UK Cold Chain resilience



Investing for continuity across food, pharmaceuticals and other critical temperature-controlled supply chains

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Closing perspective: Resilient by design



The UK is investing in cold-chain capacity, but how resilient is the capability and infrastructure?

Are we investing in the parts of our network that truly determine continuity, or only in the parts with the clearest standalone business case?

- The UK cold chain is supporting a broader and more demanding mix of products than ever before, from fresh and frozen food to online grocery, meal solutions, vaccines and other high-value pharmaceuticals.
- At the same time, much of the existing cold chain estate is ageing, extreme heat is increasing refrigeration demand, and modern automated facilities are costly and slow to bring online.
- The resulting challenge is not simply a shortage of pallet positions, it is a shortage of appropriately located, climate-ready, energy-secure and operationally flexible capacity.

1

Demand is growing across multiple sectors

Frozen and chilled convenience foods, online fulfilment and pharmaceutical products are increasing and diversifying temperature-controlled requirements.

2

Legacy infrastructure is becoming an operational constraint

Around **70%** of UK 3PL cold-storage capacity is housed in facilities more than **20 years old**, including approximately **30% aged 30 years** or more. [1]

3

Modern capacity is capital intensive and slow to deliver

Automated cold stores require specialist refrigeration, insulated construction, high power availability and automated systems. Their economics favour larger-scale developments with costs approximately **2.5 to 3** times a standard development. [1]

4

Resilience must be managed end to end

Future resilience depends on how quickly products, inventory, power, transport and storage can be redirected when a node fails, not only on total national capacity.

5

Exposure extends to the point of use

Retail cabinets, local fulfilment locations, pharmacies and clinical locations can become the final weak link, even where upstream storage remains available.

6

Leadership action cannot wait

Identify what must keep moving, expose where the chain could fail and mobilise action against the greatest continuity risks.

Sources: 1 CBRE, cold storage market shifts to development phase report, 2025

The UK depends on uninterrupted cold chains for both food security and patient-critical products

Temperature-controlled supply chains protect the safety, availability and quality of products ranging from imported food and chilled convenience meals to vaccines, biologics and other temperature-sensitive medicines



~42%

of food consumed in the UK comes from outside the UK in 2025 [1]



184,000

UK jobs supported by the cold-chain sector [2]



70%

of UK 3PL cold-storage capacity is housed in facilities more than 20 years old[3]

- The UK relies on globally sourced, temperature-sensitive food, beverages and medicines, with continuity dependent on ports, transport, storage, distribution centres, stores and home-delivery networks.
- Consumer demand is shifting towards frozen products, chilled convenience, online grocery and delivered meal solutions, increasing the number and complexity of temperature-controlled movements.
- Pharmaceutical flows introduce different requirements, including validated handling, stricter chain-of-custody controls and temperature ranges extending from controlled chilled (2°C) to ultra-low temperature (-80°C).
- Failure therefore creates different but equally serious consequences: food waste and lost availability for consumers, or unusable medicines and delayed patient treatment in healthcare.

Sources: 1 Defra/gov.uk, Agriculture in the UK 2025, Ch.13 Overseas Trade (fruit and veg £8.2bn, imports £67.8bn, trade gap £42.1bn) 2 Cold Chain Federation, £14bn economic impact (2024) 3 CBRE, cold storage market shifts to development phase report, 2025

The conditions the cold chain was built for are not the conditions it must now withstand

Hotter conditions increase cooling demand[1]

- Record temperatures and prolonged drought are increasing the intensity and duration of refrigeration demand.
- Summer 2026 was provisionally the UK's warmest since records began in 1884.
- Heat affects not only industrial cold stores and vehicles, but also retail cabinets, store backrooms, dark stores, collection points, pharmacies and clinical storage.
- Failures at these smaller downstream assets can still lead to product withdrawal, waste, emergency reallocation or lost availability.

Much of the estate was not designed for current requirements[2]

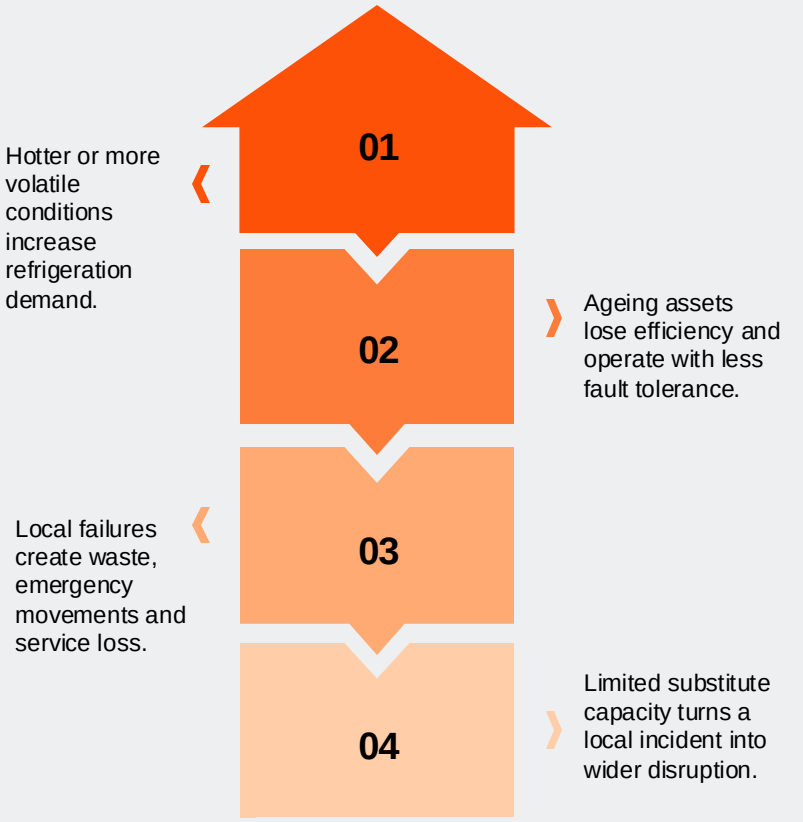
- Older facilities and refrigeration systems may be less efficient, harder to maintain and less capable of supporting modern throughput, temperature and automation requirements.
- Ageing retail refrigeration should be included within resilience assessments, rather than treating the distribution centre as the final controlled node.
- In-store refrigeration failure can trigger emergency product transfers, temporary cooling and stock write-offs.

Energy volatility is amplifying the pressure[3]

- Cold chains need continuous power, while geopolitical shocks have exposed businesses to higher prices and greater supply uncertainty.
- Defra reports that non-domestic electricity prices doubled and gas prices nearly tripled against the 2020 baseline during the recent energy shock.
- Automation can reduce unit labour and energy consumption, but it also increases dependence on reliable power, controls, software and specialist maintenance.

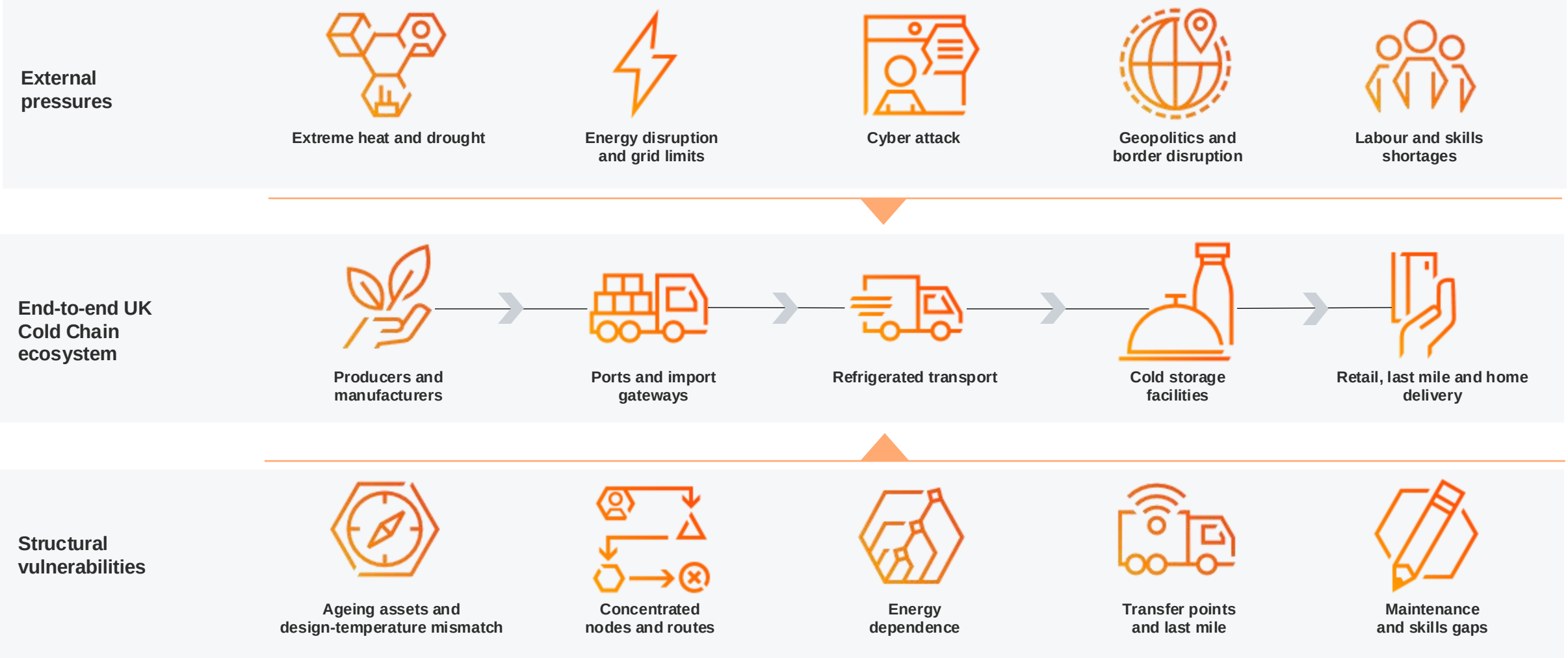
Operational headroom is being eroded

- Harder-running assets require more frequent maintenance and are less tolerant of faults.
- Ageing equipment and constrained spare capacity leave fewer options when a critical asset fails.
- Shortages of refrigeration-engineering skills can delay maintenance, repair and recovery.
- Together, these pressures reduce the cold chain's ability to absorb disruption without affecting supply.



Sources: 1 Met Office/gov.uk National Drought Group, 2026, UK Cold Chain Resilience report 2 Climate Change Committee-commissioned study (UK Climate Risk), Phase 1 and 2 3 UK Cold Chain Resilience report (energy shock, 2020 baseline)

Cold chain resilience is only as strong as the weakest link across the end-to-end system



Disruption can originate at any node and travel in either direction. Resilience therefore needs to cover primary flow, reverse flow and recovery across the full temperature-controlled ecosystem.

New capacity is modernising the UK cold chain, but investment remains uneven and capability-specific

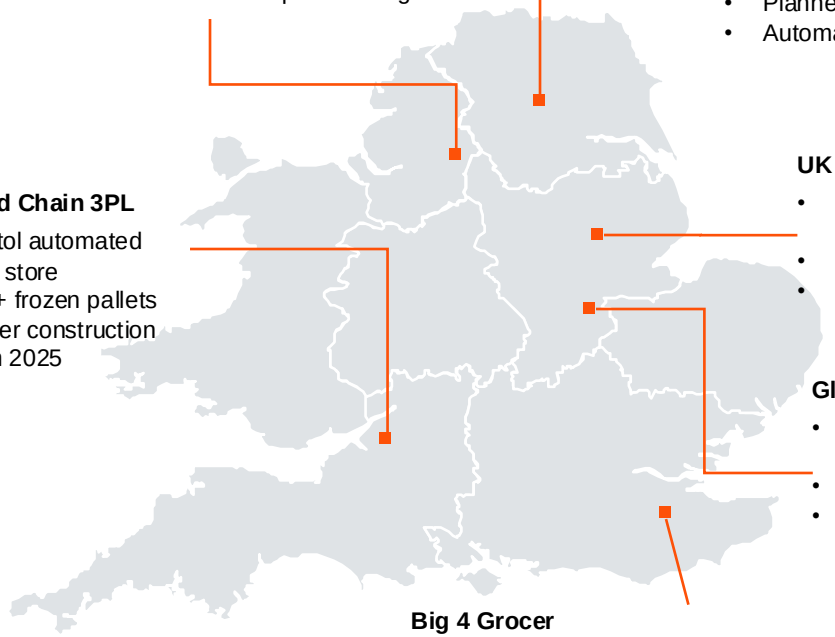
Recent developments are adding scale and automation, yet location, temperature band and whether capacity is already operational or still under construction determine whether it provides a viable resilience option.

Global 3PL

- Manchester pharma hub 2k+ pallets
- Opened June 2026
- 2–8°C and 15–25°C GDP-compliant storage

Global Cold-Chain 3PL

- Wakefield III expansion
- 19k+ frozen pallets
- Planned 2026
- Automated high-bay expansion



UK Cold Chain 3PL

- Bristol automated cold store
- 90k+ frozen pallets
- Under construction from 2025

UK Cold Chain 3PL

- Easton fully automated high-bay facility
- 101k+ frozen pallets
- Opened March 2025

Global Cold-Chain 3PL

- Corby 3 expansion 33k frozen pallets
- Operational June 2025
- NewCold Corby now at 185k+ pallet positions

Big 4 Grocer

- Aylesford distribution centre, 621k sq ft
- Completed February 2025
- Includes 300k sq ft chilled and 100k sq ft frozen

01 **Investment is shifting** – New facilities are bringing larger-scale automation, higher-density storage and modern refrigeration into the network

02 **Capacity is not interchangeable** – Frozen, chilled, multi-temperature and pharmaceutical facilities support different products, handling requirements and recovery options

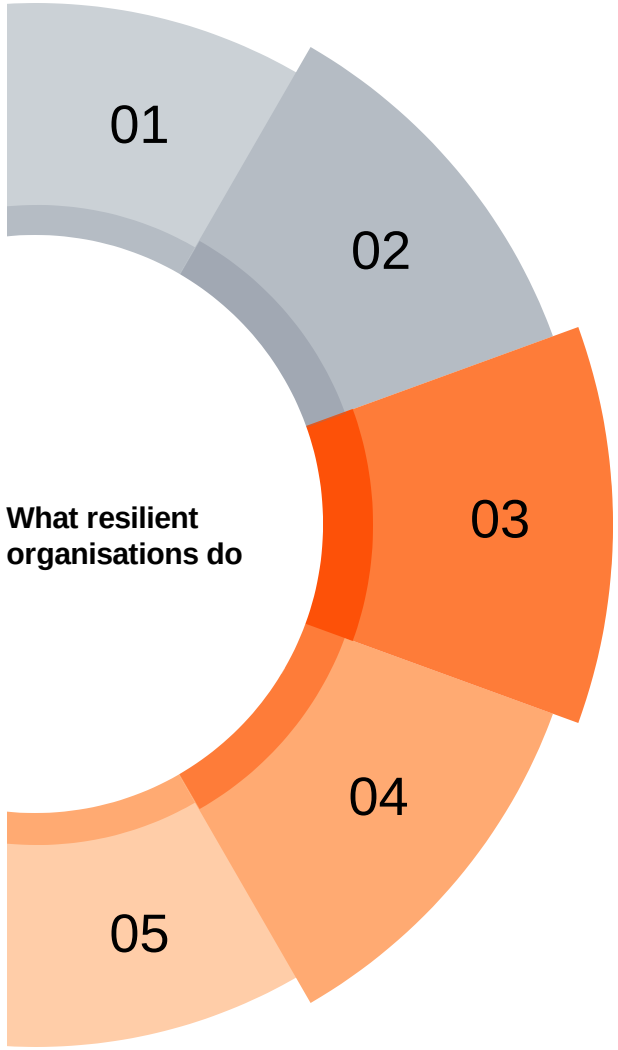
03 **Scale creates concentrated dependencies –** larger automated nodes can improve efficiency and capacity, but increase reliance on power, controls, specialist maintenance and effective contingency arrangements.

04 **Alternative capacity must be accessible –** capacity only strengthens resilience when the right temperature-controlled space can be accessed quickly following a critical site, route or power failure.

Selected major developments identified through public announcements, illustrative rather than exhaustive.

Sources: 1 GEODIS, Manchester temperature-controlled pharmaceutical warehouse announcement, May 2026 2 NewCold, Wakefield III expansion announcement, December 2025 3 Magnavale, Easton facility completion announcement, March 2025 4 NewCold, Corby 3 expansion announcement, June 2025 5 Magnavale/British Frozen Food Federation, Bristol automated cold-store development, September–October 2025 6 Panattoni UK, Tesco Aylesford distribution facility completion, February 2025

Capacity is only the starting point: resilience comes from all five connected capabilities, not one



Ecosystem governance

- Align manufacturers, logistics providers, cold-store operators, wholesalers, retailers, ports, energy providers and public bodies around critical flows and shared disruption scenarios.
- Establish clear ownership, decision rights, escalation routes and information-sharing expectations before disruption occurs.

Capacity and coverage

- Understand capacity by temperature band, product, location and season, rather than relying on total pallet positions.
- Map critical flows against available capacity, alternative sites, routes and providers to identify where viable substitutes do not exist.
- Assess how quickly capacity can be accessed or reallocated during disruption, not simply whether it exists somewhere in the network.

Climate-ready assets

- Assess critical refrigeration, storage and transport assets against future temperature peaks, not only historic design assumptions.
- Prioritise ageing, under-specified and difficult-to-maintain assets according to their importance to product continuity and recovery.
- Build resilience requirements into asset specifications, maintenance strategies, lifecycle plans and capital-investment decisions.

Secure and flexible energy

- Understand the power requirement and energy exposure of every critical cold-chain node.
- Develop appropriate continuity options, including backup generation, renewable supply, thermal storage, demand flexibility and alternative operating arrangements.
- Incorporate energy-price, grid-constraint and supply-disruption scenarios into site strategy, investment decisions and continuity planning.

Operational capability and visibility

- Create end-to-end visibility of product condition, inventory, capacity and disruption across sites, transport and transfer points.
- Use early-warning thresholds, escalation protocols and clear decision rights to intervene before an excursion becomes product loss or service failure.
- Maintain rehearsed recovery options covering alternative routes, facilities, transport capacity, inventory deployment and customer prioritisation.

The immediate next step: identify where cold-chain investment can protect continuity and unlock growth

01

Map

- Map the critical products, flows, nodes and partners that determine customer and food supply continuity.
- Overlay future growth plans, including new products, channels, regions and service propositions.

02

Stress test

- Test critical flows against disruption, future demand, volume growth and changing product requirements.
- Identify where capacity, energy, assets, technology or partner constraints could limit continuity or growth.

03

Prioritise

- Rank opportunities by continuity risk, growth enabled, substitutability, time to recover and time to value.
- Develop a focused investment portfolio that combines no-regret resilience upgrades with growth-enabling capacity and capability.

04

Mobilise

- Assign ownership, secure funding and align delivery with critical partners.
- Track whether investment improves continuity, capacity, customer service and growth readiness.

Three questions for every leadership team



Which products, customers or regions would be affected first if a critical node failed?



Where could cold-chain constraints prevent us from delivering future growth?



Which investments could both reduce risk and unlock new products, customers or markets?

Resilient and ready for growth



The UK's challenge is not simply to add more cold-chain capacity. It is to build and operate a diverse system of food, pharmaceutical and retail infrastructure that is climate-ready, energy-secure, operationally recoverable and able to support future growth.

Where could resilience investment both remove a critical constraint and unlock your next phase of growth?

Thank you

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