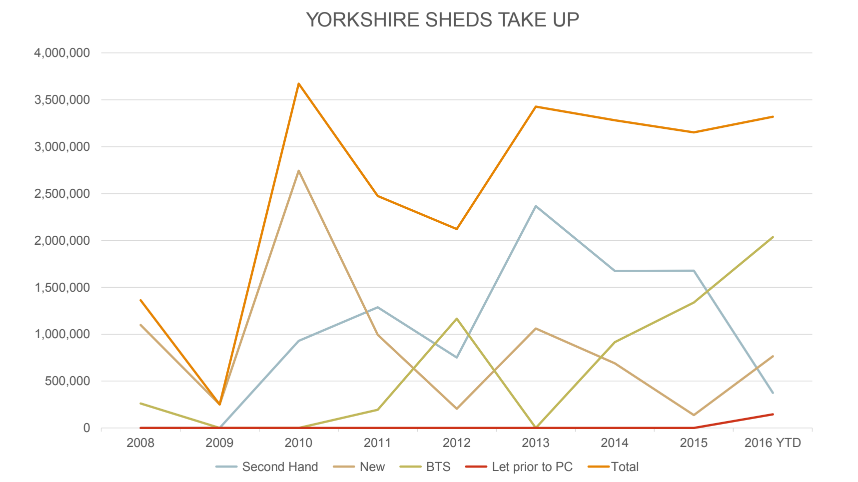
Doncaster Council assisted in securing planning for the site, the largest greenfield site granted planning permission in England to date. The catalyst for the scheme, however, was construction of the "Great Yorkshire Way" connecting Robin Hood Airport directly with the M18 motorway.

The road was funded by a public-private partnership, with contributions from Europe, Doncaster Council, Verdion, Haworth and Peel. The new road, in addition to opening up the iPort, provides the opportunity to redevelop the former Rossington Colliery into a large-scale housing development and connect Rossington Village to the M18 motorway.

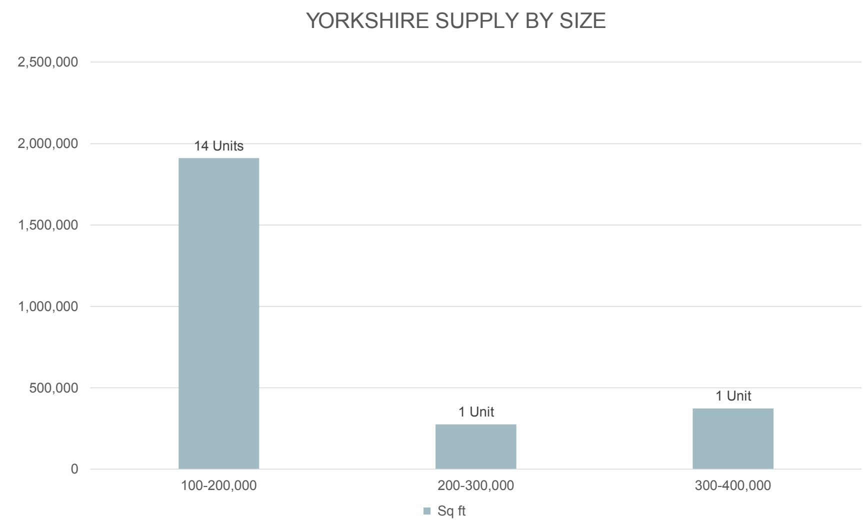
What scope is there for more sharing of sheds and transport modes by different occupiers in the UK?

To date the closest the UK has to having shared user facilities, in the European sense, has been third party logistics providers storing goods for different customers within the same building. Big sheds, with partitioning to suit occupier requirements, are much more common in Europe, and there is real potential that the lack of building stock in the UK will drive greater sharing of assets going forward.

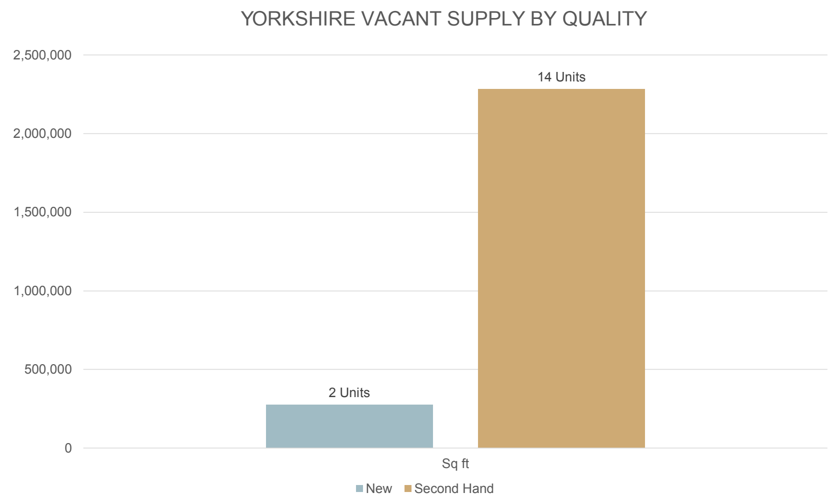
In the past, occupiers have been more particular and wanted their



Build To Suit take-up in Yorkshire has taken off over the last few years, with speculative sagging.
DATA: Savills



DATA: Savills



The tail-off in speculative development has left remaining supply in Yorkshire a second-grade affair.
DATA: Savills

own buildings, but with increased sophistication in stock handling and stock management systems the prospect of shared user facilities is far easier to for occupiers to accept than before.

What effects have you seen on occupier and investor sentiment in the wake of the EU referendum result?

In general, the sentiment is business as usual, and many recognise that it is far too early to tell what the full ramifications of Brexit will be. Gent Visick have completed on 2.5m sq ft of space since the referendum. There has obviously been an impact on investor sentiment, but any nervousness seems to be more on the funding side than the occupier side.

With regards to iPort, a lot of the occupiers we have dealt with are of the view that where this is a project, which is for the UK market, with Board approval for the right reasons, they are pressing on regardless.

What are the main issues that developers of sheds are facing currently?

There are a few issues. The first is build costs, which have increased significantly in the last few years - both for materials, but also thanks to the skills gap, for labour and increased “green” taxes on aggregates and raw materials.

Second, we’ve seen an emergence of prime assets which not everybody can afford to occupy, which has raised a new barrier with regards to capital and rental values. That, allied to a lack of stock, means that not everybody is able to move, which means secondary stock that could otherwise be freed up isn’t - which has a depressive effect on overall supply and means there is a lot of pent-up demand. Satisfying that demand is difficult as a result of the current attitudes for funding towards development. Occupiers can, generally, get funding. However, funding for developers for speculative development is fairly limited at the moment.

What policies could be enacted to help boost logistics development?

It feels a little like raking over old coals by now, but planning is a particular headache. The importance of speeding up and simplifying the planning process hasn't been grasped. Local authorities are in a difficult position. They've been subjected to budget cuts, so they can't employ large numbers of planning officers.

At the same time, Unitary Development Plans which are being replaced by Local Development Framework plans, which everyone was under the impression would be an easier and simpler process, have proved to be anything but. Currently, we're in the absurd position of employment land being tied to housing land. The Government has rejected a number of local plans on housing grounds, so for many authorities their plans are taking far longer to bring forward. When local authorities are without an adopted plan, that adds uncertainty to planning and makes it more expensive and risky to bring forward larger scale developments.

Finally, there is a lot of uncertainty with regards to the grant regime. If we're leaving the EU, then EU funds won't be available to assist with major infrastructure projects or otherwise. Detail from the Government on what their post-Brexit plans for grant funding would be very welcome.

The importance of speeding up and simplifying the planning process hasn't been grasped. Local authorities are in a difficult position.

A EUROPEAN AND GLOBAL VIEW

The European picture: CBRE Global Investors

CBRE Global Investors
Anthony Wirth
Director and Head of EMEA Logistics
Strategy & Research

CBRE Global Investors manage $89.7bn in property assets across the world, with $31.8bn held in EMEA. Anthony Wirth, Director and Head of EMEA Logistics Strategy & Research, oversees the firm's investment strategy and asset management decisions.

It may not be to the same degree, but Europe is seeing many of the same drivers for industrial asset value growth as the UK. The Eurozone is (on the whole) recovering, and as GDP growth comes back we are seeing that bleed through into people's pockets. Disposable income is driving increases in private consumption and industrial production: the Economist Intelligence Unit reported cumulative growth of five percent in both across the Eurozone over the last three years, with growth of between seven and eight percent projected for the next five.

And as the Continent spends more, as with the UK, it is increasingly doing it online. Online retail in Europe is worth nearly €200bn, having doubled as a proportion of total sales in just four years. It is little wonder that industrial transaction volumes in Europe have done likewise, with almost €25bn worth of assets bought last year, compared with €10bn in 2012, with the vacancy rate across Europe falling sharply from seven percent to five percent over the last year.

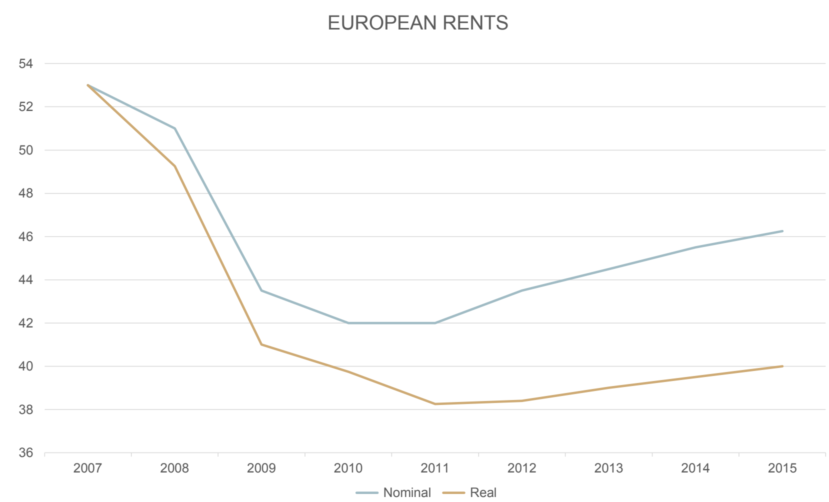
Where the story is different for Europe comes in how logistics is of interest to investors. Of course, investors are still looking at the sector on a location-by-location basis, and there are different appeals to take into consideration across the continent. Polish locations, for example, offer occupiers the attraction of lower labour costs, and favourable tax regimes add to the appeal of Benelux locations.

But while the UK has seen logistics deliver strong rental growth, Europe's average industrial rents have only seen modest real term increases since the depths of the Eurozone crisis in 2011, standing at €40/sq m in 2015 compared with a trough of €38/sq m. This is partly down to developers being comfortable with rents where they see an income play. In some markets, we have seen asset owners willing to cut rents in order to fill space. Where returns from industrial property in Europe have been strong in recent years, it has typically been through income return - although we have also seen some capital growth.

This, however, is not something you would necessarily notice from taking measures on capital growth at face value. Industrial asset values are only mildly up on their pre-financial crash peak, up nearly ten percent by mid-2016. Where value has been realised is in specific assets located in the path of growth: many of the largest capital value gains have come from industrial assets in urban or prime locations that have seen strong rental growth, some of which have been converted into residential or retail. Investors have benefited from the increase in land values, but due to the changes of use, these capital value and rent increases have been filtered out of the industrial index.

The fundamental drivers for the sector are expected to strengthen, and this makes European industrial property an appealing investment - indeed, one we project as likely to deliver the highest total annual returns of any major property sector in the next five years, at 6.6 percent. Furthermore, at the same time, the volatility of the sector has fallen sharply in recent years - a reflection of the growing prevalence of institutional buyers who take a longer-term view that is more focused on income return, as opposed to private owners who might be more disposed to buying and selling assets in response to short-term shifts.

There is, obviously, huge variance between different countries. Central and Eastern Europe has come a long way compared with the more mature Western European markets in recent



The tail-off in speculative development has left remaining supply in Yorkshire a second-grade affair.
DATA: Prologis

years, and the evidence is in the increase on long-term transaction volumes that the region has seen: a more than 300 percent increase compared with the long-term average in each reported half-year but one since 2013. Years of EU investment in infrastructure have borne fruit, paving the way for the vastly improved products on offer to investors in the likes of Poland and the Czech Republic. Investors are now much more comfortable investing in the area, although we caution that Poland must be monitored for the potential to oversupply from the sheer amount of industrial development that it has seen. It is one of the few areas in Europe that has seen a large increase in speculative development. On the whole, European developers have not taken on a great deal of risk - as in the UK, it remains difficult to get financing for speculative schemes.

At CBRE Global Investors we take a selective approach in the developments we choose to forward fund or develop ourselves. For example, we are currently developing extensions to a Eurocentre scheme that we acquired in Toulouse, France. This example is informative as it demonstrates the preconditions that give investors confidence in speculative development. This asset is an existing 325,000 sq ft scheme that we acquired last year along with additional land located adjacent to the first phase.

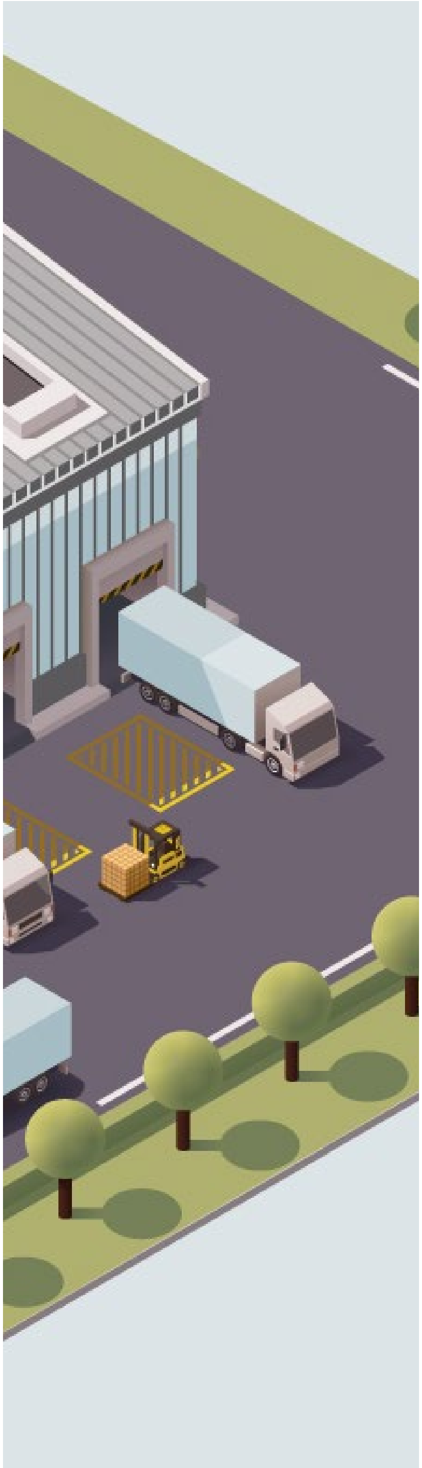
Our experience managing the existing scheme gave us knowledge of the potential tenant base that would take an interest in the area and has given us the confidence to build additional phases on the excess land, capitalising on the undersupply of good quality space in South West France. This strategy has proven successful: we have just signed a lease agreement with Kuehne & Nagel on three of the four units in the first extension, totalling just over 150,000 sq ft of space in the 215,000 sq ft addition. We have planning permission for another 300,000 sq ft extension, and the success we have had in leasing the first extension will help to guide our planning for the remainder of the site.

But, while there is a sound research-driven rationale for speculative development in particular cases, there are differing trends in the European market worth keeping in consideration. Many companies are outsourcing their logistics operations in Europe due to the complexity of cross-border supply chains, which are more efficient and cheaper than ten years ago but have typically become longer and more complicated. As a result, third party logistics operators are becoming increasingly prevalent in Europe and the move towards longer leases that we are sometimes seeing in the UK is not coming through in the European market; 3PL occupiers rely on clients that will rarely sign long-term contracts. There is, unsurprisingly, a large share of industrial leases in our portfolios that end within three years. 3PLs are now some of the largest tenants in the sector and they can account for as much as a third of our rent rolls in some of our logistics accounts.

Logistics is a growing sector that investors are now less likely to avoid. The value of global cross-border online sales is projected by Accenture to surpass $1 trillion by 2020 and the demand for operators with the expertise to manage those intricate supply chains will not go away.

As for other trends that are likely to be on the horizon for Europe, it is instructive to keep in mind the remaining room for e-commerce growth on the continent, which still lags behind the UK. The topic of last mile logistics, currently the muse of many UK investors, is one that will no doubt come to the fore as online retail continues to grow in Europe. There is still plenty of land out there in prime locations for big box European logistics sites, but talk of expensive infill sites and potential multi-lets and multi-storey facilities could also be around the corner as investors wrestle with how to pull the most value out of the European urban logistics piece.

We think that the European logistics sector is an attractive place to be as an investor and a developer, particularly for assets with rosy prospects in nations with strong judiciaries, stable economies and good transport networks. With the shortfall of supply looking set to continue, we think that now is an appropriate time to invest in well-positioned logistics development sites.



UK has seen logistics deliver strong rental growth

Cheap labour and land costs are at the heart of Europe's eastward expansion:

Prologis
Martin Polak
Regional Head of Central & Eastern Europe

Prologis is the world's leading developer and owner of logistics property, with a 26% market share in industrial property in Central and Eastern Europe. Regional Head of CEE Martin Polak is responsible for the firm's development and leasing operations in Czech Republic and Slovakia.

What have been the prime drivers of logistics demand in CEE?

CEE logistics is a varied and fragmented sector, when compared with the more mature UK and US markets. But as in the UK and US, Amazon has expanded its operations in CEE, building five fulfilment centres in Poland and the Czech Republic since 2013, totalling an area of over 5 million sq ft. Sited near motorways connected to neighbouring Germany, they will primarily serve German e-commerce demand. Amazon's development highlights the region's attractiveness for occupiers wanting a European hub.

E-commerce and logistics have been generating a great deal of demand in the Polish and Czech markets, in particular, with the Czech e-commerce market a little more mature than the Polish one. There are some local e-commerce companies growing organically in the region and taking out significant space. Online consumer goods and electronics store Mall.cz has recently completed construction of an additional facility at Prologis Park Prague-Jirny, taking their total space at the park to over 550,000 sq ft. The interesting point about many of these facilities for local occupiers is that they come with highly automated bespoke fit-outs of a similar quality to the likes of Amazon. We are encouraged that local players are now emerging rapidly throughout the region.

To what degree has it been helped by infrastructural investment in the region?

There has been significant EU investment in infrastructure in the region in recent years. In Poland, for example, there was not a single motorway into the capital Warsaw until the European Championships football tournament in 2012. That motorway has cut journey times from Warsaw to Berlin from 10 hours to five. Firms choosing to base hubs in CEE often have to balance the appeal of the low costs of basing themselves in the region with the longer distance from their customers it entails, so investment in infrastructure is pivotal to increasing the appeal of CEE as a logistics base.

There have been other improvements, such as the opening of a deep-water terminal in Gdansk in 2007, which can accommodate the largest Triple E container ships. Since 2013 there has also been a direct rail freight link from Łodz to Chengdu that can deliver goods from Poland to China in just 11 days. There hasn't been a major shift towards these routes, as it is still generally more cost-efficient to have goods imported by sea to Hamburg and transported from there by road, but these connections do open up potential for future routes to the CEE market.

Given how far the sector has come since 2008, how much scope is there for increased growth?

The CEE market has doubled in size since the end of 2008, from 99.9m sq ft to 195.5m sq ft. There is still strong and growing demand for logistics space across the region. The Polish e-commerce market, for example, is still maturing, so we are seeing new businesses entering the market along with the expansion of existing businesses, which will help to drive demand. Over 14m sq ft of space was leased in the first half of this year in Poland, which is one of the strongest performances the Polish market has seen.

Will we begin to see 'continental hubs' that serve all of Europe for one base, akin to many of the NDCs in Britain?

Absolutely. The geographical position of the Czech Republic and Slovakia, along with the labour supply and improved infrastructure of the region we have seen in recent years, puts CEE in a good strategic position to host many of them. Lego, for example, already has a large production facility in Kladno in Czech Republic, which is serviced by a distribution centre in one of our parks, which services the entirety of Europe. We're also beginning to see a lot of major firms in the automotive sector take CEE seriously for facilities that distribute to the whole continent, particularly in Slovakia.

What is your outlook for the next five years?

Prologis concluded the first half of 2016 with an occupancy rate of 94.8% in the CEE market, and leased over 9.3m sq ft of space in that period. We are looking to continue developing multi-tenant logistics parks in core locations with developed infrastructure, and we have nine warehouse facilities under construction. Central Poland this year entered the top 10 in Prologis Research's annual survey of the most desirable logistics locations in Europe, with Prague just outside at #11, so the health of the sector is positive, and we anticipate demand as likely to remain strong.

Prologis's CEE developments include the 1 million sq ft rail-connected Prologis Park Sochaczew, located 50 miles west of Warsaw on the Germany-Lithuania E50 motorway

How can the UK learn from Europe?

Delin Capital Asset Management (DCAM)
Ekaterina Avdonina
Managing Director

Delin Capital Asset Management, established in 2012, specialises in European logistics assets across the UK, Benelux and Germany. Ekaterina Avdonina, managing director of Delin, is overseeing a shift in the firm's strategy from pure asset management to development.

How has DCAM evolved over the last four years?

We have built an impressive income-producing portfolio of c. €500m in assets, combined across the UK and Europe. Last year, we established an in-house development function to take advantage of the market in Benelux and Germany. The UK has been very competitive on the development side, but Brexit could create opportunities if other developers, especially funds, end up sitting on their hands. This could drive down land values.

While the likes of Prologis and SEGRO have significant land banks in the UK, this isn't the case for much of Europe. The land is priced more efficiently and the appraisals are more or less the same for everyone.

Federal structures can also be less bureaucratic and in some municipalities, some places are designed purely for industrial use.

Based on your European experience, to what degree do you think we'll see more multi-tenancy buildings as companies look to drive efficiency savings?

In Europe, you'll routinely find two or three tenants in one big box with a firewall in the middle. These units can very easily be turned from a single-tenancy into a multi-tenancy big box and we like that flexibility. Maximising the development size of the building gives you the best return. The actual size requirements appropriate for the market then become secondary, because you have the ability to easily downsize.

Occupiers are desperate for space, particularly close to cities. I think that will trigger some further changes in the traditional distribution centre model, once supply constraints become much more evident. That's the future: you'll have to share the space to drive the efficiencies. This is certainly on the cards.

What other things could the UK learn from Europe?

Road carries the vast majority of goods in Britain, but Europe is concentrated around multimodal hubs and sites are very constrained. Canals, barges, rail and port activities play a bigger role in transportation. There's a huge opportunity for Britain

DCAM's Magna Park shed, let to DHL

to do the same, particularly given the scale of its own waterways network.

I also think the obsession with the yard depth in the UK is incredible. Anything less than 50m in the UK is not considered up to specification. I think that needs to be challenged. The use of land and the efficiency that could be driven means we have to evolve our thinking. In Europe, a yard depth of 35m is standard.

Do you see higher capital growth from urban logistics over distribution centres (DCs)?

Our recent activities have been focused around identifying suitable brownfield sites for last mile urban development, rather than Distribution Centres. At DCAM, we see value in this because that land will become more valuable, driven by occupier demand. On the traditional DC side, the land is expensive and I don't see how much more capital appreciation there can be. However, the income they produce is highly attractive.

How does the fit-out tend to differ for urban logistics?

On a 60,000-70,000 sq ft sortation centre you're looking at investment of €60m-€70m, compared with about €10m for a DC. If you compare that to the construction costs of a larger centre compared to a smaller centre, even when taking into account how much more valuable the land is, it makes it even more expensive. However, the requirements for the number of future smaller sortation centres is much higher than for traditional warehouses. The driver for this isn't tenant transition; it is a step-change triggered by consumer demand for online goods.

At this point, real estate players don't take care of the automation systems, nor could they be financed anyway. Occupiers' balance sheets hold them, so they are forced to sign longer leases enabling them to monetise this equipment over a period of time. However, balance sheet obligations change, thereby creating a lot of capital pressure on occupiers.

I think urban logistics will be a very interesting area and one where new operators could enter the market, working hand in hand with occupiers to create and manage the technology.

Occupiers are desperate for space, particularly close to cities. I think that will trigger some further changes in the traditional distribution centre model, once supply constraints become much more evident.

A CGI of the 375,000 sq ft facility being speculatively developed by DCAM in Roosendaal, the Netherlands, due for completion by the end of Q1 2017

How do the drivers of the European logistics market compare to the UK's?

P3 Logistic Parks
Ian Worboys
Chief Executive Office

P3 is a specialist developer, owner and manager of logistics assets across Europe, holding 163 warehouses in nine countries, totalling over 35 million sq ft of space with 15 million sq ft landbanked for development. Ian Worboys is the CEO of P3, with over three decades' experience in industrial property.

How has P3 evolved during your time with the business?

I joined in 2009 and have overseen the company's evolution from our previous identity as Pinnacle to today's P3 brand. Since then we have expanded significantly across the nine European countries in which we are active and, at the same time, the company's value has increased roughly tenfold from around the £200 million mark when I joined. We've got 3.3 million sq m of standing assets, mainly big box warehouses, plus a land bank of with zoning for the development of a further 1.4 million sq m.

We've developed a huge amount of new space across Central and Eastern Europe (CEE). The region's prominence as the centre for European logistics is largely down to employment costs. Compared to Germany, Czech employees cost around a third while Romanians staff cost just a fifth as much. As a result, companies can afford to manufacture goods in CEE and move them westwards while still making significant savings.

What does the market look like across Western Europe?

Our Western European assets in Spain, France, Germany, Italy and The Netherlands tend to be slightly older buildings but are in first class locations. As a result, we're exploring the potential for further value expansion on a number of sites including P3 Lomme park in France and P3 Bedburg park in Germany. Occupier demand is very strong across Western Europe, driven by strong economic basics as well as the continued expansion of the e-commerce sector and its need for parcel distribution hubs.

How is the rise of last mile demand reshaping the industry?

In Britain shoppers generally return about 7 percent of what they buy from physical high street stores. When you look at online shopping, returns are far higher - 40 percent for fashion and 27 percent overall. As a result, a huge amount of extra space is needed. The trend in mainland Europe is exactly the same, with demand from the likes of global players such as Amazon as well as Zalando in Germany and Mall.cz in the Czech Republic.

This widespread demand for large-scale distribution to residential addresses just didn't exist in any previous cycle. From last mile to delivery from airports to inner-city hubs, we're seeing a whole range of new solutions emerging. Most cities are pretty land tied and this creates opportunity for developers like us. We've built quite a lot of small parcel hub warehouses for DHL and TNT.

How easy is it to fund smaller sheds and to what degree will we see uses change from offices and retail parks?

Funding is a challenge given the relatively low site cover of a logistics hub, as space is needed to drive vehicles in and out. This may well bring forward the need to convert office buildings into last mile points although this would undoubtedly be quite complicated. Old retail warehouses and supermarkets would also be capable of being converted to logistics use.

A lot of secondary retail has already been hit on value and the potential for assets to be reborn with institutional grade covenants attached - perhaps from an Amazon or DHL - could be highly attractive. Of course, many funds owning such assets would not look at such development but this is what creates opportunities for businesses such as ours.

Are big boxes overpriced now and how do you see the market evolving over the next couple of years?

You can quite easily get 6-8 percent returns on warehouses with very good covenants, compared with negative returns from putting money into a Swiss bank account. I would argue it was wrongly priced before and that there will be further yield compression in 2017.

In terms of the European investment market, I do think you're going to see some consolidation. It's a specialist industry and the more synergies you can create, the greater value you can extract. There's a group of specialists already building up, and some of these will consolidate and get even bigger.

Across Europe, supply is nowhere as tight as in the UK, so there's definitely more yield compression to come there. At the prime end in Britain, the degree to which we could see further yield compression comes down to whether investors value a 20-year lease to Grade A covenant as a pure property transaction or as a bond. If you compare it to a fixed income play, then yields could still come in further.

The UK has already seen a lot of rental growth and we're seeing strong rental growth in Europe across our portfolio. While there are known unknowns - such as Brexit and Trump - the fundamentals as we see them remain strong.

Bespoke automation solutions are becoming less popular in the German logistics market

Luther
Dr. Maximilian Dorndof
Partner

Luther is one of Germany's leading commercial law firms, with a long record of advising on German logistics projects and projects in Benelux, Poland and the Czech Republic serving the German market. Partner Dr. Maximilian Dorndorf has extensive experience in contract negotiations for logistics deals.

In the last 15 years, Germany has been, and continues to be, a key focus for the development of logistics real estate in Europe, simply due to its strong footprint as one of the EU's main markets. The country's stable political and legal environment supports the value of logistics assets.

The German logistics market has been changing over the last ten years. For example, we worked on a major logistics project, Esprit's Distribution Centre Europe, in Mönchengladbach in 2009. It marked a high point in automated supply chain, with roughly 14 miles of conveyors and equipment on a site of approximately 350,000 sq ft. The 'Watchtower' we carried out for KNV (the biggest book wholesaler in Germany) in Erfurt in 2014 was also highly automated - an investment of some €150m to provide a 3.4m sq ft shed, one of the largest operations in Europe.

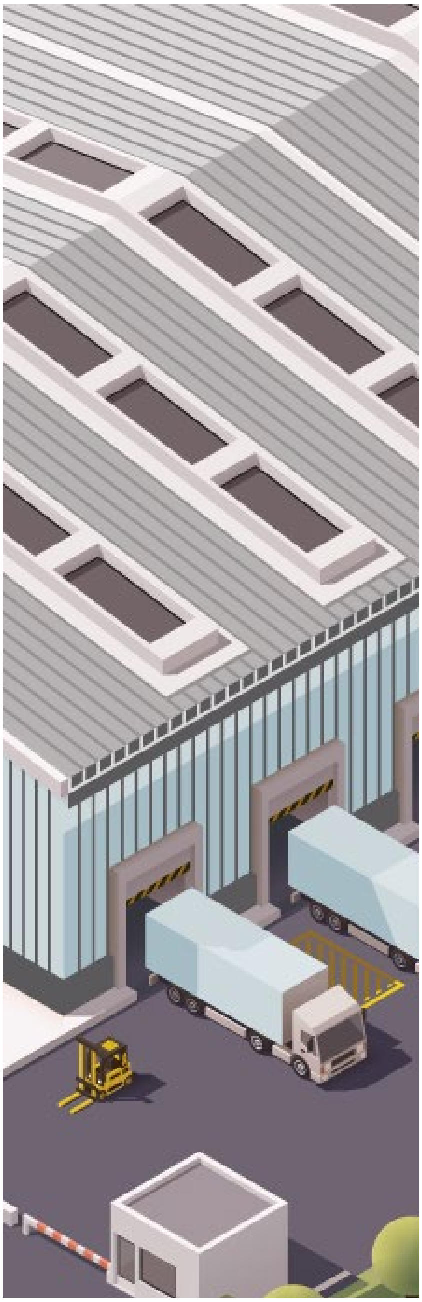
However, from several new projects we have had in the past months, it seems that the degree of automation required is decreasing. The 540,000 sq ft extension for the Esprit warehouse is designed more for manual operation. The Pirelli warehouse we advised on in Dieburg, with approximately 970,000 sq ft of space, does not contain a huge amount of automation. So it seems that the market is beginning to avoid buildings that are tailored to a particular customer's needs, as bespoke automation systems can jeopardise the third party usability of the building. The challenge is to design buildings more flexibly, and to design automation solutions in a flexible way too.

Listening to investors, developers and operators, the clear trend is towards smaller more flexible buildings, with the integration of digital solutions based on open interfaces (for third party use). Investors are looking for flexible (sometimes even smaller) buildings that are capable of being easily used by third parties; clients who run their own operations, are investing in simple buildings with a high degree of IT-competence and with intra-logistics automation.

For investors, the main challenge is to find a key lessee of good standing and investment rating. Once that has been achieved, the remaining challenge is the design of the building, and providing the necessary flexibility of use. In Germany we do not have difficulties with the planning system. On the contrary, most projects are strongly supported by the local authorities, who want the jobs the development will provide.

E-commerce is one of the main drivers in the German market, but it is not the only one. The market seems to be being split - one part for e-commerce, providing buildings near to a city that are very flexible, and the other part for more traditional users like automotive, which relies on more "old-fashioned" single user warehouses, where location is less critical.

However, occupiers' demands will undoubtedly continue to change in the years to come, and the challenge in Germany, and elsewhere, will be to provide buildings that are capable of meeting current and future requirements.



Listening to investors, developers and operators, the clear trend is towards smaller more flexible buildings, with the integration of digital solutions based on open interfaces (for third party use).

3 INFRASTRUCTURE - WHAT ALTERNATIVES ARE THERE TO ROAD?

Unlocking investment for rail as well as multi-modal sheds

Addleshaw Goddard
Paul Hirst
Head of Transport

Paul is Head of Transport and is rated as one of the country's top transport lawyers with an unrivalled breadth of experience in the sector including light rail schemes, heavy rail franchising, rolling stock procurement and leasing and advising a range of private and public sector clients. Paul advises clients such as Department for Transport, Hitachi Rail Europe, Merseytravel, Alstom and the Roads and Transport Authority of the Dubai Government.

Unlocking investment for rail as well as multi-modal sheds

Many of the country's newest logistics facilities allow occupiers to carry goods in and out via road to rail. Allowing multi-modal access is a way to not just enhance the flexibility of use, but to generate additional income from other businesses able to access rail networks.

Just as the planning process creates delay and uncertainty for developers, issues arising from access-related regulatory problems can further de-rail things. The likes of Prologis, Segro, Goodman and Verdion aren't necessarily in the rail industry as such, but they're investing in something that will benefit from rail connections.

The DfT has previously noted that tonne for tonne, rail freight produces 70% less CO2, up to fifteen times lower NOx emissions and nearly 90% lower PM10 emissions than by road, according to Department for Transport (DfT) figures. De-congestion benefits are also significant: depending on its load, one train can remove up to 77 HGVs from the road.

It's compelling stuff. However, it would be naive to pretend that companies' primary driver is anything other than cost management in this context. That said, increasingly intelligent consumers and more responsible retailers are taking more of an active interest in their supply chains. It will not be long before products, connected to the internet of things (IoT), are able to articulate the amount of carbon emitted on their journey from factory to home.

The IoT also poses the potential of greener road haulage. Uber's recent move towards driverless lorries is a signpost that this could soon become reality. Nevertheless, there's really strong statistical evidence supporting a greater modal shift, not least between ports, for example, and ultimate destinations. And there is already significant policy support at Government level.

The DfT's 2014 National Policy Statement for National Networks essentially makes the case for favouring rail networks and strategic rail freight interchanges (SFRIs) in the context of planning policy.

"SFRIs can provide many benefits for the local economy," the DfT said. "For example, because many of the on-site functions of major distribution operations are relatively labour intensive, this can create many new job opportunities. The existence of an available and economic local workforce will therefore be an important consideration."

In spite of obvious data highlighting the degree to which the UK currently breaches the EU's green criteria - and the fact that more than 431 billion road miles are travelled each year in the UK - making a business case for inter modal traffic can be tough. The margins are often too low. The environmental and economic growth benefits of rail are hampered by a lack of capacity and an overly complicated and opaque regulatory system.

Sharing is caring

There's a growing trend towards more distribution hubs that are bigger and include multi-user access. Firms are having to deal with shorter delivery times, and therefore they have to have presence in more areas to meet these customer requirements. There's a big question mark over whether supermarkets, for example, will stop subsidising the cost of deliveries. But even so, with Amazon looking likely to step in with its Fresh offering, the potential for more direct-to-consumer food deliveries is growing. What this means is that we'll need a real estate and transport network that supports a more integrated route to market.

Having more multi-tenanted facilities would also support greater usage of rail freight because of the economies of scale. This undoubtedly throws some complexity on to the far from traditional real estate financing - everyone is comfortable with a forward-funding deal or pre-let. But we know that many FMCG brands - such as Britvic and Diageo for example - have shared facilities where it makes sense to do so. Having these conversations early on could certainly support a greater provision of infrastructure.

Returns from capacity

While rail and toll roads can take years to come to fruition, there's a win-win-win for institutions, businesses and our economy. Borrowing to build infrastructure and related assets has never been this cheap. However, clearly the amount of public funding is finite - so there is renewed pressure on finding ways to generate private finance to make schemes viable.

The question over how you make rail investor friendly is not an easy one. However, as property investors know only too well, where there's an income, there's a way. Companies pay "rent" to access the rail network just as they do real estate.

The issue in practice is that making an investment decision without sufficient clarity in relation to the associated revenue stream is impossible. And unlike many sectors, there are no government contracts in freight, it's all purely commercial. Of course there's an element of "build and they will come" but this is unlikely to wash with a pension fund looking after other people's money.

There may be different models available that provide the required level of certainty to investors that they can access the revenues associated with their investment in rail related schemes - maybe by taking a greater degree of control. Where the government could look to help is by supporting the kinds of conversations that would be needed here. The wider social economic benefits of regenerating areas, as we explore elsewhere in this report, are clear as day. Finding solutions to the key risk areas that would unlock investment is the priority to provide confidence that a facility can be accessed as intended and the costs associated with its ongoing maintenance and revenue can be recovered.

It's possible to quantify and de-risk a build cost but not open-ended operational expenditure. If the sponsor is saddled with the latter, that is a higher risk that cannot be quantified. Particularly where there is shared use, that exposure is unlikely to support a viable business case. If however the investment can be looked at in the context of the wider benefits to the national rail network and the economy as a whole, that may open the door to a different discussion where that risk is shared by all beneficiaries and/or fully or partially folded into the costs of the national rail network as a whole. That would be enough to make it commercially viable and a major step forward.

Soothing the ills of access

The problems faced by developers once they have passed the interconnected part of the rail network become complex. One of the key concerns is guaranteeing access into the facility where freight is competing with the passenger operators. Unfortunately this is not a fight that freight providers often win. Sadly for logistics firms, there are far more votes to be won and lost on the passenger network. As Transport for the North (TfN) has firmly grasped, there needs to be an acceptance across the industry and Westminster that freight cannot wait.

The secondary issue is the nature of the paths that freight operators need. They need longer slots which can be difficult to work into the timetable. Numerous studies have shown you can identify and keep such paths to one side without ossifying the network. But there is not enough joined up thinking on when these paths should be hardwired into the timetable. With better collaboration between the freight and customer arms of the timetable planning fraternity, much more could and should be squeezed out of the available capacity.

What we need is national policy that takes control and doesn't shirk from making big decisions. It was welcoming to see TfN announce the creation of the UK's first pan-regional freight and logistics strategy last August. TfN appointed Mott MacDonald and MDS Transmodal to help drive the strategy's development. Given the realities of logistics, this has to become a national strategy to have the impact we need it to. It's nonsensical to bring it only in the North. But at least it's got logistics a seat at the table of the wider discussion surrounding Britain's infrastructure needs.

Planning change

While everyone accepts that creating new structures to funnel investment in will take time and concerted effort, it is certainly possible to tilt planning policy towards rail-connected sites giving developers a better shot at particular greenfield projects. This could make investors less averse and more open-minded. What they need is a guarantee over access to the rail network - currently a big unknown in many cases.

The way in which the ORR, which oversees this, has approached the granting of guaranteed access options to date has meant that the existence of such a mechanism has been largely overlooked. Using the current criteria it has set out does not sufficiently allow scheme sponsors to make the case. In its Track Access Options Policy (2008), the ORR said that track access options "should only be approved where sufficient capacity will be available on the network" and "where they are required to support financial investment (either in enhancements to a railway facility or a wider scheme". In practice, this has only really supported the grant of options over major new rail lines e.g. Crossrail and the enhanced Thameslink railway. But the time is right to re-look at the track access option policy to make it a catalyst to investment, not a glaring missed opportunity.

This plays into the question of certainty - which is the key for investors. The Railways Act 1993 (as amended) already provides for investors to be granted an option over access to the network. So with a bit of joined up discussion, there are some fundamental changes that could be made in a very short space of time to unlock the potential - but the industry needs to approach the ORR with a joined up voice to demand a re-think on this potentially game changing right that the legislators wanted the industry to have available to it not just in theory but in practice to support real investment in the railway and unlock the potential of the wider benefits rail connected sites undoubtedly deliver.

Ultimately, the reputation of rail freight as a poor relation to the passenger market precedes it and will continue to. But although Westminister will want to satiate voters' growing angst over being late for work, if our lack of transport capacity means their weekend grocery orders or children's' birthday gifts ordered online are tardy too, then they may well have to act.

It will not be long before products, connected to the IoT, are able to articulate the amount of carbon emitted on their journey from factory to home.

Superports: why we need them and how to get them

DP World London Gateway
Oliver Treneman
Park Development Director

DP World is a global trade and logistics firm, operating 77 marine and inland terminals in 40 countries across six continents. Oliver Treneman is Park Development Director at London Gateway, DP World's £1.5bn deep-water port and logistics park scheme.

Why superports have become necessary

Logistics has come a long way. Looking back over the last three decades to the sector's early years in the United States in the mid-1980s, there has been a transformation from a sector that began as a simple combination of haulage and storage, into something that has become an art form.

Driven by increasing demand from consumers, not least in emerging markets, logistics has become almost completely mechanised and IT-driven. The size of ships such as the CMA CGM Marco Polo and the Maersk Triple E class, vessels the length of four football pitches, has necessitated the rise of deep-sea superports capable of docking these behemoths. Shipping remains the quickest and easiest way to transport goods around the world and, put simply, superports are essential to keeping British importers competitive.

Even with the likely rise of trans-continental rail freight services from China, it will be very difficult for importers to get the volume and cost saving that they do with a large vessel.

That was DP World London Gateway's justification for kick-starting the £1.5 billion London Gateway scheme in 2006, when it acquired the site as part of its acquisition of P&O.

Once complete, the 460-acre logistics park will constitute one the biggest logistics developments in Europe, served by six deep sea berths able to handle the biggest container ships in the world, and three railway lines connecting the site to all of the UK's main distribution hubs. The state-of-the-art deep-sea container terminal also became the first port in the world to be awarded the Planet Mark, a certification programme backed by the Eden Project, for its commitment to carbon emissions reduction.

With 9.25m sq ft available for development, London Gateway is one of Europe's biggest logistics sites

Superports as logistics bases: how to get more

The connectivity and scale of what we have created is of great appeal to retailers and 3PL companies. The 9.25m sq ft of blank canvas developable space we have will enable occupiers to shape the kind of bespoke, tech-enabled facility many now require. Clients who would typically be focused on the Golden Triangle of the Midlands for logistics facilities are considering London Gateway. Last November, UPS signed a £120m deal for over 10 percent of the scheme's land, and is currently building a 344,000 sq ft shed onsite, which will be their central UK hub for sorting and delivering packages to and from Europe. The proximity to Stansted and Southend airports, popular with 3PL operators because of lower airfreight costs when compared with Heathrow, is another bonus.

Locations like ours are catching the attention of occupiers because infrastructure considerations are steadily becoming more pointed. The rule with infrastructure investment is that you need to plan for the worst and then build three times as much to cater for future demand. Logistics providers are starting to feel the pinch of the long-term legacy of the UK's "make do and mend" approach.

This is something that can play to the advantage of developers. To kick-start the London Gateway project we built infrastructure roads and made commitments such as funding the widening of the nearby A13. Playing to the desire of planners to demonstrate direct local benefit from new schemes is something that can go a long way. Equally, the local development order for London Gateway also factored in the local economic growth that logistics development brings. It makes provision for mixed-use office and industrial development to accommodate the ancillary businesses generated by logistics supply - such as catering - in addition to the 12,000 people projected to be employed at the park once it is complete.

Chinese horizons

The urgency of unlocking more logistics space will only grow if, as in China, value shifts away from retail assets and towards logistics assets. Granted, our logistics boom is nothing compared to China's, which has undergone one of the most fascinating developments in human history - a transformation in the space of a decade that has seen a country which had no word in its dictionary for 'logistics' at the start of the millennium build the best part of 800 million sq ft of warehousing: nearly double the entire UK warehousing stock.

It is a development that may be instructive. Much like the UK, China has embraced e-commerce, a trend in large part down to a population both highly computer literate and with growing disposable income. Convenience has become paramount, and the results for last mile delivery have been truly extraordinary. People will deliver orders within an hour on a motorcycle; not only a fast but liveried professional service.

Now while that may be the Amazon dream, it is likely that China's comparatively low labour costs have played a large part in that, but there are other trends in Chinese e-commerce that could be more likely to translate across to Britain. Alibaba & Taobao, amongst others, have developed such advanced e-commerce platforms that we have started to see Chinese consumers bypassing the retailers and purchasing directly from manufacturers.

It is easy to see something similar taking off in Europe over the next three to five years with consumers buying directly from source, particularly with more generic items. Why go to a high street store when you can buy unbranded crockery or white T-shirts direct from a Chinese manufacturer? That cross-border e-commerce prospect has huge potential, particularly as IT systems make tracking stock more intuitive and cost effective.

Without doubt, that kind of e-commerce disruption would only increase the upward pressure on industrial rents. Perhaps, if the trend spreads from Asia, some inspiration for a solution could be learned from there too. Multi-let facilities are standard form in countries like Japan. Many occupiers, happy to work alongside each other in Tokyo or Shanghai, stay in a single development in the UK, in a large part because of preconceived ideas of what occupiers should be doing. We hear plenty of reasons around fire risk or transport or security, but the Asian example shows that where there's a will, there's a way.

After all, necessity is also the mother of innovation. If there continues to be a shortfall of logistics space in prime areas, if technological fit-out costs continue to rise, and if e-commerce continues to grow, with the subsequent increase in rents there may be little choice but to begin sharing facilities. We see similar innovation in sweating assets with the likes of Airbnb and Uber. In the meantime, we hope that the scale of our facility will continue to make a real and ongoing contribution to British economic growth.

The rule with infrastructure investment is that you need to plan for the worst and then build three times as much to cater for future demand.

Once complete, London Gateway will be served by six deep sea berths, three railway lines, and employ 12,000 people

The importance of rail

MDS Transmodal
Mike Garratt
Chairman

MDS Transmodal is a leading freight transport and logistics consultancy. MDST's expertise has been used to produce the UK Department of Transport's port, rail and air freight forecasts, and the GB Freight Model used for the UK Government's National Transport Model. Mike Garratt is the Chairman and founder of MDST.

Non-coal rail freight in the UK in the decade to 2014 grew by about 17 percent, at a time when overall freight in the UK has gone down around 10 percent. So rail, as a proportion of the market, expanded its market share in all non-coal traffic by 3 percent per annum over the last decade.

However, the rail network as a whole is filling up rapidly - partly because of the way the network is run and the competition for space with passenger transport. In certain key cases, freight has been frustrated because of a lack of capacity. This was most obviously seen at Felixstowe, where 28 percent of containers leave the port by rail. 33 trains leave the port every day now, compared with 14 per day ten years ago. Those 33 are capped; no more trains can be added until more infrastructure is put in place. The port's railheads could accommodate 50 trains per day, but the problem is getting them out onto the network. It is going to frustrate further growth.

Southampton, which has 35 percent of its freight departing by rail, has also been constrained. London Gateway, however, could dispatch more trains because there are some spare paths running through London; that in itself is rather strange, given that London has the greatest demand for passenger trains.

So there is some capacity to put more trains through the network - how many is difficult to assess as it depends on what else is happening on the network. The next step for Felixstowe is to upgrade the branch line to Ipswich. That will release more capacity, but most of the trains will have to go through London, putting it in competition for rail capacity with London Gateway when upgrading the cross-country route across East Anglia would remove most of the freight trains through London.

Rail represents around 12 percent of UK freight transport, in terms of kilometres travelled. The incremental cost of road transport is around double that of rail freight for containers, so rail is competitive for moving containers long distances once the higher fixed costs are covered. The last bit of the journey will be done by road, but the people receiving the goods may not realise they came most of the way by train. Rail can offer economies over quite short distances. It makes sense for companies like Tesco and Sainsbury's to deliver into London by rail, as they have their own big sheds and rail terminals in Daventry.

The key is to limit rail journeys to requiring only one road leg. Deep sea container ports use rail because one end is already rail connected. Although there is an extra cost for loading to rail compared to loading to road at places like Southampton, it's less of a burden than if you had to drive from one place to another by road first. Half a dozen a trains run from Southampton to just Birmingham every day, and that traffic is rail connected at one end and with a road leg at the Birmingham end. The challenge for domestic traffic distribution by retailers is that they would typically have a road leg at both ends of a journey involving a rail leg. Rail-linked distribution parks offer the opportunity to cut the cost considerably, which is what happens at Daventry, which has more than a dozen trains a day leaving it, and is doubling in size. Prologis is now well on the way with its DIRFT 3 project, and it has occupiers already booking space in its 6m sq ft extension at Daventry.

The value and economics of a park like Daventry depend on the proportion of traffic that will arrive by rail, and will therefore make the savings - this makes the land more valuable. That uplift in value makes it worth spending on rail infrastructure on site and the connections.

Other property companies are looking to capitalise on rail connectivity. Roxhill is looking to develop the East Midlands Gateway, a 6m sq ft freight interchange at Kegworth near Nottingham. Goodman is pursuing a similar scale site at Etwall near Derby, and is attempting to gain permission for its Slough International Freight Exchange. Ashfield Land has proposed the 8m sq ft Rail Central project near Northampton. SEGRO is a part of the joint venture behind the iPort scheme at Doncaster, and Peel Group this year opened a high profile tri-modal sea, road and rail scheme at Port Salford.

However, the success of such schemes will depend on capacity on the rail network; the occupiers have to have confidence that the railway system will work for them. The bad news is that, if there isn't the capacity in long run to allow more freight on the network, then sites like Daventry will not be able to capitalise on the attractiveness that comes from lower cost rail transport and other sites will not develop.

A Network Rail paper published in August 2016, the Freight Network Study, sets out how the forecast increase in rail transport could be met. It identified a large number of projects, which would cost billions of pounds to deliver. Ultimately, it's down to how the network is utilised by passenger and freight trains. It looks like it will cost £100m to increase the capacity of the branch at Felixstowe so the increased freight can share the line with a once an hour, subsidised, passenger train. Freight trains only occupy a small minority of the overall network capacity. Deciding how many paths freight gets compared with passengers is a an important capacity allocation issue.

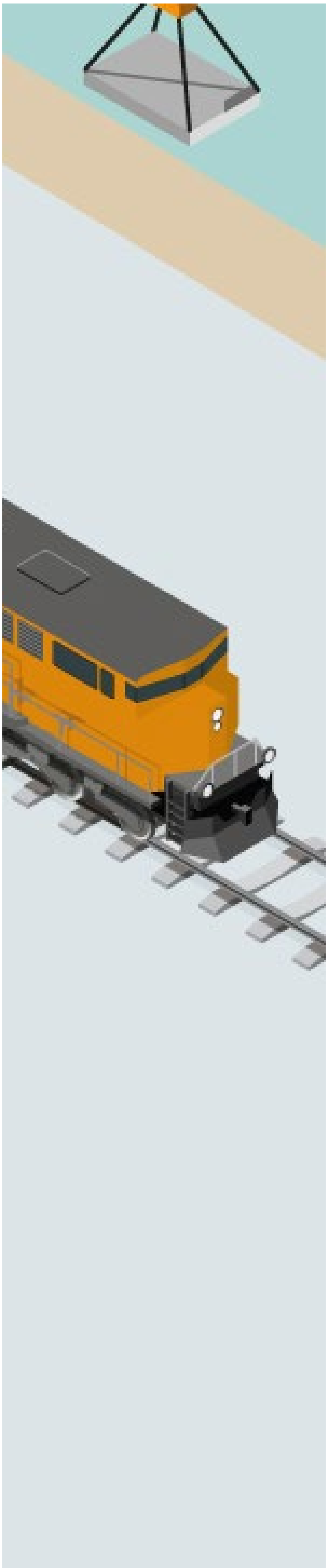
Changes are occurring too on the way freight is moved to the UK from the Continent. Currently, a huge proportion of this cargo uses the Dover-Calais crossing, but because of problems on the Dover crossings in the last few years, major shippers have been looking at diversifying how they move their cargo. Some are moving a higher proportion of their cargo to North Sea crossings to reduce their dependence on the Dover Strait. In turn, the biggest North Sea ferry operators have announced they are going to near double the size of new ships to increase capacity. So there is increasing interest in moving cargo long distances by sea, to spread risks and reduce cost.

This shift would have great benefits for the northern regions. The recent Transport for the North freight and logistics report, which was largely written by MDS Transmodal, calculated substantial user and non-user benefits of such a strategy for the north of England. The Liverpool2 container terminal will be beneficial as well in allowing cargo to be landed closer to its destination. These developments are worth a lot, both to the regions and the wider economy. However, the delivery of Transport for the North's policies will depend upon more rail freight paths being available north to south, and to certain extent east to west, and there is no guarantee that these will be available.

Returning to the implications for real estate, there is a continuing demand for sheds. There is currently over 400m sq ft of big sheds space in the UK, which is refreshed on a 25 year basis. This means there are around 10 to 15m sq ft of sheds built every year.

The question is: where should they go? If they were to be concentrated on rail and water-connected sites to a greater extent, the net result for UK plc will be a cheaper freight transport system. Because of the shortage of HGV drivers in the country, major road haulage operators are looking to rail because of the sheer need for transport capability. That is why the largest container road haulage company in the UK, Maritime, now has two railheads - one at Barton Dock Road in Manchester, and the other at Birch Coppice near Tamworth. What will be key is ensuring that the planning system makes land available to put big sheds near rail-connected ports and inland sites on the edge of urban areas.

That uplift in value makes it worth spending on rail infrastructure on site and the connections.



Where needs investment and how do we get it?

Rail Freight Group
Maggie Simpson
Executive Director

Rail Freight Group is the leading representative body for rail freight in the UK, promoting and campaigning for policies that support sustainable growth of rail freight. RFG's members include ports, logistics firms and property developers. Maggie Simpson has been the Executive Director of RFG since 2012.

How can we unlock additional capacity on the rail network for freight?

Network investment can have real impact in delivering extra rail capacity for passenger and freight trains. It can be as large as the planned works on the London-Sheffield Midland Main Line, which will see the line electrified, allowing faster trains, as well as rebuilding of the bridges and tunnels along the line. It can be smaller schemes such as the branch lines to ports. Medium term, there is also a role for digital signalling and train control systems, which can increase capacity without the need for major civil engineering projects. But it can also be as simple as an extra signal, or an improved line speed. There has been a move towards having longer trains as an obvious way of increasing capacity, but not all lines are enabled for 775m long trains yet.

What investment has there been so far?

Government has been supporting that through the Strategic Freight Network fund, which has had around £400m of funding over the last decade, in addition to freight elements of other projects. The Strategic Freight Network Steering Group, for instance, has prioritised increased capacity on the Felixstowe branch, which is important to deal with forecasted growth on this route.

There's also been private sector investment from customers and operators, in new higher capacity wagons, modern terminals and so on. The payback for Government comes from economic prosperity and environmental benefits - it's estimated that rail freight contributes around £1.6bn per annum. Following Brexit, supporting trade links to ports and via the Channel Tunnel, which operators have identified as a key growth area, will be vital for our exporters and rail has a big role to play there.

How can we create structures to encourage funding from institutional investors to create that additional rail capacity?

There seem to be two different approaches. One is the 'Crossrail model' where businesses commit to a future uplift in rates in exchange for the economic benefits of enhanced transport links. But Crossrail is a clear and distinct project, with specific benefits accruing to certain areas of London. One approach could be to fund capacity projects that would benefit a port cluster, many of which are already owned by institutional investors.

The other model is for an investor to fund a scheme outright, with payback over time from the new services that run. This is harder for freight, because the charges which we pay are essentially capped in law and, if they increase, customers will tend to move back to road rather than pay them. So there would be a role for Government in guaranteeing the return. I can see this working best for mixed traffic projects where those conversations are already happening for the passenger service.

How can we reduce rail freight's cost barriers?

We need to keep the pressure on cost efficiency, even for those parts of the market where we are cheaper, and challenge each area where we lose time, such as in loops and sidings. It's not always possible on a busy railway, but we need to instil that mindset in timetablers and controllers to see what's achievable. We also have to invest in skills and technology that can improve productivity. Finally, we need Government to recognise that freight is critical to the nation's prosperity, and to ensure that the charges for accessing the network are fair for the sector.

Following Brexit, supporting trade links to ports and via the Channel Tunnel, which operators have identified as a key growth area, will be vital for our exporters and rail has a big role to play there.

A train wagon capacity perspective

VTG Rail UK
Robert Brook
Managing Director

VTG is the UK's leading private rail wagon hire company, which develops and produces wagons for rail container freight transport. Robert Brook has been Managing Director of VTG since 2006.

What specific advantages does rail freight offer?

The fastest growing rail commodity, due to consumer demand, is containers.

Maritime containers - the ones coming in on ships to Felixstowe, Southampton, London, Liverpool and other ports - have to be taken out of the port to their distribution centres pretty rapidly, as the ports don't have the space for storage. The beauty of rail is that on a "standard" train you can carry around 36 40ft containers. That's the equivalent of 36 lorries compared to one train, which makes a huge difference for road congestion.

How can we expand rail capacity?

The biggest issue is that the rail network is shared between passenger and freight. There are many schemes to increase passenger capacity but there isn't a clear impetus driving the development of more capacity for freight: after all, freight doesn't vote and passengers do. If freight leads to delays for passengers their complaints will be heard but not vice versa.

There is work being done by Network Rail and other industry bodies to identify where the network needs enhancement, but it takes money and time. It involves measures such as doubling the tracks to increase capacity or installing "passing loops" on single track branch lines to free up train movements. There are benefits coming in the future from new control and computer systems such as the European Rail Traffic Management System and the European Train Control System which will mean that trains can run faster and closer together, which will definitely increase capacity - which in turn, will enable more rail services out of ports such as Felixstowe, which are capacity constrained at the moment. Network Rail's forecast has suggested container traffic could be triple current levels by 2030, if current network constraints are tackled.

To what extent can more efficient rolling stock make a difference? Modern materials can produce bigger, lighter, more efficient rolling stock. But presumably the rolling stock is limited by the width of the track and the height of the tunnels.

The pivotal consideration is the loading gauge which is defined by the size and shape of all the tunnels, platforms, bridges, in fact everything that surrounds the railway track. For a freight vehicle to be able to "go anywhere" on the rail network it must fit the lowest common denominator of all of those.

The Office of Rail and Road and Network Rail are currently funding gauge enhancements, such as raising a tunnel's height, that allow the biggest containers to travel on higher deck height wagons on the line. Clearly, these types of measures are incredibly expensive and time-consuming. While they are important, we need to be realistic in recognising how long it will take to make these adjustments across the UK's extensive rail network. Therefore, it is unlikely bigger vehicles will be 'the' solution to capacity issues for the foreseeable future. What we must do is make the best of current constraints.

Another way of expanding capacity could be through allowing greater axle load capacity. However, that has an impact on the infrastructure due to the heavier load on the track. There are also opportunities, which VTG Rail UK has recognised and addressed, to tailor the wagons to get more containers on the train. By redesigning decks so that the wagons are closer together there is less wasted space and it is possible to get more wagons, and hence more containers, on a standard length train. So there is some design optimisation that is possible.

The key things that the Government would need to address are capacity-improving measures which wagon developers could incorporate but are not currently incentivised to build in as standard. Wheel Slide Protection (WSP) for example - the equivalent of ABS in a car - addresses a widespread problem in the rail world. If wheels lock up and slide, which can happen when braking in slippery conditions, trains end up getting flat spots on their wheels, which can cause damaging impacts to the track, and disruption to the network. If we could stop that by installing WSP it would save costs for all actors in the sector, but the problem is that the cost of fitting those systems to the wagons is substantial. Our customers see a marginal benefit but usually don't think it is worth the cost since much of the benefit, which relates to reduced track damage, benefits Network Rail.

One way of tackling this could be through incentivisation via the Track Access Charging System, in the same way currently applied to the suspension system fitted to wagons. Operating companies pay Network Rail to run trains on the tracks and reducing the access charge to operators that use wagons with more "track friendly" suspensions that cause less damage to the system has proved to be a successful strategy which could potentially be rolled out to other beneficial wagon designs or features such as WSP.

What are some of the innovations in rail freight you have been behind?

We have focused on material capacity improvements - for example, we introduced a high-capacity aluminium cement wagon a few years ago to replace the industry-standard old steel wagons. As aluminium is much lighter, the tare (empty) weight of the wagon was reduced by 5 tonnes. That allows you to carry 5 tonnes extra product, which works out as an additional 100 tonnes of cement per train - the equivalent of taking three or four lorries off the road.

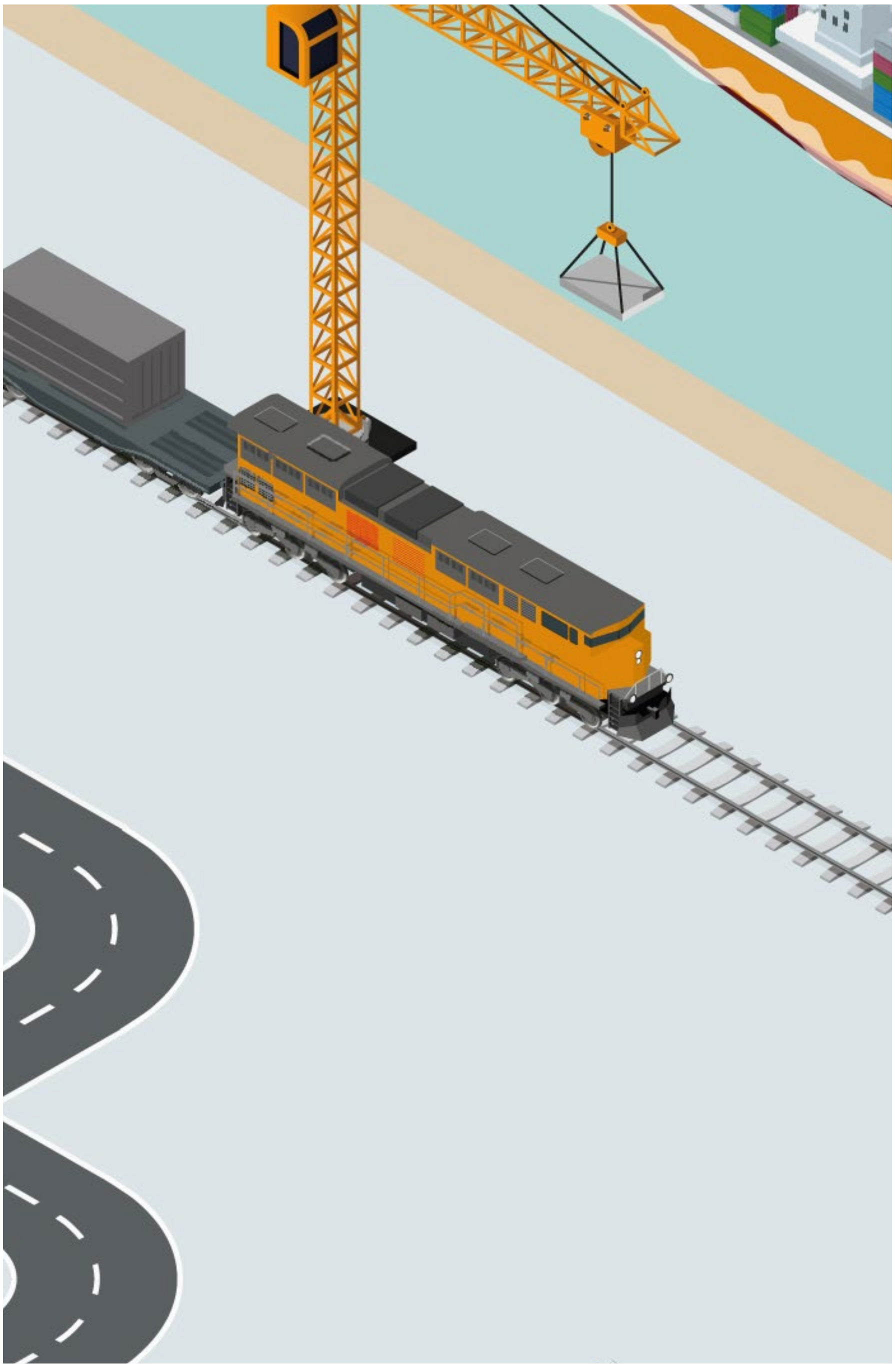
We have also investigated better length-efficiency in trains. We studied freight trains being used to take containers out of ports, and it quickly became obvious that there was a lot of dead space on the trains. Many wagons were leaving port carrying far below capacity, as they were designed to carry one 40 foot container and one 20 foot container, at a time when the two container sizes were used roughly equally. However, that has shifted in recent years: now there are roughly four 40 foot containers used for every one 20 foot container, so a lot of trains were leaving port with empty 20 foot spaces. In response, we designed a wagon called the Ecofret to fit as many 40 foot containers as possible in a standard length train, but which still allows space for 20 foot containers. As a result, trains with our Ecofret wagons can now run at 100 percent capacity as standard, which has allowed us to get roughly 35 percent more containers onto the same length of train. It is all about thinking about how you can get more product on one train.

Do you see the rise of electric and self-driving lorries as spelling the end for rail freight?

There is no reason why the two can't complement each other. The quieter electric road vehicles are particularly well suited to urban logistics. When rail freight was more widespread, freight trains used to regularly stop at main stations. The use of electric vehicles could enable that again, with products being delivered by rail into urban stations at night with electric vehicles distributing them out from there. Additionally, it is worth bearing in mind that electric and self-driving vehicles will still have to operate on an increasingly congested road network. A single train of our aggregates' wagons typically carries 1,500 tonnes of stone from a quarry, the equivalent of 52 HGVs, often directly into the heart of cities in the south east of England. With 20 trains running out of some quarries each day, that can take over 1,000 trucks from a single location off the roads, so I think rail will definitely still have a part to play.

Even beyond that, rail is an incredibly efficient mode of delivery - over 94 percent of rail freight deliveries arrive within 15 minutes of the scheduled arrival time. As consumers become ever more demanding in placing a premium on quick order facilitation, that is the kind of fact which speaks for itself.

The fastest growing rail commodity, due to consumer demand, is containers.



Airport city - a view from MAG Property

Manchester Airport Group Property
Lynda Shillaw
Chief Executive

MAG Property is the real estate development and management arm of Manchester Airports Group, holding a commercial portfolio of 5.67m sq ft worth £623m across four airports, in addition to the £800m Airport City logistics development at Manchester Airport. Lynda Shillaw is Chief Executive of MAG Property.

The Midlands is seen by many, as the prime region for sheds in the UK - do you think the North West offers other particular advantages?

Yes. The region is also very central to the UK and Airport City Manchester, in particular, is very well connected to the motorway network. It also has a big labour supply, great international air links and multiple cities within close proximity. Following the arrival of household names such as DHL and Amazon, the Global Logistics element of Airport City is now widely regarded as one of the key prime sites for logistics within the North West.

What potential do you see in air freight as an alternative to shipping for global logistics operations to the UK? Is it a growing market, or a niche one which has unsatisfied demand?

We are seeing an increased demand for air freight as customers increasingly need express, just-in-time deliveries for fresh products and produce. The growth of e-commerce is driving this and is leading firms like DHL to grow, who have recently extended their major UK hub at East Midlands Airport. The UK air freight sector is a growing market and MAG Property's airports are responsible for the majority of growth through 2015. MAG Cargo's cumulative volumes grew from 640,000 to 670,000 tonnes in 2015, and volumes are now close to exceeding 700,000 tonnes.

Is there an anticipated profile for Airport City occupiers who would be particularly well served by air freight?

Many of our occupiers, present and future, will cite Manchester Airport's air freight links as key to Airport City Manchester's appeal - this is certainly the case for DHL and Amazon. And with new routes like Beijing, Houston and San Francisco, all with bellyhold cargo capacity, such demand can only grow.

You have space at Stansted, in the East Midlands, and in Bournemouth: do you have any plans for logistics development or investment in those areas?

Yes. East Midlands Airport is in a perfect central position for logistics and lots of the plans around the 'Midlands Engine' focuses around its suitability for logistics. The Airport is the most important pure freight airport in the UK and this means that logistics firms are interested in basing themselves in and around the airport. London Stansted is the country's second biggest pure freight airport and we are looking to promote its facilities as other airports in the South East reach capacity. Managing airport property takes knowledge and expertise, at MAG Property we know how airports operate and their associated advantages for businesses.

Has Brexit and the new government's shift from the "northern powerhouse" agenda affected your outlook?

We do not see a shift away from the northern powerhouse agenda. There will be a continuing focus on it through things like the Northern Powerhouse Partnership, which MAG Property is backing. Improved transport connections to Manchester Airport will help promote its role as the global gateway to and from the North. That means not just HS2 but improved east-west rail links too.

It's too early to tell how Brexit has and will affect logistics businesses but we do not see Britain's role declining. We're actually currently developing ALPHA, a 130,000 sq ft logistics unit at Airport City, which has already been forward sold to a UK institutional investor. Interest is stronger than ever and our pipeline is positive.

Many of our occupiers, present and future, will cite Manchester Airport's air freight links as key to Airport City Manchester's appeal

The total planning area of Airport City Manchester comprises of approximately 5 million sq ft GFA, with a total development cost of £650m and value of £800m.

Third party logistics: Eddie Stobart view

Eddie Stobart
Alex Laffey
Chief Executive

With over 2,500 trucks Eddie Stobart is one of the UK's leading supply chain and logistics distribution firms, operating a pan-European network covering retail, consumer goods and manufacturing by road, sea and rail. Alex Laffey, chief executive officer of Eddie Stobart, oversees the firm's operations, vehicle fleet, staff and warehouses.

Technological efficiencies and economies of scale from multi-user provision makes third party logistics operators increasingly attractive to retailers, says Alex Laffey, CEO at Eddie Stobart Logistics

What do Eddie Stobart's operations cover?

At Eddie Stobart we operate 2,500 vehicles which all support a number of different sectors, across retail, manufacturing, industrial, and e-commerce and fulfilment. Given we transport everything from boulders to books and scarves to sausages, you really never know what may be behind the curtains in an Eddie Stobart lorry next to you.

To give an example of our reach, of the food and groceries industry body IGD's top 20 ranked suppliers, we work with 18. We also provide transportation across different modes. As well as the famous lorries, we run six trains a day six days a week from Daventry and our rail terminal at Widnes to all ends of the country. In addition, we operate 21 warehouses across the UK, from dedicated full warehouse operations for big consumer suppliers down to short-term ad hoc storage for other customers. So we have a fairly strong overview of the trends underpinning the logistics sector.

How has the warehousing sector changed over the last decade?

The obvious trend is that it is now far less labour intensive, with greater on-scheme automation and mechanical handling. However, another more recent trend is that customers have started to move away from demanding dedicated facilities for themselves, and are more willing to outsource to third-party logistics or use multi-user facilities. This has come about partly as the retail sector has become a much more challenging market. Some retailers have decided to focus more on reinvesting their profits into their core offer at their stores, rather than investing in warehousing. As well as this, multiuser operations can in many instances offer these firms added value without having to pay for a whole site.

That is partly where our offer as a firm comes in. At Eddie Stobart we can leverage our network and our other customer volumes to offer these occupiers economies of scale through multi-user operations, like having deliveries for different customers on the same train or run through the same facility. Additionally, we can drive economies of scale in other ways. By running the work we do strategically at particular times - say, delivering industrial volumes at 8 in the morning and 5 in the afternoon, and delivering fulfilment volumes at 2 in the afternoon and 2 in the morning - we are able to use the equipment we have across sectors in a way that maximises the utility of our network and sweats our assets effectively.

To what extent does technology allow you to drive those efficiencies?

We are heavy users of technology. Our lorry fleet makes use of the latest telematics, which supply us with real time data on the location of a truck and how full or empty it is. We can then use that data to see where we can make greater use of capacity. If a lorry is driving more than 20 kilometres empty, that will be flagged as a concern to our operations team. That also links in with our planning system, which plans routes across all sectors to maximise that utilisation of space. We have also worked to improve our processes as part of that – by using methods such as advanced notification for deliveries and reducing the paperwork required before drivers can get back on the road, we can maximise efficiency at the margins.

What do you think the trends in the logistics market will be in the coming years?

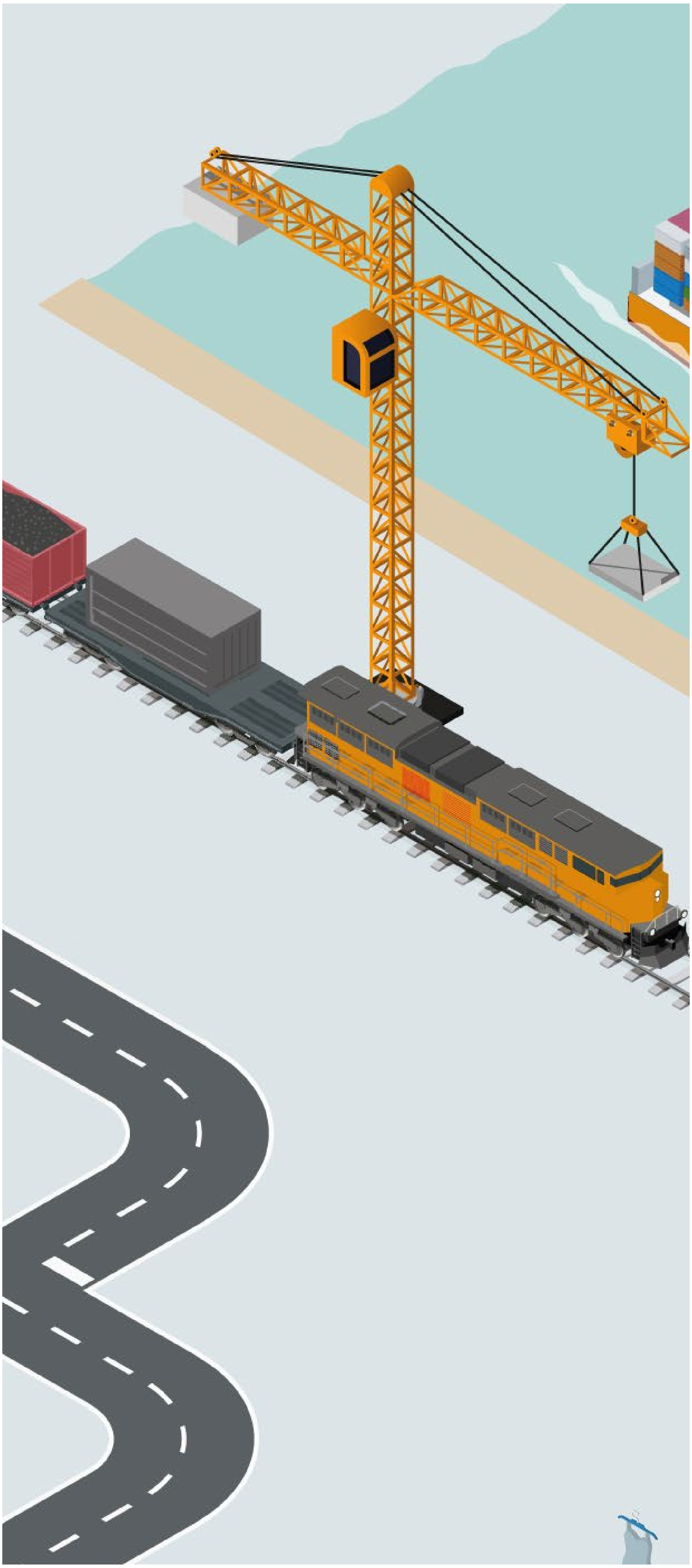
Warehousing in smaller urban locations, from 50-1,500 sq ft, will see real increased demand to facilitate the growth of online retailers and quick fulfilment. I also think we're likely to see consolidation for discount retailers. Some of these companies have seen mergers and acquisitions over the last few years and as such have logistics networks that are spread across four or five sites when one or two could do, which would allow them to reduce their distribution costs.

We may also start to see firms relocating their distribution operations away from the North West and more towards the South. Around two thirds of the UK's population lives south of Lichfield, but the comparatively higher cost of logistics space in the South has until now discouraged occupiers from basing their operations in the region. With increased haulage costs and congestion on the roads, some retailers may decide it makes more sense for their bottom line to pay more for the location and gain a trade-off on delivery costs.

To what extent is rail likely to be a solution? What should be done on infrastructure?

Currently only about 3-5% of our operations are done by rail. The economics of rail are tough to work in the UK for a lot of companies, as we don't benefit from the efficiencies of distance that European rail freight does, and the UK rail network doesn't offer much flexibility for freight. It is currently running close to capacity, and passenger services will always take precedence over freight. You only have to look at HS2 to see the huge costs and timeframes involved in increasing rail capacity substantially.

The answer is likely to be more investment in roads. Most of the major roads are getting some form of investment, particularly the M1 and the M6, but there is the additional problem that the number of road users seems to go up just as fast as any new investment creates capacity. From an industry perspective, the best we can do is to balance our delivery flows across the whole 24 hours of the day and maximise what we move when we move it.



4 RETAIL AND CONSUMER NEEDS AND LAST MILE FULFILMENT

Retail is reinventing itself again - Addleshaw Goddard

Does the parcel boom make sharing an inevitability? - Doddle

Digitising the supply chain - Fabacus

A 3PL perspective - Iain Speak, Consultant

Going big on small sheds - Network Space

Focusing on communication, collaboration and partnerships to meet customer expectations on logistics - Britvic PLC

A hybrid approach - Diageo

Retail is reinventing itself again

Addleshaw Goddard
Andrew Rosling
Head of Retail & Consumer

Andrew is a corporate Partner, specialising in UK and international mergers and acquisitions, and is Head of our Retail and Consumer Sector Group. His clients include Britvic, Diageo, Harper Collins, McBride, Royal Mail Group, Sainsbury's, Schwan Group, Tate & Lyle, Valmont and William Hill.

History will file the 'death of bricks and mortar' above the millennium bug and next to Brexit's Project Fear. As anyone who has visited Westfield at the weekend will know, consumers are still flocking to shopping centres in droves, confounding the prophecies of decline.

The mountain and Mohammed

The retail experience that is drawing in those consumers has however changed profoundly, in a remarkably short period. At the heart of this change has been the consumer's appetite and ability to browse and shop through different channels, and crux of that flexibility is the ability to take products and services to the consumer whilst also continuing to draw the consumer to those products and services.

So the 'final mile' has become perhaps the defining characteristic of the new retail world, a remarkable logistical challenge which has also created a remarkable arms race between retailers competing to raise the bar on fulfilment, whether in terms of delivery times (it is currently at one hour, across the crowded streets of London) or in terms of means of delivery (we are all awaiting our first drone delivery...).

The other fascinating feature of the new landscape is 'click and collect', which feels a bit like a strategic imperfection, a sticking plaster holding together the online shopping model, compensating for the fact that our homes, our roads, our time-poor lifestyles and our working patterns don't allow a perfect home delivery model.

Is this sustainable?

Clearly, a lot of the current experimentation with delivery commitments is just that: a test of both the ultimate capability of the fulfilment industry and of the boundaries of customer expectations (does a consumer really want to have a single bottle of milk delivered? Do they expect not to pay a delivery fee?).

Also, whilst it is hard to imagine how shipping orders across London on multiple mopeds to meet a one hour delivery promise is ever going to be a profitable enterprise, the cost of that fulfilment pales in comparison with the impact of returns. The average returned purchase passes through seven pairs of hands as products are sorted, repackaged and prepared for re-sale, often costing two or three times as much as the initial delivery. Clear Returns, a returns solution provider, estimates that returns cost UK retailers around £60bn a year - with an ever increasing percentage of these generated by online sales.

And what about 'traditional' logistics - impact on the hub/spoke/planning etc?

Furthermore, logistics solutions are far from obvious. For the various structural reasons discussed elsewhere in this report, the warehouse space needed to cater for growing demands simply isn't there, and unless investors agree huge write-downs in retail parks and other out-of-favour assets, the prospects for carpeting the edge of urban centres with last mile hubs are not great.

So what is the next solution, the next click and collect?

So where next for online retailers trying to drive their margin and stay ahead?

Some are implementing or increasing their delivery charges (eg Amazon setting a minimum spend of £20 for free delivery, and John Lewis charging £2 for click and collect orders under £30). But just as the music and newspaper industries have seen, when consumers have got used to getting something for free, it is very hard to persuade them to start paying, especially when there is always likely to be a new market entrant trying to buy market share. The challenge of returns may well also be met by increased fees but retailers are hemmed in by both the legal constraints around e-commerce and also existing consumer expectations and behaviours.

Drones attract lots of headlines but face significant regulatory challenges and safety concerns that have not come close to being properly explored. Perhaps the more exciting game changer will be driverless vehicles. Uber have just put $680m on this particular horse, buying Otto, a start-up (which didn't even exist before 2016) pioneering driverless truck technology. Challenges abound but, as Tesla are showing, maybe the driverless future is not as far away as it seems.

As the Sainsbury's/Argos deal showed, scale is critical in a market with challenging margins and lightning speed innovation. There will doubtless be more consolidation, amongst retailers, fulfilment businesses and technology businesses.

Click and collect itself was a relatively unsophisticated solution to the home delivery challenge. Part of the next evolution will be equally unsophisticated - more new homes being built with embedded delivery facilities. The approach of major listed landlords, such as British Land, Hammerson, and Land Securities, has also been to encourage consumers to continue using retail centres by increasing the provision of leisure operators within their schemes, making a day out shopping more of a leisure destination, while also working with retailers to benefit from a growing focus on omni-channel operations.

While brands and occupiers increasingly share facilities, particularly outside of Britain, the biggest missed opportunity currently for retailers is sharing technology. Most retailer platforms have been cobbled together over years but a patchwork quilt of technology is never going to be as stable or as efficient as something built for purpose, such as Amazon or Zalando. The prospect of lots of retailers having all their own proprietary systems doesn't make any commercial or practical sense. The thousands of firms who are not Amazon have neither the cash nor expertise to create their own logistics systems or e-commerce platforms. To try seems pointless. Finding safe, open source solutions should be a focus for the retail sector right now; encouraging a shift to an environment where multiple firms can use the same platform.

Some or all of the above predictions may come to pass, but two things are certain: someone will surprise us, with a profoundly new and different solution and retail's next reinvention will not be a comfortable, predictable, managed evolution. If there is one lesson to be learned from the last ten years it is that change now comes in rapid and disruptive steps, driven by a consumer and a technology industry that are both fully empowered to ask 'Why does it have to be like that?'.

The 'final mile' has become perhaps the defining characteristic of the new retail world, a remarkable logistical challenge which has also created a remarkable arms race between retailers competing to raise the bar on fulfilment.

CASE STUDY

The acquisition of Argos by Sainsbury's completes a remarkable reinvention by Argos, a business that was struggling to stay relevant in terms of its store footprint, its product range and how its consumers browsed and bought those products.

The fast-moving evolution of click and collect has been instrumental in achieving that relevance, although as the world moved towards Argos and its catalogue, it also moved towards the world, for example opening new small store formats in commuter stations to allow shoppers to order on the train in to work and pick up on the way home.

Its ability to fulfil low-level orders on a same-day basis, across a range of over 20,000 products, requires Argos to be nimble and highly efficient. It achieves this through a hub-and-spoke logistics model, using smaller vans and indeed this platform has been called out a key driver in the Sainsbury's acquisition of its parent, HRG.

The transaction was effectively trialled by the parties in advance by inserting Argos concessions at Sainsbury's stores (itself an interesting innovation). The reaction of a surprised market to the deal reflected the speed of change and the unpredictability of the retail market. Initial reactions included comments like "the rationale baffles us - a step in the wrong direction for Sainsbury's". Very quickly however, as the market caught up with the strategic thinking and the underlying evidence, the deal started being seen as "financially and strategically inspired" with Sainsbury's being seen to be "paying a fair price and getting a non-food supply chain very cheaply". So the market recognised quickly the particular benefits of the Argos platform and also the benefit of thinking very differently, not just incrementally.

Does the parcel boom make sharing an inevitability?

Doddle
Tim Robinson
Chief Executive

Doddle is a click and collect parcel delivery service, with 50 stores in train stations, shopping centres and universities across the UK, which can accept over 40,000 deliveries per day. Tim Robinson, founder and CEO of Doddle, was previously a Director of Freight and Logistics for Network Rail.

What is Doddle?

We're essentially a click and collect parcel collection and returns platform. We have 50 stores in train stations, shopping centres and universities across the UK, which can accept over 40,000 deliveries per day, with customers either paying one-off costs for delivery or a subscription service. We've delivered a total of 415,000 parcels so far, with 130,000 signed up for subscription by end of 2015.

You have a long background in logistics - how has the parcel logistics sector evolved?

Inbound products for retail is the segment that drives UK logistics: the way it's structured, the way it works and its profitability. The UK is not a nation of big manufacturers or big producers anymore: we are a consumer nation.

When I worked at Network Rail in the 1990s, we used to work with Royal Mail and Parcelforce on their modernisation projects. Those projects came about thanks to the advent of email, which meant the economics of letter mail and how it made up their cost base had to come under scrutiny. But what we saw during the 90s, and increasingly through the 00s, was that parcel volumes were continuing to increase. The fruits were coming from the rise of eBay, Amazon, the early gestation of ASOS, and the move to multichannel shopping from the likes of John Lewis. While letter mail was down considerably, the increase in parcel volumes was a light at the end of the tunnel - but it brought abut new problems for logistics.

More volume is a good thing for any sector, but it put the particular set-up for supply chains under unique pressure. When logistics meant delivering to high street shops, it was a wide and varied network but it only had to deliver to a limited number of addresses, relatively. A logistics provider for Waitrose only had 300 different addresses and stock rooms to keep full. The shift to e-commerce widened the scope of how many addresses the network had to supply to - every single address in the UK: millions of homes, offices and shops throughout the country. Having to hit 15,000 postcodes every single day cost-efficiently led to the problem that almost everyone will have encountered: the dreaded little red card that comes from only being able to deliver when the person isn't in. With the UK set to spend over £80bn online a year by the end of 2018, up from just £7bn in 2007, it's a problem that is only intensifying.

How did this connect with Network Rail and Doddle?

The inspiration for Doddle was guided by that transformation of the UK logistics industry. Working as managing director of Network Rail's logistics division, we worked with rail operators to develop new infrastructure, rail-connected warehouses and new supply chain products.

What stood out was the opportunity to create a new network of 'consolidation points' that recreated that original logistics set-up before the explosion of e-commerce: delivering to a few hundred set points, rather than every address in the UK.

It dovetailed neatly with what was rapidly becoming an underused railway station portfolio. Railway stations in big towns and cities are ideal locations for parcel pick-up points, both from the view of the station owner and the consumer. Stations offer a lot of available space and it gives a use to the space at a time when ticket offices are gradually being phased out. They also have huge footfall and tend to be surrounded by offices and very dense employment and consumer activity.

Doddle isn't just based in railway stations though - were there other considerations?

The above all tends to be the case in big cities. However, you don't have to go far out of the big regional cities to find different footfall patterns. When setting up Doddle shops in stations in London, we were able to penetrate the commuter community fairly easily. In places like Sevenoaks and Basingstoke, the stations were great sites but didn't see much activity during the day, as much of the time provincial stations are built on the edge of towns rather than inside them.

So to reach the local communities, we had to focus on how consumers behave in provincial areas during the day. What quickly stood out was that supermarkets are far and away the hubs of most communities during the daytime. It isn't just people doing their weekly shop each day: it's people getting cigarettes, lottery tickets and, particularly in provincial towns, getting lunch. We thought long and hard on how we could fold the Doddle service and ethos into a supermarket environment, and we have a strong partner in Morrisons which thinks about customer service in the same way as us.

How does the service differ from the Post Office? What advantages does that bring?

We are not connected to any one carrier or retailer. Any retailer can use the Doddle store network and offer it for pick-ups or returns at their online checkout. We also receive deliveries from every single carrier, which means consumers can adjust their needs in terms of price or service, whether packages are signed for, tracked, whether they're international or domestic.

By contrast, the Post Office works exclusively with Royal Mail, and it has its local Collect network. Amazon et al can send package to a local Post Office, but only with retailers prepared to ship with Royal Mail. Those retailers all in all make up less than 20 percent of the e-commerce market. To demonstrate the difference, a Doddle store, on average, will handle between 300 to 500 items per day. The average Post Office will on average handle between 40 and 50 e-commerce collections per day.

Because we are the only dedicated walk-in parcel shop in the UK other than the Post Office, we've put a focus on the consumer experience and how we can use tech to drive that. Customers can do pretty much everything via our app. We've specifically designed our store layouts to avoid queues and ensure that customers are in and out in a short amount of time without any form-filling, as that's what modern consumers want. Our average store dwell time is less than 90 seconds. Consumer experience is something we obsessed over: people don't want to be waiting in a queue at the Post Office during their lunch hour just to send something they don't want back to ASOS.

How will logistics infrastructure have to change from here?

The vast amount of items handled by carriers and retailers means they will still need the ability to consolidate. Regional and national distribution centres in the middle of the country are something that will still be needed, but I think perhaps companies may not need so many as time goes on.

The adjustment I think we'll see is that it will almost be a return to the old days - these tech-enabled, high volume, high-throughput national distribution centres will be supported by hyperlocal distribution facilities that allow for orders to specific postcode groups to be consolidated, be it to parcel shop networks, homes, or offices. That will allow carriers to pay the costs of triple-handling out of system, while also consolidating locally and getting the benefits of consolidation at a regional level.

But off the back of that, the key thing that will need to change is the industry's attitude towards sharing infrastructure and networks. It simply won't be realistic for each retailer and carrier to run their own networks and their own facilities. Project the growth of e-commerce and home delivery forward ten years, and the number of parcels going to each individual home in terms of the number of white vans required for home doorstop delivery: it isn't sustainable. It can't carry on with 12 big carriers, each with their own distribution centres and networks, and I think big acquisitions and mergers in 3PL are inevitable. Ultimately, we will need to get to a point where the industry is able to amalgamate all of an individual's packages - where all of Mr Smith's items that have come in from multiple carriers are consolidated into one daily delivery.

Presumably all of this will need far more last mile depots. However, the general feel is that these are tough to finance despite the clear demand. How will the industry deal with that?

I think it is still early days. Amazon has been the biggest mover in the last mile market recently, but it isn't a well-defined market. They've had to be quite inventive in terms of finding workarounds, like buying print works and converting them into logistics facilities. Presumably the market will eventually adjust and as demand for last mile goes up, funds will start to take this niche seriously.

This provides an opportunity for investors and developers to modernise and updating existing investments. Estates like Park Royal which have been housing relatively small businesses in small units for some time have the potential to see a level of inward investment not seen in decades. We may see areas like Trafford Park, which had been almost lost and abandoned, come back to prominence thanks to this reinvestment and repurposing. Those who've invested in those types of sites with infrastructure will do well.

Is this future sharing economy for 3PL possible?

I think the opportunity is there, and we've seen plenty of foreign examples to know it can work. A main obstacle is that a lot of firms are stuck in traditional leases where the covenant is king and the terms and conditions don't necessarily have the flexibility to allow free thinking around sharing. Even beyond reticence from landlords, getting local planning authorities to understand the value that this sharing will add may be a challenge. Fundamentally, sharing infrastructure, sharing supply chains, and sharing premier locations is the right answer. We're going to run out otherwise.

The inspiration for Doddle was guided by that transformation of the UK logistics industry

Digitising the supply chain

Fabacus
Andrew Xeni
Chief Executive Officer

Serial entrepreneur Andrew Xeni created Fabacus, a London-based technology company, to help fashion manufacturing and retail businesses equip themselves for the digital age. Borne out of his clothing manufacturing company, Xeni sees technology as the key to driving greater efficiency across everything from supply chain management to logistics.

How has the retail supply chain evolved and what are some of the specific challenges faced by fashion manufacturers?

The retail supply chain has changed dramatically. It has become more saturated, margins have been squeezed and everyone's focused on streamlining their business. Location is far more critical than it once was, because of next day delivery and click and collect. This puts huge pressure on retailers and their logistics networks. For major fashion brands, speed is of the essence. The success of brands like H&M and Zara is as much about their ability to respond quickly as their in-house design skills.

What do you see as the role of technology in driving more efficient supply chain management?

Tech has a crucial role to play at every stage. Every company now has to be a digital business now in some way, whether they like it or not. My own frontline experience in fashion manufacturing, growing up around my parents' garment factory in north London, taught me the ins and outs of the many processes involved in making clothes. I had seen first hand how every process affected the end output. Having developed software previously in finance and with a growing fashion businesses of my own, creating software solutions for day-to-day challenges manufacturers face seemed like a logical next step.

Essentially, Fabacus was created to unify the various elements of garment manufacturing to give both the manufacturer and retailer a real time holistic overview of the entire supply chain. The majority of firms don't have Amazon levels of funding to invest in bespoke systems. But you'd be shocked at how many businesses still operate on bits of paper - and not just in fashion.

Being on the factory floor, I knew first hand that if I could build a system that let retailers know that manufacturers material had been delivered late, it would give them the oversight and agency to adjust their orders according to demand. Fabacus was born out of that granular understanding that if supply chains could be managed better, then everybody in the industry is set to win - from the suppliers of the yarn, to the customer in the shop on a Saturday afternoon.

Should we expect to see a lot of disruption to the way companies manage their supply chains?

We already are, although some sectors are further along than others. The automative sector, for example, has rebounded quickly from nearly being wiped out in 2008. Fashion has a way to go. What I see is there's a growing need for real time business intelligence. Having such a high level of transparency and the ability to optimise each stage of your supply chain is essential for retailers - who may have several different suppliers of one item - because of the level of data it provides them with.

A retailer can see who the fastest suppliers are; the fastest routes; the best selling products; the most profitable items; and better understand who the best suppliers are. Put simply, a fashion retailer can live or die by having a handful of key items well stocked over a busy trading period. Certainty of this is priceless.

What implications does this have for distribution centres?

This obviously has massive implications for logistics because our customers can see where the optimum location for their distribution centre is. They can work out which routes that distribution centre needs to be connected with and they can create a robust supply network based on the most cost effective variables. Companies like Amazon are driving this development in logistics with their last mile acquisitions. In order to stay competitive, other companies have to follow suit. The technology we've developed gives companies the oversight to do that.

How does Fabacus provide this service for its customers?

We have two main software platforms: Overture is focused on solving supply chain challenges by enabling customers to crunch their data in real-time so they can get a better understanding of their business functions through increased data quality and accuracy. It helps reduce the supply chain risk - which is monumentally high in retail.

Symphony is an advanced reporting and API integration tool. In plain English, we can take a bad system and get it to talk to a good system, without being too disruptive to the stack. It acts as the middleman, talking to a company's various systems. The upshot is that it allows them to extract and store their data. In terms of logistics, if a large distribution partner wants to connect all their retail partners together in order to create streamlined communication platform and strategy - Symphony can do that for them.

How crucial is the use of real time data becoming?

It's business critical. As companies of all kinds rationalise their property portfolios - in terms of shops and warehouses - having the data to support the decisions they take is essential. Whether it's understanding how many small red jackets you've sold or knowing how much spare capacity you have in your warehouse, there's endless potential for driving extra sales and efficiency savings. Ultimately, omni-channel platforms are now centric to our shopping experience. But if you don't know what inventory you have and are unable to stay in contact with customers the minute they have collected, then you've lost. For some, technology is a threat. But for the smart guys, technology is about future-proofing their existing businesses.

Location is far more critical than it once was, because of next day delivery and click and collect.

A third party logistics perspective

Consultant
Iain Speak

Iain Speak has extensive experience and expertise in the third party logistics sector, having previously been MD of TNT Logistics in the Netherlands and CEO of Bibby Supply Chain Services. Iain now runs his own successful consultancy, working with a global Far East-based freight forwarder and several UK-based businesses.

One of the biggest changes for logistics and 3PL companies in recent years is the use of the internet. From companies importing products and parts to people doing their grocery shopping, the transactions have gone online. Historically, a 3PL would deliver to a retailer's own physical warehouse, whereas now they often deliver directly to customers - a shift from large deliveries to smaller deliveries. The final mile delivery is a challenge, not just physically but also economically. An operator needs to have agility and economy of scale in order to keep charges competitive and acceptable to the ultimate customer.

Another change is the use of technology. It impacts at all points - for modelling, planning, optimal location for a warehouse, and the way the warehouse will be laid out in terms of racking and shelving. It is also used tactically on a day-to-day basis to increase efficiency through the use of, for example, voice picking, pick to light and other methods that improve productivity and reduce errors. Commercial vehicles, just like the cars we drive, are very different from those of a few years ago. The trucks are designed to improve the driver experience, improve fuel efficiency, and reduce the whole life costs for the operator. Connectivity of the vehicle, driver, his base, the 3PL client and the ultimate customer is the norm, supply chain visibility and transparency through technology is changing behaviours of all involved. The vehicle no longer operates in isolation; it's connected to the chain.

On the use of warehouse space, for example, landlords traditionally want long leases; occupiers want low rents and short leases. Technology is starting to be used to offer a means of exchanging capacity. If a warehouse operator or 3PL company has spare capacity, that's a valuable resource that could be sold to someone who could use that capacity - a sort of Airbnb style system across logistics space that maximises capacity and ensures empty space is an opportunity and not a cost. Digital markets can now easily be created and as they are introduced the dynamics of how we transact business changes.

Within warehouses, internal automation is effectively replacing people, who are becoming an increasingly scarce resource. However, automation can also reduce flexibility, so more and more automation is modular and flexible. For example, a large well known retailer has an enormous facility in Milton Keynes that's very automated but also very modular, so they can add to it and change and adapt it as the market moves and changes. The big development over the last few years has been the creation of systems that are flexible.

Competition between retailers is tight, and some have turned to costly quick delivery to appeal to consumers, but there's no such thing as a free lunch. Consumer choice isn't just about the products they buy it's also around how the products are shipped and where they are delivered. The options are far greater than previously. A trip to the shops to view and purchase was the only option, now, even for the basics, the options are many. Whether these choices are really required can be questioned, certainty and reliability are probably what comes first, but never the less, the pursuit of a competitive edge drives retailer to offer the choice.

It's not an issue for digitally provided products that can be downloaded by the consumer. But things like furniture, groceries and other consumer products have to be manufactured, sourced, stored, shipped, handled and physically moved - all that cost continues. The company that can provide and deliver such products at the least cost will survive.

We operate in a time of rapid change, development, growth of the digital age and therefore effective supply chain management is critical. However, it tends to be forgotten by many. It's actually strategically important to UK plc, but the Government, media and public don't see it that way. We, as consumers, want to be able to select from thousands of products; we don't appreciate how those products get to that store. There's a disconnect between the strategic importance of industry and the supply chain, and consumerism and the state of the country's economic health. Any interruption to a supply chain is felt very quickly and the attention of Government and the media is attracted to the issue but under 'normal' conditions it's ignored, it's something that takes place in the background, efficiently keeping UK plc ticking along!

This sector is no longer just about trucks and sheds and greasy spoon cafes. It's sophisticated, efficient, professional, highly compliant, responsive and critical to us all.

Generally, I think the outlook for 3PLs is positive. They are responsive and they understand multiple markets - quite often they understand the client's market better than the client, certainly from a physical supply chain point of view. If you are a manufacturer or retailer with your own supply chain, you focus on your products, on your market, and it's difficult to adapt and flex. 3PLs are quite insightful, and they're adaptable. They have to be, as they compete for, lose and win clients; they have to be able to provide the service that's needed.

Going big on small sheds

Network Space
Richard Ainscough
Group Managing Director

Network Space is a commercial real estate developer and manager specialising in industrial and office space in the North and the Midlands, with a £130m portfolio covering 3m sq ft. Managing Director Richard Ainscough oversees Network Space's investment, development and management operations.

How did Network Space come about?

The business was established in 1981 and began by converting old factories and mills into industrial estates. By the late '90s it had begun assembling a land bank and, consequently, moved into developing new multi-let industrial estates, more often than not with some form of public sector support. The unfortunate truth of industrial property in the regions is that, for most of the time, particularly in the North of England, small to medium size units cost more to build than they're worth once finished.

This was the context behind a joint venture which now accounts for about a quarter of Network Space's £130m investment portfolio - a deal with English Partnerships (now the Homes and Communities Agency) in 1999. The JV was set up by John Prescott and the Coalfields Task Force in recognition of the need for public sector assistance for industrial development. The aim was to provide offices and industrial space for SMEs to support regeneration in former coalfield regions, predominantly in Yorkshire and the North East.

Through both the JV and our own direct development, in the space of nine years we were able to build nearly 3m sq ft of space across the North of England, in part with public sector support. This development makes up about two-thirds of the portfolio we retain today, having bought out the HCA's stake in the JV in 2012. This particular venture concluded with 22 workspace estates housing 300 businesses and employing almost 2,000 people.

During the recession, in which the necessary support for such development inevitably disappeared and values fell, we became more active in the investment market and bought over £30m of existing industrial property.

Now that the market has recovered, occupier demand has improved and increases in rental values have started to manifest. This is due to a lack of supply, as very little development took place during the recession. That said, it is fair to say that there was some over-supply before the recession so there was some slack in the market to take up. We have recently submitted a number of planning applications for new developments, however, viability is still challenging, and in some cases support of some sort will still be required. Our land bank predominantly suits unit sizes ranging from 15,000 to 100,000 sq ft, which is generally larger than we have built in previous cycles. However, the cost/value gap increases as the unit size reduces and funding rules make it difficult to deliver anything smaller, even with public sector support.

Why is there a viability issue for smaller units? Why not share larger buildings?

If you build a 250,000 sq ft unit for one occupier, it's a detached building with an open internal space, one yard, one office and one welfare block.
If you build the same area for eight occupiers, it will still need to have the same features but eight times over, which inevitably costs more per square foot. Subdivision of a terrace becomes necessary with smaller unit sizes for these reasons, but this brings with it limited external space, which is only acceptable up to a certain size.

From a value perspective, units also tend to get more valuable per square foot as they get larger. A well-let single 250,000 sq ft shed can attract an investment yield of, say, 5 percent whilst a similar rent per square foot in a 25,000 sq ft shed might be 7 percent. This trend continues as the units get smaller still, the reason being increasingly shorter lease terms to weaker covenants.

Therefore, with the proportional cost and value going in different directions as the units get smaller, the gap widens very quickly.

We are planning to speculatively develop 250,000 sq ft of space across three sites with units sized between 20,000 and 60,000 sq ft. Any speculative development is a risk, particularly at this size for the reasons stated above, but we think there is latent demand for the space due to years of low supply. We would consider developing smaller units again, but this is likely to require more public sector support than can be currently made available.

What is the tenant mix for smaller sheds?

Its' difficult to say, it is so varied - we have over 500 tenants in 60 properties totalling 3m sq ft. There is a stained-glass maker in 500 sq ft and a furniture manufacturer in 50,000 sq ft, with pretty much everything in between. The important thing is to make sure the unit size is suitable to the location. The sector is seeing increasing demand for online-led distribution, so city fringes and arterial roads are desirable as they represent that last mile provision.

It isn't all distribution, we have occupiers in these types of sheds doing all sorts of things, from the laundry for hospitals to the servicing of bus engines. A large proportion of the national take-up is made up of established businesses like these that require modern space. Even without the last mile requirement, there is still a lot of pent up demand. We've just had a period of nearly a decade where supply in the regions has been trickle-fed at best, with population growth and obsolescence of existing buildings further contributing to the supply gap.

How has that impacted on rents?

We've seen significant rental value growth in the last couple of years, some way ahead of inflation. However, this does follow several years of stagnation and in some cases reductions. This gives us sufficient comfort that it is worth putting a spade in the ground. However, we know enough about the history of rents in this sector to know that it wouldn't be wise to bank on them continuing to increase materially. Rental values are volatile; a newly built scheme twenty years ago could have been attracting the same rent then as it was three years ago. The last 18 months have seen a post-recession correction with sharp growth, but where it will settle is anyone's guess. We wouldn't consider it wise to rely on the prospect of ever-increasing rental returns.

What more can be done to stimulate smaller scale industrial development in the regions? Do we need a return to Prescott-style support from the Government?

In fairness we are seeing some recognition that support is needed to enable projects that could not otherwise occur, but there is still a distinct lack of development of small unit multi-let industrial estates. This is because the gap is too big even for such support to fill. There may be a case for something equivalent to the social housing model that enables and underwrites the development. It would be useful to learn from the previous initiatives, but so much has changed in the requirements of an occupier that it is more important than ever that supply meets demand.

At the end of the day, you need to match the demand for any building with an appropriate supply and this isn't happening with small to medium size industrial buildings, with viability problems playing a large part in that. There is a sizeable amount of brownfield derelict land with excellent development potential, particularly in the regions. Councils focusing not necessarily on releasing green belt land, but instead subsidising the acquisition and remediation of brownfield sites for the provision of employment space would be an ideal way of ensuring we get the most out of our finite land resource.

Focusing on communication, collaboration and partnerships to meet customer expectations

Britvic PLC
Clive Hooper
Suply Chain Director

One of the UK's two leading soft drinks suppliers, Britvic sells 2bn litres of drink annually, covering iconic brands such as Robinsons squash, Tango and Pepsi. Clive Hooper is Britvic's Supply Chain Director, responsible for logistics across the firm's four factories and national distribution centre.

How does Britvic's logistics operation work?

We have our four factories and warehouses in Leeds, Norwich, Rugby and Beckton with storage capacity ranging from 4,000 up to 20,000 pallet spaces. These are all backed by our 275,000 sq ft national distribution centre in Lutterworth near Rugby, which has a capacity of 50,000 pallet spaces. Broadly, we will try to deliver stock directly from our factories to our customers if possible. If not, stock is delivered to the national distribution centre and then delivered from there. 100 percent of our product is delivered by road.

Have customer logistics demands shifted over the last decade?

Yes, customers are making a concerted effort to reduce their order-to-delivery times - they will order on day one, and we will deliver on day two. This has increased the pace at which we need to operate. Simultaneously, grocers are trying to move away from ordering full pallets of goods and towards ordering customised mixes of what they want. This increases the complexity of our logistics operation.

In what ways do you work to meet customer expectations?

At Britvic, we are well placed to deliver on these evolving customer needs because our logistics operation is based on several essential pillars.

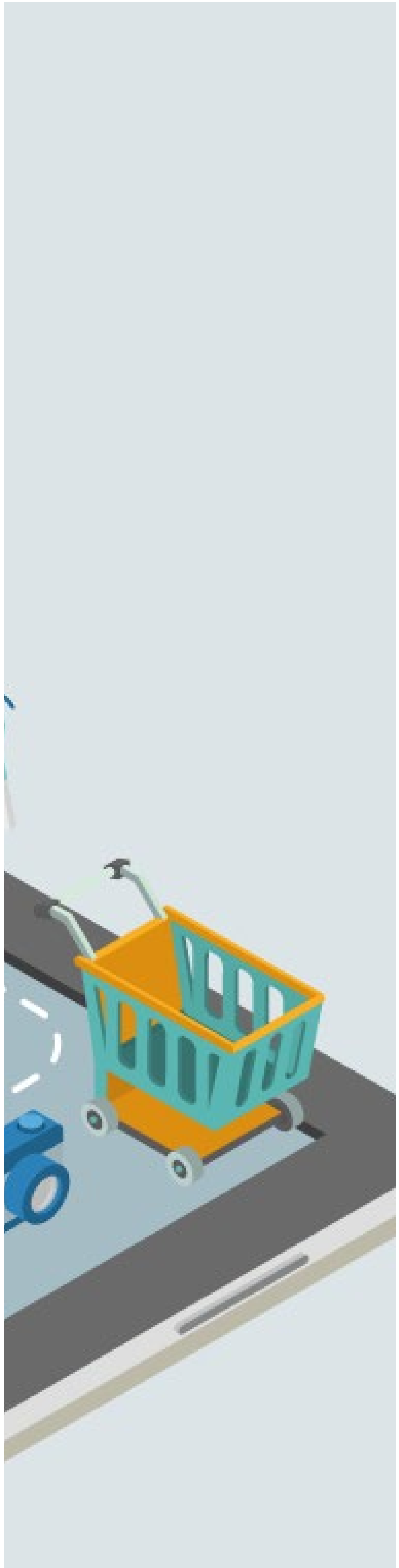
The first is strong collaboration with our customers. One of our 2020 goals as a business is to be the 'Most Valued' by our customers and partners, which we measure through the industry-recognised Advantage Survey. We have successfully integrated our logistics teams with our customers' logistics teams to ensure we are meeting those challenges collectively. This collaborative way of working ensures we are maximising shelf-availability of our brands, responding at pace to customer requirements and equally driving out waste. In 2016 we were voted #2 in terms of Supply Chain performance by our customers, as measured by the Advantage Survey.

Secondly, we have highly integrated supplier partnerships, working with a number of specialist logistics partners to ensure we are maximising our access to the best in the industry. We have developed a strong internal capability in logistics, while also working closely with industry experts such as Gartner.

Thirdly, we use a number of technology platforms in logistics to support our overall strategy. These tools allow us to respond to but more importantly pre-empt changing requirements from our logistics model. We tend to focus on three areas, namely Inventory Optimisation (making the right stock at the right time), Network Optimisation (putting the stock in the right location in our network) and Cost to Serve (ensuring we are maximising our efficiency).

Have your specification requirements evolved at your properties? Has that shifted your leasing requirements?

Not significantly. There is now more use of racking to maximise space. The big shift has been in automation, reducing the need for forklift trucks. It hasn't shifted our ownership arrangements as we own three of our four factories, so ensuring longer leases isn't a concern for us.



A hybrid approach

Diageo
Owen Griffiths
Global Logistics Procurement Director

The world's biggest whiskey producer, with brands including Smirnoff, Guinness and Baileys, Diageo sells its products in 180 countries. Owen Griffiths, Global Procurement Director of Logistics, is responsible for the firm's global logistics strategy and transport operations.

What are some of the trends you're seeing across logistics, transport and real estate?

We've seen a reduction in the number of third party logistics providers through consolidation over the past 10 years. We expect this to continue.

We've seen an increase in warehousing rates in the midlands region often referred to as the "Golden Triangle". We expect rentals to continue to increase driving organisations out of the region.

Transport-wise, we're focused on ensuring service levels into the on and off-trade supporting the companies focus on ensuring on-shelf availability.

How do you approach real estate in the UK?

We take a hybrid approach to using real estate in Britain. Warehouse operations which are linked to our manufacturing operations, distilling, maturing, bottling, are owned by Diageo. Secondary distribution centres which hold stock are typically managed by third parties. We will use their IT systems and equipment.

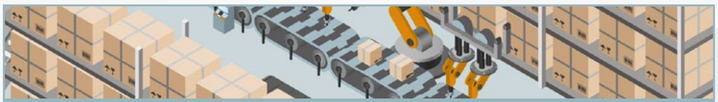
We also use shared user warehouse facilities as it enables suppliers to smooth labour requirements across a number of customers during peak periods.

How crucial is understanding real time data and sales forecasts?

For us, it's vital that any of our customers heading to a store or supermarket see an unbroken selection of our product on the shelf no matter when they go. UK retail is very demanding so their forecasts have to be met.

We've seen a reduction in the number of third party logistics providers through consolidation over the past 10 years. We expect this to continue.


24



HOW SOON IS NOW?

The disruption and evolution of logistics and industrial property

Real Estate Logistics

Jonathan Powling
020 7160 3245
jonathan.powling@addleshawgoddard.com

Catherine Fearnhead
0161 934 6379
catherine.fearnhead@addleshawgoddard.com

Transport

Paul Hirst
0113 209 2466
paul.hirst@addleshawgoddard.com

Industrial

Michael Birchall
0161 934 6249
michael.birchall@addleshawgoddard.com

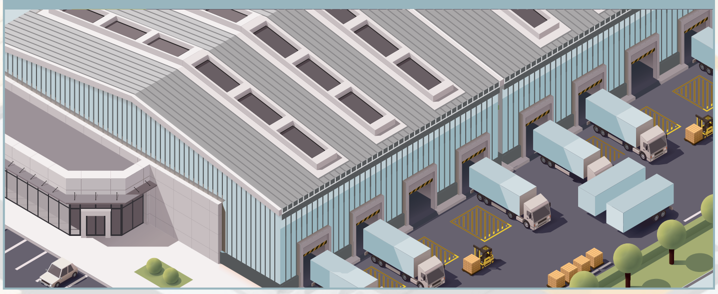
Andy McVeigh
020 7160 3095
andrew.mcveigh@addleshawgoddard.com

Retail & Consumer

Andrew Rosling
020 7880 5613
andrew.rosling@addleshawgoddard.com

#logistics @AGInsight

www.addleshawgoddard.com



ADDLESHAW GODDARD

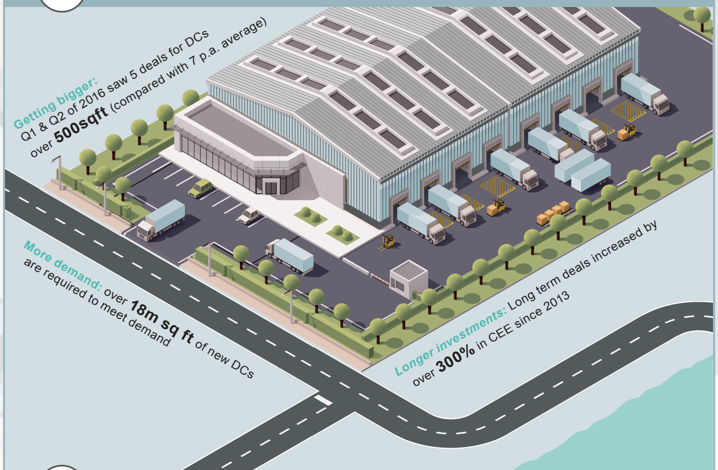
HOW SOON IS NOW?

The disruption and evolution of logistics and industrial property

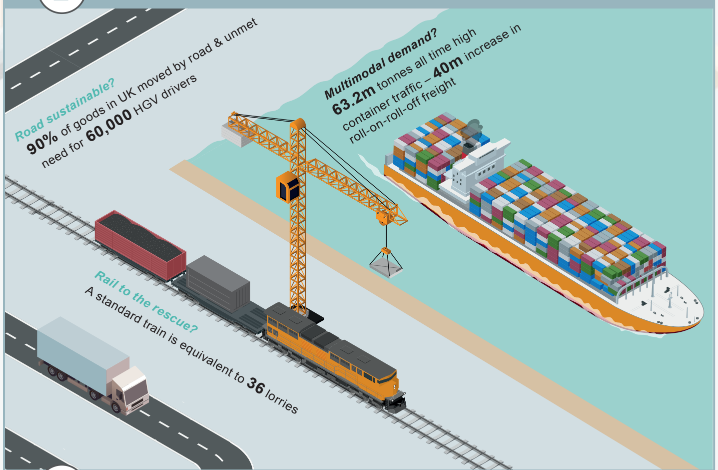
E-commerce has changed our world! Whether at home or on-the-move, we can buy something online and expect delivery to our homes in a matter of hours. To allow this to happen, the warehouses storing our purchases, and the network which gets them to us, have seen dramatic change.

Our report, How soon is now? gathers the views of leading investors, developers, occupiers and operators and sets out policy recommendations on how the logistics sector should respond to the current challenges and opportunities.

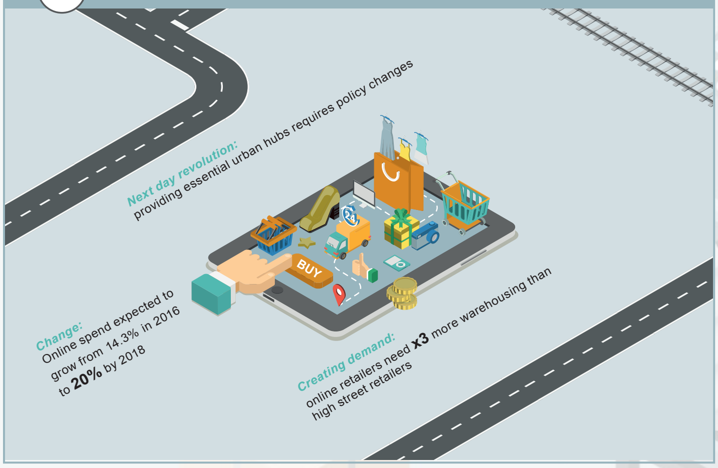
1 INVESTMENT AND DEVELOPMENT



2 INFRASTRUCTURE - What alternatives are there to road?



3 RETAIL AND CONSUMER NEEDS AND LAST MILE FULFILMENT



A THANK YOU

This is the sixth industry-wide report that Addleshaw Goddard has produced in the last three years covering housing, planning, build to rent, retail and student accommodation. This latest report represents the firm's continued commitment to providing thought-leadership and sharing ideas across the real estate industry and the sectors shaping it. It brings to the fore the opinions from an array of exciting new personalities, inspirational entrepreneurs and market-leading experts, to form a suite of policy recommendations for consideration by Government and the wider market. We would like to thank those who have contributed and welcome further discussion with it's readership.

Catherine Fearnhead and Jonathan Powling
Joint Heads of Real Estate Logistics

addleshawgoddard.com

Doha, Dubai, Hong Kong, Leeds, London, Manchester, Muscat, Singapore and Tokyo*

* a formal alliance with Hashidate Law Office