Distribution Networks – Is Your Warehouse in the Wrong Place?

Procurement and Supply Chain Management Made Simple.

Foreword – The Hidden Cost of Being in the Wrong Place

A warehouse can be immaculate, well staffed and operationally efficient, yet still be in the wrong place. When a distribution facility was first established, nearby customers, affordable land and dependable road connections may have justified its position. Years later, the same location can quietly lengthen journey times, raise fuel expenditure and cause missed deliveries. The problem is rarely visible inside the building; its consequences emerge across the wider distribution network it serves.

Geographical mistakes matter at national scale. Department for Transport (DfT) statistics show that Great Britain-registered heavy goods vehicles (HGVs) lifted 1.53 billion tonnes of goods within the United Kingdom (UK) during 2025, and that roughly 31% of their vehicle kilometres were run empty. Not every empty journey is avoidable, yet figures of this magnitude explain why depot locations, delivery density and return-load opportunities deserve sustained senior attention rather than occasional operational review.

Markets also refuse to stay where businesses first found them. Office for National Statistics (ONS) data show online sales reached 27.5% of total UK retail sales in 2025, up from 19.2% in 2019. Manufacturers change suppliers, new housing shifts population, and customers expect tighter delivery windows. A site once ideal for replenishing stores or factories may now be poorly placed for smaller, more frequent and more geographically dispersed orders arriving every day.

The financial consequences accumulate one journey at a time. An additional £200 of transport expenditure per route each day, across five routes and 250 operating days, would amount to £250,000 a year, an illustrative calculation made before any service penalties or inventory effects. Relocation is not always the answer, because regional stockholding, revised routing or shared facilities may offer better value. The essential question is whether yesterday's geography still supports tomorrow's business.

Distribution Network Design – Getting the Geography Right

Distribution network design determines where goods are received, stored, sorted and dispatched, and how those activities connect suppliers with customers. It brings warehouse locations, distribution centres, transport hubs, delivery routes and stockholding policies together into one operating system. The objective is not simply to minimise distance, but to achieve dependable service at a sustainable total cost while retaining enough capacity and flexibility to absorb changing demand over time.

Warehouses principally hold inventory, while distribution centres typically combine storage with picking, consolidation and rapid order dispatch. Transport hubs transfer freight between vehicles or modes, often without prolonged storage. Each facility plays a distinct role: a supplier-facing warehouse might favour port access, whereas a parcel hub needs fast links to regional depots. Poorly coordinated locations create repeated handling, unnecessary journeys and avoidable delays as goods move between these different activities.

A central position on a map is not automatically the best commercial location. Planners must assess real road journey times, customer ordering patterns, inbound origins, delivery commitments, operating hours and available labour. A network that reduces trunking mileage may increase last-mile journeys or duplicate inventory across several sites. Sound decisions therefore compare complete operating scenarios rather than treating rent, transport or service performance as isolated considerations owned by separate departmental budgets.

The challenge is considerable. DfT figures show that Great Britain-registered HGVs moved 162 billion tonne-kilometres of freight within the UK in 2025. Across a system of that size, small differences in average journey length, vehicle fill, or stop density multiply over thousands of daily movements. A network that saves a few miles per trip, or adds one extra drop to each route, can therefore materially change annual operating costs.

Network decisions are also unusually durable. Warehouse leases commonly run for many years, automation is fixed to particular floors, and recruitment builds local workforces that cannot simply be moved elsewhere. Errors therefore persist long after the original rationale has faded. Good practice treats each location as a hypothesis to be retested against current data at every lease event, major contract award or significant change in customer mix, rather than as a permanent fixture.

How Warehouse Location Determines Distribution Costs

The cost of a distribution network extends far beyond the warehouse lease. Inbound collections, outbound journeys, vehicle depreciation, fuel, drivers, insurance, maintenance, loading equipment and delivery administration all contribute to the final cost of serving customers. A cheaper building can become an expensive decision when every consignment travels farther than necessary. Transport cost should therefore be modelled alongside property expenditure, handling productivity and stock availability from the very outset.

Empty running makes geographical inefficiency particularly visible. DfT statistics record 18.975 billion kilometres travelled by Great Britain-registered HGVs in 2025, of which 5.897 billion kilometres were run without any load. Some empty legs are unavoidable, particularly for specialist vehicles, but poorly paired collection and delivery locations aggravate the problem. Return loads, supplier backhauls and improved depot positioning can recover some wasted capacity, provided the additional handling, diversion and collection costs do not outweigh the transport savings.

Distance also consumes legally constrained driver time. Under the assimilated European Union drivers' hours rules, daily driving is generally limited to nine hours, extendable to ten hours twice a week, with a 45-minute break due after no more than four and a half hours. The Road Transport (Working Time) Regulations 2005 separately cap average working time at 48 hours weekly, so a badly placed depot can require additional vehicles and drivers.

Consider an expressly illustrative network sending 100 vehicles on journeys that are each 20

miles longer than necessary, across 250 operating days. That positioning adds 500,000 vehicle miles a year. Assuming an illustrative all-inclusive operating cost of £2 per mile produces £1 million in additional annual expenditure, before any service failures or stock consequences. The assumptions are examples rather than reported industry averages, but the arithmetic exposes how quickly small distances compound.

Customer Geography – Locating Facilities Where Demand Exists

The correct starting point for facility location is where orders originate, not where premises happen to be available. Customer postcodes, order frequency, shipment weights, delivery windows and product types reveal the true geographical shape of demand. Concentrated urban deliveries favour high stop density, while remote customers create longer routes with fewer drops. Mapping actual transactions frequently produces a different answer from plotting every customer as an equally important dot.

Population helps to explain distribution patterns, but it cannot replace sales data. Official mid-2024 estimates put London at approximately 9.09 million residents and the South East at 9.64 million, together representing about 27% of the UK population. That concentration makes the region commercially significant, although a manufacturer supplying northern industrial customers may sensibly prioritise entirely different locations, irrespective of where most households happen to live.

Density changes delivery economics sharply. The 2021 Census recorded about 5,598 residents per square kilometre in London, compared with about 150 in Wales. A dense customer base can support many more deliveries per route, although congestion, loading restrictions and parking can erode that advantage. Rural distribution needs different vehicle sizes, delivery frequencies and sometimes shared facilities to maintain affordable coverage across long distances between drops.

Changing buying habits can make older networks obsolete. The growth in online retail described earlier changes order size, dispatch frequency, and the final destinations parcels must reach. Returns add a reverse flow that many legacy sites were never designed to handle. A warehouse positioned to send full pallets to stores may be poorly placed for single items travelling to households, and poorly equipped to receive, inspect, and restock them afterwards.

Amazon shows how networks evolve as demand grows beyond established concentrations. Its Hull fulfilment centre, opened in 2025, was expected to create more than 2,000 jobs and sits beside an 88,000-square-foot delivery station. Amazon also announced further fulfilment centres in Northampton and the East Midlands. These investments reflect capacity in response to demand and labour, although the announcements do not independently prove savings at any particular site or establish an optimum location.

Delivery Performance – Distance, Time and Customer Expectations

Delivery performance depends on more than straight-line distance. Order cut-off times, picking capacity, loading schedules, vehicle departures, road reliability and the final route together determine when goods reach customers. A warehouse might appear close enough geographically yet still miss a next-day promise because vehicles leave before orders are processed. Sound design works backwards from promised delivery windows to establish achievable dispatch and replenishment schedules for each region.

Next-day commitments reward predictable trunk movements and reliable local delivery capacity, whereas same-day commitments generally demand inventory already near the destination. Promising faster service from a distant warehouse can mean premium couriers, part-loaded vehicles and extra evening shifts. Where delivery charges fail to recover those costs, customer convenience quietly reduces profitability. Planners must distinguish products that genuinely require speed from those that can travel economically through slower, consolidated deliveries.

Royal Mail's Midlands Super Hub at Daventry illustrates the link between facility capacity and delivery performance. Opened in 2023, the automated hub was designed to process up to 90,000 parcels an hour, with individual items taking approximately seven minutes through the sorting machinery. Its position within a national hub network supports rapid onward movement, but sorting speed adds value only when trunk services and local delivery offices remain dependable.

Public-sector deliveries carry different consequences when service fails. The National Health Service (NHS) Supply Chain states that products stocked in its national and regional distribution centres can be delivered within its standard 48-hour lead time, subject to preferred delivery days. Some non-stocked lines take longer through supplier-direct routes. For hospitals, network design must account for product criticality and clinical need, not merely the lowest achievable cost per consignment delivered.

Transport Infrastructure – Roads, Railways, Ports and Connectivity

An attractive warehouse location must work within the real transport network. England's Strategic Road Network, comprising the motorways and principal roads managed by National Highways, accounted for only 2.4% of road length in 2025 yet carried 33.9% of motorised traffic and more than two-thirds of lorry mileage. Proximity to these corridors matters, although junction capacity, local restrictions, and congestion determine whether theoretical connectivity translates into dependable journey times.

Ports are equally significant for import-dependent supply chains. DfT statistics show that UK ports handled 428.3 million tonnes of freight in 2025. Positioning stock near a port may reduce initial container movements and simplify inbound consolidation, but that advantage can disappear if most customers are hundreds of miles away. Import gateways, inland storage and final distribution should therefore be evaluated as a single linked system rather than as separate decisions.

Rail terminals offer alternatives to long-distance road trunking, especially when volumes are predictable. In 2025, DfT recorded 7.3 million HGV journeys involving another transport mode, approximately 5% of the total. Intermodal operations require suitable terminal access, transfer capacity and onward delivery connections, and they are not automatically cheaper on every route. Their value depends on freight volume, journey length, timetable reliability and the cost of handling goods between modes.

Tesco provides a particularly useful UK example. In October 2024, it introduced a further rail freight service linking its Daventry distribution operation with Widnes. Tesco reported that the service would carry approximately 600,000 cases a week and replace more than 90 lorry trips weekly on what had been a 260-mile round-trip road movement. Positioning facilities around rail infrastructure can therefore change transport economics while also reducing road congestion and emissions.

Connectivity must also be tested under difficult operating conditions. A site beside a motorway interchange may suffer persistent peak-hour queues, while a remote site may expose drivers to unpredictable minor-road delays. Port disruption, roadworks and rail engineering possessions can all alter route suitability. Network evaluations should therefore include realistic journey-time variability, alternative routes and contingency capacity, rather than relying only on favourable off-peak mapping estimates that flatter a location.

Property Costs – When Cheaper Warehousing Becomes More Expensive

Property decisions often begin with headline rent, but occupiers ultimately pay for much more. Business rates, utilities, repairs, insurance, service charges, security, loading infrastructure and fit-out all belong in the comparison. Clear internal height, yard depth, dock doors, floor loading and expansion land also affect operating efficiency. A low-rent warehouse that cannot handle vehicle volumes or automation may generate recurring labour and transport expenses that exceed its apparent savings.

Colliers reported that average prime headline rents for UK distribution warehouses larger than 100,000 square feet reached £12.40 per square foot a year in the first half of 2026. At that benchmark, a hypothetical 100,000-square-foot facility would carry £1.24 million in annual headline rent before incentives and other occupancy costs. This figure is an illustrative calculation based on a market average, not a quotation for any property currently available.

Availability can constrain warehouse location as much as price. Savills reported in May 2026 that take-up of UK logistics units exceeding 100,000 square feet reached 33.6 million square feet during 2025, approximately 15% higher than the previous year. Available supply stood at around 63.7 million square feet nationally. However, regional differences in property availability, building suitability and transport connectivity mean that the theoretically optimal location may have few suitable facilities available within an acceptable timeframe.

Business rates require careful comparison between locations. England and Wales introduced revised rateable values on 1 April 2026, reflecting rental values at 1 April 2024, while Scotland and Northern Ireland operate separate systems. For 2026–27 in England, properties with rateable values from £51,000 to £499,999 pay a standard multiplier of 48 pence, while those valued at £500,000 or more pay a new high-value multiplier of 50.8 pence.

That threshold catches many large distribution centres. A warehouse with a £1 million rateable value would incur a basic annual rates liability of £508,000, potentially rising to £518,000 where the temporary 2026–27 Transitional Relief Supplement applies, before other applicable adjustments. Energy efficiency also matters: since April 2023, landlords in England and Wales generally cannot continue letting covered non-domestic properties with an Energy Performance Certificate (EPC) rating below E without a registered exemption.

The commercial test is whether the property supports efficient distribution throughout its life. A modern building nearer customers may justify higher rent through shorter routes and better loading productivity, while paying a premium for motorway access may be wasteful when deliveries stay local. Exit costs deserve equal scrutiny, although damages for repairing-covenant breaches are capped by section 18 of the Landlord and Tenant Act 1927 at the reduction in the landlord's reversionary value.

Planning, Licensing and Freeports – The Rules That Shape Location

Planning law narrows the list of viable sites before negotiating any rent. In England, storage and distribution fall within Class B8 of the Town and Country Planning (Use Classes) Order 1987, and planning conditions frequently restrict operating hours, HGV movements or external lighting. A building with otherwise ideal geography may be unusable for a 24-hour operation if its consent prohibits night-time deliveries, so planning history should be examined before heads of terms are agreed.

Operator licensing adds a second regulatory test. Under the Goods Vehicles (Licensing of Operators) Act 1995, HGV operators must nominate authorised operating centres where they normally keep vehicles. New applications must be advertised in a local newspaper, allowing nearby owners and occupiers to raise environmental concerns. Traffic commissioners can impose conditions on vehicle numbers and operating times, which can materially reduce the practical value of a newly chosen depot.

Fiscal incentives can shift the calculation. New and expanding businesses within designated tax sites at England's eight freeports may receive 100% business rates relief for five years, provided relief begins on or before 30 September 2031. Employers can also claim relief on secondary Class 1 National Insurance contributions for eligible new employees, on earnings up to £25,000 a year for up to three years, alongside enhanced capital allowances and Stamp Duty Land Tax relief.

Leasehold law determines when relocation is realistically achievable. Business tenancies in England and Wales generally enjoy security of tenure under Part II of the Landlord and Tenant Act 1954 unless the parties have contracted out. Renewal dates, break clauses and notice

windows therefore become natural decision points for network reviews. Missing a break date can lock an occupier into an unsuitable building for years, regardless of what any network model subsequently recommends.

Labour Availability – The Workforce Behind the Warehouse

A warehouse cannot operate competitively without enough trained people within practical commuting distance. Labour availability varies between regional markets and depends on local employment, public transport, shift patterns and competition from nearby employers. A low-cost site can become difficult to staff when night shifts require long journeys or bus services stop early. Recruitment costs, overtime, staff turnover and supervisory capacity should therefore influence location selection from the outset.

The sector's growth intensifies that competition. The UK Warehousing Association (UKWA) reported in February 2026 that warehousing employs more than 650,000 people, and that the sector's physical footprint has expanded by over 61% within a decade. Its report, Building the Workforce of the Future, called for skills reform to support increasingly technical operations. Where several large sites cluster around one motorway junction, they inevitably compete for the same pool of local workers.

The transport workforce presents a measurable risk. DfT reported that 26% of responding HGV-operating businesses had driver vacancies in the final quarter of 2025, up from 24% a year earlier. Among businesses reporting vacancies, 23% said driver unavailability had caused missed deliveries. These are survey-based proportions of businesses rather than a measured national shortage, but they show how staffing conditions can directly undermine network performance and customer service.

Wage floors establish only the beginning of a labour-cost calculation. From April 2026, the statutory National Living Wage for workers aged 21 and over became £12.71 an hour. At 37.5 paid hours weekly over 52 weeks, that equates to £24,784.50 in basic annual pay, before employer National Insurance contributions, pensions, shift premiums and overtime. Competitive warehouse wages in high-demand locations may nevertheless sit substantially above that statutory minimum level.

Large investments show how extensive local recruitment needs can become. Lidl's £300 million Houghton Regis distribution centre, opened in 2023, was expected to create up to 1,500 jobs. Automation changes rather than removes such requirements, because engineers, technicians and systems specialists become critical and are often scarce. The right location is one where the workforce can run the proposed operation reliably, not simply where a building is available at an attractive price.

Warehouse Capacity, Inventory and Stock Positioning

Facility geography determines where inventory sits and how quickly it can be replenished. Consolidating stock into fewer warehouses can reduce duplicated safety stock, simplify forecasting and improve utilisation of handling equipment. Yet longer delivery distances may require earlier dispatches, higher transport expenditure and more buffer stock elsewhere. Splitting inventory among regional locations improves customer access but increases the risk of holding the wrong products in the wrong places.

Lidl's Houghton Regis centre demonstrates the scale of a single capacity decision. Covering approximately 1.2 million square feet, it was expected at its 2023 opening to handle more than 9,400 pallets daily for around 150 stores. In contrast, Lidl said its existing distribution centres typically served 60 to 80 stores. Throughput at that scale supports growth only when inbound scheduling, stock rotation, and outbound vehicle capacity keep pace.

Inventory theory offers a useful rule of thumb. The so-called square root law suggests that, under simplifying assumptions, total safety stock varies with the square root of the number of stockholding locations. Consolidating from four warehouses into one could therefore roughly halve safety stock in theory. Real results depend on demand correlation, lead times and

service targets, so the rule should guide modelling rather than replace it with a convenient shortcut.

Inventory should be positioned according to demand variability, replenishment times, product value and service criticality. Fast-moving products may justify regional stockholding, while expensive or slow-moving lines can remain centralised until ordered. Seasonal peaks require temporary capacity or flexible overflow arrangements, not permanent overinvestment everywhere. The right balance weighs working capital tied up in stock, obsolescence risk, handling costs and the financial consequences of running out at critical moments.

Centralised Versus Regional Distribution Networks

A single-site distribution network concentrates inventory, people and equipment in one location, often simplifying control and reducing duplicated overheads. A centralised arrangement may also use one national distribution centre supported by transport depots holding little stock. Regional networks spread inventory among several facilities, while decentralised models give local operations greater autonomy. Hybrid arrangements combine central stockholding with selected regional fulfilment points, deliberately balancing economies of scale against proximity to customers.

Centralisation can improve purchasing leverage, stock visibility and utilisation of expensive automation. Fewer warehouses may mean fewer management teams, maintenance contracts and duplicated product lines. However, concentrating operations also lengthens some delivery routes and increases the consequences of a single disruption. Large facilities can become bottlenecks during seasonal peaks, particularly when inbound arrivals, picking capacity and outbound vehicle departures all compete for the same limited dock and labour resources.

Regional networks generally shorten customer-facing journeys and allow later order cut-offs, but they add rent, labour, replenishment movements and inventory duplication. Decentralisation can strengthen local responsiveness where demand varies sharply between markets, although divergent operating practices may reduce consistency. A hybrid design keeps slower-moving or costly stock centrally while positioning popular products nearer demand, provided replenishment systems can maintain the right balance across every location in the network.

The financial result can be counterintuitive. Consider a hypothetical organisation choosing between one national warehouse and three regional facilities. If the regional option adds £900,000 a year in occupancy, labour and stockholding costs but removes £1.3 million in transport and service expenditure, it offers a £400,000 annual operating advantage before transition costs. These amounts are illustrative rather than reported savings, but they show why warehouse count alone cannot determine network efficiency.

The right model also changes as an organisation grows. A single site may suit a young business with concentrated customers, while national expansion, new channels or acquisitions can make a hybrid network more economical. Equally, falling volumes may justify consolidation after years of regional growth. Boards should therefore define trigger points, such as order volumes, service failures, or cost per delivery, that prompt a formal reassessment of the configuration.

Inbound Supply Chains – Positioning Warehouses Around Suppliers

Warehouse geography must account for where goods enter the network, not just where customers receive them. Manufacturers may benefit from nearby component stores, while importers need dependable connections to ports, container terminals and inland freight corridors. Inbound consignments arrive in different sizes and frequencies, creating choices between direct deliveries, supplier collections and consolidated loads. A facility close to customers can still be inefficient if every incoming shipment crosses the country.

The scale of incoming freight makes this trade-off important. DfT reported that container tonnage through UK ports rose by 10% in 2025 compared with 2024, reflecting continued

reliance on imported finished goods and components. Those volumes do not determine the best warehouse location for any individual business, but port choice, customs processes, inland haulage capacity and delivery timetables all influence total landed and distribution costs considerably.

Kent Foods provides a practical example of port-centred logistics. In April 2025, DP World announced a deal worth more than £20 million for Kent Foods to occupy a 150,000-square-foot warehouse at London Gateway Logistics Park. The facility stores products arriving through the container port, then distributes them across the UK by road and rail. Its attraction lies in connecting inbound handling and onward dispatch, not merely placing storage beside the quay.

Supplier clustering, milk runs and shared inbound collections can reduce partially loaded journeys, but longer procurement lead times may create additional stockholding requirements. Manufacturers must also consider production shutdown risk when essential components are distant. The right design compares inbound freight, inventory cover, handling and outbound service together. A port-adjacent warehouse may suit high-volume imports, while a Midlands facility may better serve dispersed suppliers and customers after detailed modelling.

The Last Mile – Where Distribution Costs Escalate

The last mile begins when goods leave a local delivery facility for their final destination. Unlike long-distance trunking, each route may involve numerous stops, short journeys, parking restrictions and unpredictable recipient availability. Fuel and mileage therefore explain only part of the expense; driver time, loading access and minutes spent at each doorstep often determine productivity. High customer density can help, but congestion can quickly undermine those apparent advantages.

The scale is significant. The Office of Communications (Ofcom) reported in October 2026 that people in the UK had sent and received a record 4.6 billion parcels during the preceding year, an increase of 8.6%. Its 2026 consumer survey found that 71% of parcel recipients had experienced at least one delivery issue during the previous six months. That figure measures surveyed customer experience, not the proportion of individual parcels delivered incorrectly.

Geography creates very different delivery economics. London drivers may complete numerous stops within compact areas but must satisfy local safety requirements. Since 28 October 2024, HGVs over 12 tonnes operating in Greater London have generally required valid safety permits, supported by a minimum three-star Direct Vision Standard rating or an approved Progressive Safe System for lower-rated vehicles. Operating without a valid permit can attract a £550 penalty. Rural routes face lower delivery density and longer journeys between customers.

Unsuccessful first delivery attempts magnify these challenges through repeat mileage, customer enquiries and rescheduling. Collection points, parcel lockers, accurate tracking and dependable notifications can reduce redelivery pressure, provided customers can reach them conveniently. For example, 50,000 avoidable repeat attempts costing £4 each would represent £200,000 in additional annual expenditure. That is a hypothetical cost model, not a verified average redelivery charge across the parcel industry.

Dynamic Parcel Distribution (DPD) illustrates alternatives to conventional doorstep delivery. Its November 2025 sustainability report recorded more than 11,000 out-of-home collection locations and described bicycle deliveries of over 50,000 parcels across Oxford and Edinburgh during 2024. Local solutions can improve access and remove certain van journeys, but their suitability depends on parcel volumes, customer preferences, street conditions and the economics of servicing collection points or neighbourhood micro-depots.

Changing Markets – When Yesterday's Network No Longer Works

Distribution networks are usually built around the customers, products and sales channels known when investment decisions are taken. Over time, those assumptions can lose

relevance without any warehouse becoming poorly managed. Customer clusters migrate, stores close and orders become smaller or more frequent. The result may be longer routes, uneven capacity and rising cost per order, even when each facility continues to meet its original operational targets.

Channel change alters what a building must do, not just where it should be. A network designed to replenish stores in bulk may struggle when more transactions require item-level picking, protective packaging and residential delivery. Growth can shift required capacity from racking towards packing benches, returns processing and dispatch throughput. Buildings with ample storage but limited dock doors or yard space can therefore become constraints long before they are physically full.

Ocado Retail demonstrates that established sites need not remain suitable indefinitely. Following a network capacity review in 2023, it ceased operations at its older Hatfield customer fulfilment centre and transferred volume to newer, more efficient automated facilities, principally Luton. The decision shows how operating technology and capacity utilisation can change a location's commercial logic, although it does not prove that the same approach would benefit less automated distributors.

Acquisitions can compound geographical inefficiency when overlapping warehouses, incompatible systems and inherited supplier arrangements persist after ownership changes. Product diversification may introduce refrigeration, hazardous-goods controls or different vehicle requirements, while growth can create new regional concentrations of demand. An annual network review should monitor order origins, cost per delivery, service failures, capacity utilisation and stock transfers, then investigate material changes before the next lease renewal or expansion decision.

Technology and Network Modelling – Finding the Optimum Locations

Geographic information systems (GIS) map customers, suppliers, roads and candidate facilities against demand and travel-time data. Transport management systems (TMS) reveal route costs, vehicle utilisation and delivery performance, while warehouse management systems (WMS) show order volumes, inventory profiles and handling capacity. Combining these records creates a far more realistic picture than postcodes alone. Data must be cleaned carefully, because obsolete addresses and exceptional orders can distort the conclusions.

Centre-of-gravity analysis estimates a weighted geographical point from demand locations and volumes, offering a useful starting position for candidate facilities. However, the calculated point may fall in an unsuitable location, such as open countryside or a site with poor road access. More importantly, straight-line distances ignore congestion, estuaries, hills and restricted routes. The technique is a screening tool, not proof that a particular building will minimise actual distribution costs.

Location-allocation modelling goes further by testing which customers should be served from which facilities, subject to capacity, delivery-time and cost constraints. Analysts can compare a single national warehouse, regional depots and mixed networks under identical assumptions. Scenario planning should include seasonal peaks, supplier delays, fuel prices, lease costs and the closure of a key road. Robust decisions perform well across plausible conditions rather than under one optimistic forecast.

Ocado Group shows how sophisticated operational modelling can support fulfilment decisions. Its published technology materials describe digital twins and simulations used to assess warehouse configurations, forecasting and delivery routing. In 2026, Ocado reported that its most advanced UK operation at Luton was picking about half of its order volume robotically. That demonstrates operational sophistication, although robotic productivity alone cannot identify the most economical geographical network for another organisation.

Technology becomes commercially useful only when decision-makers can challenge its outputs. A model that excludes relocation costs, inventory duplication or labour availability

may recommend an unsuitable site with impressive mathematical confidence. Network scenarios should therefore disclose data sources, key assumptions, service constraints and sensitivity to forecast error. The final recommendation still needs site visits, property assessments and operational judgement, followed by monitoring to confirm whether expected savings actually materialise.

Dynamic Routing – Can Technology Offset Poor Geography?

Artificial intelligence (AI) and advanced route optimisation can delay the point at which an inconveniently located warehouse becomes financially unsustainable. Software combines live traffic, customer delivery windows, load capacities, driver availability and historical journey patterns to revise vehicle assignments and stop sequences. Better routing can increase drops per vehicle, minimise empty mileage and improve service reliability. Nevertheless, algorithms can only shorten avoidable journeys; they cannot move the warehouse closer to its customers.

Restore Information Management offers a recent UK example. In 2026, it reported that AI-assisted route optimisation reduced both mileage and associated carbon dioxide emissions by 25% across four sites in Birmingham, Rainham, Southampton and Monkton Farleigh. The company also reported a 39% increase in deliveries per route. These company-reported outcomes demonstrate significant operational scope, although they should not be interpreted as proof that all sites can achieve equivalent gains.

Routing technology should be evaluated as an alternative to relocation, not as evidence that location no longer matters. Operators can compare miles per delivery, drops per route, driver hours and missed delivery windows before and after deployment, then rerun network models with the improved baseline. Software cannot eliminate long trunk journeys, adverse supplier geography or chronic labour shortages. Where those structural penalties persist, optimisation may delay relocation without removing the financial case.

Distribution Network Resilience – The Risks of Geographical Concentration

Concentrating stock and automation in one large facility can reduce normal operating costs while increasing exposure to a single interruption. Fire, flooding, system failure, power loss or industrial action may halt distribution across an entire customer region. Regional redundancy can limit the damage, but maintaining additional capacity also costs money. Resilience planning must balance the probability and duration of disruption against the cost of alternative locations and recovery arrangements.

Flood risk requires particular attention in the UK. The Environment Agency's national assessment, published in December 2024, identified about 6.3 million properties in England at risk from rivers, the sea or surface water, and projected that around eight million could be at risk by mid-century. These are national exposure estimates, not predictions that particular warehouses will flood, so individual site assessments remain essential before signing any lease.

Ocado's Andover fire provides a stark real-world example. A February 2019 fire destroyed its automated customer fulfilment centre, including machinery and inventory. Ocado later reported a final insurance settlement of £273.8 million for rebuilding and business interruption, alongside cumulative exceptional costs of £124.9 million across several reporting periods. Those figures sit in different accounting categories rather than measuring uninsured loss, but they illustrate the financial scale of severe facility disruption.

Practical safeguards include geographically separated safety stock, alternative carriers, reciprocal depot arrangements, backup systems and rehearsed emergency procedures. Organisations should identify products whose absence would halt manufacturing or essential services, then set realistic recovery objectives for each category. Insurance cover, business interruption limits and supplier continuity plans should also be reviewed alongside the physical network, because a well-located warehouse offers little protection if its single point of failure remains untested.

Sustainability – The Environmental Cost of Distribution Geography

Distribution geography influences fuel consumption, vehicle loading, energy use and the number of journeys required to serve customers. A shorter route is not automatically cleaner if it requires more lightly loaded vehicles or duplicates temperature-controlled storage. Conversely, strategically positioned regional depots may reduce urban delivery distances even when trunking movements increase. Environmental performance must therefore be evaluated across the complete network, including transport and building operations together.

The national context is substantial. DfT reported that domestic transport produced 110.4 million tonnes of carbon dioxide equivalent in 2024, accounting for 30% of UK domestic greenhouse gas emissions. The figure includes passenger and freight movement, so it cannot be attributed solely to distribution networks. Nevertheless, its scale reinforces the importance of reducing unnecessary freight mileage, improving vehicle utilisation and adopting lower-emission transport modes where practical.

Royal Mail offers an example of combining fleet change with operating redesign. Its 2025–26 sustainability reporting describes more than 8,000 electric delivery vans and a 31% reduction in overall emissions against its 2020–21 baseline. It also highlights improved energy efficiency and changes to the parcel distribution network. These are organisation-wide reported measures, not evidence that warehouse relocation alone delivered the emissions reduction achieved across its national operations.

DPD reported delivering more than 85 million parcels using electric vehicles during 2025, showing how depot coverage, charging infrastructure and delivery density shape lower-emission operations. Heavier fleets face a stricter deadline because the government has committed to ending sales of new non-zero-emission HGVs weighing 26 tonnes or less by 2035, and all new non-zero-emission HGVs by 2040. Depot locations will increasingly depend on available grid capacity.

The final decision should weigh environmental and financial outcomes together. Road mileage, empty running, electricity consumption, building efficiency and carbon emissions belong alongside rent, labour and delivery costs. A higher-cost location may be justified by lower emissions, stronger resilience or better service, but such trade-offs must be explicit. The most sustainable network is not necessarily the one with the fewest warehouses, but the configuration delivering reliable service with defensible whole-network impacts.

Electricity Grid Capacity – When Power Determines Location

Warehouse location increasingly depends on electricity infrastructure, not just road access. Ten electric HGVs charging simultaneously at 150 kilowatts each could impose 1.5 megawatts (MW) of charging demand, before refrigeration, lighting or warehouse automation. This illustrative peak may exceed an existing connection and require costly upgrades. Operators consequently need to assess available capacity, connection terms and achievable energisation dates before committing to a site.

Energy UK reported in September 2025 that grid connection costs could reach £5 million at some depots, with connection dates extending to 2035. Competition is intensifying: a July 2026 TwentyForty assessment found that 96 data centres on UK Power Networks' network had typically used just 18% of their reserved capacity. These findings highlight how reserved grid capacity can constrain new depot connections, but do not establish that unused capacity is immediately available for reallocation to electric HGV charging.

The Office of Gas and Electricity Markets (Ofgem) acknowledged in June 2026 that growing connection queues contained unviable projects and that network reinforcement could delay ready developments. Grid feasibility must therefore join labour availability, transport access and property costs in site selection. Early discussions with electricity distribution network operators, phased charging and managed overnight loads may help. None guarantees capacity, making grid availability a genuine constraint on depot geography.

Public Services and Social Housing – Distribution Beyond the Warehouse

Public bodies face the same geographical questions under tighter scrutiny. In September 2026, NHS Supply Chain outlined plans for three major hubs serving northern England, the Midlands and southern England, supported by existing and new local sites. Its stated aims include holding broader product ranges regionally, consolidating hospital deliveries and limiting the effect of disruption elsewhere. These are intended benefits of a multi-year programme, not outcomes already achieved.

Social housing repairs show that distribution need not involve owning a warehouse. In 2021, Bromford, then a housing association responsible for approximately 44,000 homes across the West Midlands and West of England, awarded Travis Perkins a five-year materials contract worth £8 million annually. The arrangement included supplying repairs materials directly to Bromford's van fleet, supporting first-time repairs. Bromford subsequently became part of the larger Bromford Flagship LiveWest group in 2026.

In January 2026, Hyde Group, then responsible for approximately 120,000 homes, signed a five-year agreement with Travis Perkins Managed Services (TPMS). Hyde operatives can restock vans at TPMS branches across London, Kent and the South coast, where skips also handle waste. The landlord effectively borrows a supplier's network, so branch locations become a critical evaluation criterion.

Where the Procurement Act 2023 applies, section 52 generally requires contracting authorities to establish at least three key performance indicators (KPIs) before entering public contracts valued above £5 million, and to publish them. Statutory exclusions cover frameworks, concession contracts, light-touch contracts and certain utilities contracts. An exception also applies where performance cannot appropriately be assessed through KPIs. Measures such as van replenishment times, regional delivery reliability and first-time-fix rates provide meaningful operational oversight.

Outsourcing and Shared Distribution – Alternatives to Owning More Warehouses

Outsourcing allows organisations to access distribution capacity without financing every building, vehicle or system themselves. Third-party logistics (3PL) providers can operate dedicated facilities or shared-user warehouses, where several customers use common space, equipment and labour. Cross-docking moves inbound products rapidly into outbound deliveries with little long-term storage, while regional consolidation centres combine smaller consignments. Such arrangements bring stock closer to demand without committing immediately to permanent premises.

Wincanton describes a network of more than 30 shared-user warehouses across the UK, offering storage, picking and regional consolidation. At its 210,000-square-foot Northampton fulfilment centre, it reported deploying 48 autonomous mobile robots and achieving a 200% improvement in peak picking productivity. That supplier-reported performance illustrates how several customers can share expensive technology that would often be difficult to justify within a smaller standalone operation serving one client.

DHL Supply Chain announced in March 2026 that George at Asda would become the anchor customer at a planned shared-user fulfilment centre in Derby. Scheduled to open in 2027, the operation is designed to process up to 350,000 units daily and create around 450 jobs. It forms part of DHL's £550 million British infrastructure investment programme, demonstrating the geographical flexibility that established logistics providers can offer growing retailers.

Charging structures shape the economics. Shared-user arrangements commonly price storage per pallet and handling per transaction, converting fixed property costs into variable ones that rise and fall with volume. Dedicated contracts often use open-book or cost-plus models, offering transparency but leaving more risk with the customer. Neither model is inherently cheaper; the right choice depends on volume stability, seasonality, required specialist equipment and the expected contract duration.

Outsourcing does not eliminate distribution risk; it reallocates responsibilities and changes commercial exposure. Pricing schedules should separate storage, receipts, picking, transport, seasonal surcharges and exceptional activity, supported by auditable performance measures. Contracts also need clear provisions for stock ownership, insurance, data access, liability, business continuity, and termination assistance, so a future change of provider or location does not leave the customer without stock, systems, or operational knowledge.

The Financial Case – When Does Relocation Become Worthwhile?

The financial case for moving a warehouse begins with an accurate baseline, not an attractive property brochure. Total cost of ownership should capture premises, rates, utilities, maintenance, systems, labour, equipment, transport and inventory financing. Cost-to-serve analysis then allocates expenditure across customer groups, products and delivery regions, revealing where geographical disadvantages are concentrated. Decision-makers should compare retaining the existing network with relocation, expansion, consolidation and outsourced alternatives.

Relocation expenditure extends well beyond moving pallets. Costs can include new racking, systems integration, vehicle changes, dual running, stock transfers, insurance and temporary labour, alongside lease exit payments and dilapidations settlements where contractually justified. Recruitment, retraining and any redundancy obligations require separate provision, and their legal dimensions are examined below. Underestimating these one-off costs is one of the most common reasons apparently attractive relocations fail to deliver their promised returns.

Cash-flow forecasts should separate one-off investment from recurring operating savings, additional revenue and residual property obligations. Simple payback divides the initial net outlay by annual net savings, but ignores the timing of money and later risks. Net Present Value (NPV) discounts future net cash flows at an appropriate rate. Cash flows and the discount rate must share one basis: nominal flows, including expected inflation, require a nominal rate, while real flows require a real rate.

For example, a hypothetical relocation costing £2 million initially and generating £550,000 in annual net operating savings before tax for five years has a simple payback of approximately 3.64 years. Treating those savings as nominal year-end cash flows and discounting them at an illustrative nominal pre-tax hurdle rate of 8% produces a positive NPV of approximately £196,000, assuming no residual value or further costs. That indicates a potentially worthwhile investment, not an industry-average relocation return.

Public-sector appraisal requires a different perspective from a company's investment hurdle. The Green Book, issued by His Majesty's Treasury (HM Treasury) and updated in October 2026, specifies a 3.0% real social discount rate for the first 30 years of standard economic appraisal. That rate compares wider social costs and benefits expressed in real terms and is not automatically appropriate for an individual organisation's cash budget. Affordability, procurement obligations and service continuity remain separate considerations.

Sensitivity testing often changes the recommendation. In the illustrative relocation, savings 20% below forecast would reduce the five-year NPV from approximately £196,000 to a negative £243,000 at the same 8% rate. Management should therefore test demand shifts, fuel costs, wage inflation, property delays and disruption during transfer. An investment becomes defensible when its benefits remain credible under realistic downside scenarios and non-financial service requirements are demonstrably achievable.

Employment Law – Relocation, Redundancy and Transfers

Closing a warehouse can create a redundancy situation under section 139 of the Employment Rights Act 1996, because the employer ceases, or intends to cease, carrying on business where employees actually worked. Following High Table Ltd v Horst, that place is determined factually, so a mobility clause does not automatically prevent redundancy. Offers of suitable

alternative employment at the new site, with statutory trial periods, can preserve skilled staff.

Collective obligations arise at scale. Under section 188 of the Trade Union and Labour Relations (Consolidation) Act 1992, proposing 20 or more redundancies at one establishment within 90 days triggers consultation starting at least 30 days before the first dismissal, or 45 days where 100 or more are proposed. Employers must also notify the Secretary of State using form HR1 at least 30 or 45 days before the first dismissal takes effect, as applicable, and before issuing individual dismissal notices. Failure to comply with the statutory notification requirement is a criminal offence.

The Employment Rights Act 2025, which received Royal Assent on 18 December 2025, raises the stakes. From 6 April 2026, the maximum protective award for failing to inform and consult doubled from 90 to 180 days' pay per affected employee. The Act also provides for an additional organisation-wide redundancy threshold, expected from 2027 once secondary legislation fixes the number, so multi-site networks will need to aggregate proposals across locations.

Outsourcing or changing logistics providers can engage the Transfer of Undertakings (Protection of Employment) Regulations 2006 (TUPE), particularly through a service provision change, although the outcome depends on the facts. Since 2014, an economic, technical or organisational reason entailing changes in the workforce has expressly included a change in the place where employees work. Even so, relocation-related dismissals require careful handling, consultation and legal advice before implementation timetables are fixed.

Distribution Networks in Practice – Lessons from UK Logistics

British distribution networks reveal how geography interacts with market access, infrastructure and operational scale. Motorway corridors across the Midlands connect many national markets, but a central position creates value only when it aligns with actual shipment patterns. Retail replenishment, manufacturing components and parcels move through very different networks and cannot be judged by a single performance measure. Investment announcements also need to be separated from verified post-opening results.

Jaguar Land Rover selected Unipart Logistics to operate its global aftermarket parts centre at Appleby Magna, Leicestershire, under a five-year agreement announced in 2021. The campus covered approximately 2.94 million square feet, consolidating parts distribution and related services in one location. Its geographical significance lies in linking major road corridors with global fulfilment, although consolidation on that scale demands careful inventory migration and service protection during transfer.

Parcel networks require yet another design. DHL eCommerce officially opened its hub near Coventry Airport in February 2025, after commencing operations in August 2024. The facility covers about 25,000 square metres, includes 48 cross-dock doors, and has a stated handling capacity exceeding one million parcels daily. It forms part of an investment programme reported at approximately £482 million. The capacity is impressive, but a large automated hub creates value only when feeder depots and delivery routes are coordinated around it.

3PL providers can also support targeted consolidation. In November 2025, MG Motor and XPO Logistics announced a dedicated parts warehouse in Daventry, initially offering approximately 15,000 square metres of storage. The plan would consolidate the previous Longbridge parts operation while supporting a customer base of more than 340,000. Anticipated benefits include fewer inter-site transfers and improved service, which should be measured against achieved performance rather than assumed as guaranteed savings.

Several common lessons emerge from these examples. Successful operators match facility type to flow type, anchor large sites on reliable transport corridors and treat consolidation as a carefully staged programme rather than a single event. They also distinguish design capacity from delivered performance. For other organisations, the transferable insight is methodological: define the flows first, then select the geography, building and operating

partner that serve those flows most economically.

Recognising the Warning Signs – Is Your Warehouse in the Wrong Place?

A warehouse can operate efficiently internally while the surrounding network performs poorly. Rising transport cost per order, longer average delivery distances and falling vehicle utilisation may indicate that demand has drifted away from the site. These measures should be compared after adjusting for fuel prices, shipment size and product mix; otherwise, apparent geographical deterioration may reflect inflation or changing customer requirements rather than an unsuitable building.

Service data provide another warning. Falling On Time In Full (OTIF) performance, missed cut-off times and repeated premium deliveries can reveal excessive distance or unreliable routes. Route-level analysis should distinguish congestion and planning failures from fundamental location problems. An operation that repeatedly adds emergency vehicles to meet routine commitments may have outgrown its geography, even when warehouse staff achieve excellent picking accuracy and dispatch productivity across every shift.

Uneven capacity and persistent recruitment difficulties strengthen the diagnosis. A national warehouse running close to its practical peak while regional facilities remain underused suggests an allocation problem, and high vacancy rates may point to an inaccessible labour market. Empty return journeys, repeated stock transfers and duplicated safety stock create further hidden costs. Each indicator should be measured over a suitable period rather than treated as conclusive on its own.

Management should commission a structured network review when several warning signs move adversely together, or when a major lease event, contract expiry or customer change approaches. The review should establish comparable baseline measures, map actual order flows and quantify financial consequences before any move is recommended. Sometimes the answer is revised routing, inventory reallocation or new shift patterns rather than relocation, so operational fixes deserve equal consideration.

Redesigning the Network – From Analysis to Implementation

A successful redesign starts by defining the service outcomes and financial constraints the new network must satisfy. Reliable information is needed on customers, suppliers, transport routes, stock profiles, operating costs and property commitments. A realistic base case should examine future demand rather than mechanically projecting historical volumes. Executive sponsorship matters, but transport planners, warehouse managers, procurement, finance, employees and customer-facing teams must all be able to challenge assumptions.

Candidate locations should be tested through travel-time modelling, capacity calculations, labour-market analysis and site inspections. Property checks must cover planning consents, access arrangements, grid connections, lease restrictions and environmental risks. A building that appears suitable on a map may lack vehicle turning space or expansion land. Shortlisted sites should be compared using identical financial assumptions and realistic operating schedules, including contingency routes and seasonal peaks.

Contract design and workforce planning are equally important. Competitive procurement should define measurable performance standards, transparent charging mechanisms, implementation responsibilities and exit provisions. Public bodies must follow the Procurement Act 2023 where it applies, while private organisations benefit from equally disciplined tendering. Employment consultation, transfer obligations and contractual notice periods, examined earlier, must be mapped onto the programme before any implementation timetable is publicly committed.

Wincanton describes relocating a British retailer's home-delivery operation to a 20,000-square-foot cross-dock facility within 12 weeks. According to the provider, the transferred operation supported 300 dispatch orders daily using 20 specialist vehicles and approximately 60 colleagues, without disrupting customer service during the move. Although the retailer was

not publicly identified, the example shows the importance of coordinating stock, systems, vehicles, and workforce transfers in one plan.

Implementation should proceed through tested milestones rather than a single uncontrolled switch. Inventory reconciliation, trial deliveries, system interfaces, carrier readiness and fallback stock arrangements need agreed acceptance criteria before each phase goes live. Afterwards, actual transport costs, service reliability, stockholding, labour productivity and emissions should be compared against the approved business case. Reviews at three, six and twelve months show whether promised improvements have materialised or corrective action is needed.

Summary – The Right Warehouse in the Right Place

The right warehouse is not necessarily the cheapest building, the most central postcode or the newest automated facility. Its value depends on how effectively it connects suppliers, inventory, transport infrastructure, workforce and customers. A network can appear inexpensive within individual departmental budgets while creating avoidable costs elsewhere. Geographical suitability must therefore be judged by total cost, dependable service, resilience, regulatory fit and the capacity to respond to changing demand.

Distribution networks should be reviewed whenever customer geography, product ranges, property commitments or delivery expectations change materially. Well-chosen facilities reduce unnecessary journeys and improve stock availability, while badly positioned operations quietly erode margins for years. Outsourcing, shared-user facilities, supplier branch networks, and regional stockholding offer alternatives to outright relocation, but each introduces distinct costs, dependencies, and contractual risks that deserve the same rigorous commercial and legal scrutiny.

Ultimately, distribution network design is a continuing responsibility shared across operations, finance, procurement, human resources and commercial management. Good decisions combine verified demand data, realistic cost modelling, suitable infrastructure and carefully managed implementation. The goal is not to operate the fewest warehouses or achieve the lowest rent per square foot. It is to place the right capabilities in the right locations, delivering sustainable value as the organisation and its markets evolve.

Additional articles can be found at Procurement and Supply Chain Management Made Simple. This site looks at procurement and supply chain management issues to assist organisations and people in increasing the quality, efficiency, and effectiveness of their product and service supply to the customers' delight. © Procurement and Supply Chain Management Made Simple. All rights reserved.

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