



Building the Future: Smart Logistics for Construction Supply Chains

The future of the UK construction industry remains broadly positive, with many forecasts pointing to continued growth.

PwC states that industry growth is “expected to accelerate in 2026-27”, and Glenigan suggests that output could increase by as much as 21% over the next two years.

However, ongoing geopolitical tensions in the Middle East are introducing a degree of uncertainty, particularly around supply chains, energy prices, and overall market confidence, which may temper the pace of this growth.

For sector players, it’s set to be a period of major opportunities. To take advantage, they will need to ensure they have the right operational foundations in place.

As urbanisation, infrastructure upgrades, and housing targets continue to drive activity, logistics will be a critical accelerator – or constraint – in enabling construction firms to capitalise.

Indeed, logistics is fundamental to the success of construction. It is the backbone of the industry, ensuring the right materials, equipment and personnel are in the right place at the right

time, which has a major bearing on project timelines, costs and overall quality.

That is easier said than done. Indeed, construction logistics is unlike any other vertical when it comes to supply chain management. It involves heavy materials that need to be transported in accordance with tight delivery windows, while meeting industry-specific compliance standards, and strict safety obligations.

The stakes are incredibly high. Loads are heavy and sites can have access limitations, requiring highly specialised vehicles and equipment to execute deliveries successfully. Naturally, these conditions demand highly qualified specialists, disciplined planning, and the ability to anticipate issues and adapt in real-time.

This paper explores why the construction industry requires specialised logistics solutions, analysing sector-specific challenges such as the complexity and scale of materials, seasonality, and schedule volatility. It will also outline some of the foundational aspects of successful operations, and emerging trends that will shape the sector’s future.



Why construction demands more than standard logistics

In construction, the combination of heavy loads and unique skillsets can quickly stack up to provide both sector players and their logistics partners with a set of serious operational hurdles.

The complexity and scale of materials

While goods in other verticals such as FMCG may be small, light, easy to load, easy to lift, and neatly packaged, rarely can any of the same be said for construction materials. From bricks and tiles to timber and landscaping products, goods are typically large and heavy.

As a result, deliveries often involve specialist vehicles and equipment such as articulated cranes and forklift trucks, with gross loads reaching weights in excess of 40 tonnes. Equally, a good percentage of those materials may be fragile, or require extremely careful handling, such as architectural stone. Timber frames, for example, cannot risk getting damaged, while glass windows need protection for obvious reasons.

Every load represents both a significant investment and safety challenges, so precision and care are non-negotiables.

Site access and operational constraints

Construction schedules rarely run like clockwork. While other industry's logistics operations involve to-the-minute scheduling and operate around the clock, the built environment typically faces limitations.

Time restrictions are a major obstacle. Deliveries generally need to be made within social hours due to noise restrictions and local authority requirements. Further, there's also challenges relating to the sites themselves. Deliveries may have to be made in areas where there are narrow roads, schools, one-way systems, limited laydown areas, or kerbside constraints, necessitating different vehicles for different environments.

Schedule volatility

Construction logistics is regularly subject to last minute scheduling changes. Adverse weather can make it unfeasible for sites to receive specific materials, while issues with subcontractor sequencing can also cause same-day changes.

Cancellations are common. If planned drop off windows are delayed or pushed back, then dynamic re-planning is required. Managing this volatility is, however, not easy, with the industry typically facing a shortage of qualified logistics professionals and specialist vehicles for different load-types.

Without proper planning, preparation and management, missed slots can ripple throughout construction logistics networks, with one delay creating a domino effect impacting many multiple clients.

bwd's Construction Seasonal Demand

Seasonality and programme cycles

Scheduling volatility becomes even more pronounced during peak periods. With many construction projects accelerating throughout the warmer months, demand for logistics support typically surges in spring, summer and autumn, with winter generally being quieter due to adverse conditions and fewer daylight hours.

Planning resources for these peak periods can be challenging. Logistics professionals need clear visibility of their fleets and resourcing capacity, planning significantly in advance while also maintaining flexibility to ensure that challenges can be addressed at speed.

Specialist skills and qualifications

From articulated cranes to truck-mounted forklifts, construction logistics involves the use of specialist vehicles and equipment and, therefore, demands experienced, certified operators.

Unlike other supply chain verticals, labour gaps or capacity challenges can't be bridged with ease overnight. Indeed, attracting and retaining qualified industry talent is absolutely critical.

Soft skills are also vital. Close communication with site managers, residents and marshals can all help in ensuring that on-site deliveries run smoothly. Every construction environment is different, and issues arise regularly. Therefore, communicating effectively and adapting on the job are crucial skills for success.

Performance pressures

Despite the extensive and unique challenges that construction logistics faces, the expectations are still incredibly high. Service level agreements are demanding, with 98% on-time-in-full (OTIF) being the industry standard benchmark that operators must strive to exceed. The margins are incredibly tight. For every 100 deliveries, only two can fail before an operator falls short of its key performance indicators.

Given that a single missed window, stalled or cancelled delivery has the potential to create a domino effect of site delays, it's vital to remain adaptable and plan for every eventuality.

The key to successful transport management for construction

In construction logistics, customers demand safety, deliveries on-time and in-full, and insights into deliveries, all in a cost-effective and efficient service package.

Creating a transport management system that can meet these needs while accounting for capacity challenges, seasonal peaks, and flexibility in dealing with unforeseen issues – all while maintaining a collaborative client relationship that drives continual service improvements – requires several key ingredients.

Intelligence and real-time visibility

Real-time visibility is absolutely essential. Knowing where vehicles are, how far from collection or delivery, whether they're running ahead or behind schedule... this information enables proactive decisions to prevail over reactive firefighting. When systems alert stakeholders to potential delays before they become actual delays, problems get solved while they're still manageable.

Here, the use of GPS technologies enable materials to be tracked in transit, providing accurate delivery estimates, and ultimately increased transparency for clients and logistics teams alike.

Predictive planning takes this further. Analysing historical data reveals patterns in demand, identifies seasonal trends and highlights which routes consistently run into issues. This feeds directly into capacity planning, resource decisions and route design. Patterns emerge from the data that daily operations may not reveal, such as loads that could combine, delivery windows that need adjusting, and networks that could benefit from reshaping.

Strategic planning and pre-construction engagement

Forward planning also requires human input. Transport management planners should collaborate closely with all stakeholders – from suppliers and partners to customers on an end-to-end basis, ascertaining collection times for key materials and suitable windows for delivery.

Any timeslots must be adhered to, while pre-arrival checks such as access, marshal availability and site restrictions should be well understood, enabling the selection and deployment of the right equipment and vehicles to ensure speedy, safe and successful pickups and deliveries. These checks may also influence the most logical transport routes and site entry points.

The right people and culture

The right combination of experienced strategic planners and coordinators working alongside qualified drivers and operators can make a huge difference to the smooth and seamless flow of construction transport management operations.

Effective training requires a culture of continuous improvement, in which all team members are driven to find iterative improvements. It is that mindset that drives a partnership relationship capable of unlocking added value.

While technical proficiency is important, so too are soft skills. Proactive communications with site managers and marshals, for example, can go a long way in helping to mitigate and overcome any potential on-site issues that otherwise may arise.

Flexibility and adaptability

Even with extensive forward planning, skilled professionals and insightful technologies, things can still go wrong. For that reason, it is imperative to plan for every eventuality, remaining flexible in the face of a variety of potential challenges. With last minute cancellations, weather issues and other challenges regularly arising, being able to swiftly adapt to these is crucial.

By staying agile, logistics partners can reduce costs, maintain efficiency, and deliver on client expectations, even when circumstances change.



W wienerberger

Case study: wienerberger

How bwd has achieved over 98% OTIF for the world's largest producer of bricks and clay blocks.

wienerberger is both the world's largest producer of bricks and clay blocks and market leader for clay roof tiles. The company has over 200 production sites across 28 countries, including more than 20 sites in the UK.

Barron Wood Distribution (bwd) joined forces with wienerberger in 2014 to manage volumes from Ipswich port. With its extensive nationwide fleet, bwd quickly streamlined operations and now handles contractual volumes for 13 of wienerberger's UK sites as a trusted transport partner.

Critically, bwd has achieved over 98% on-time in-full (OTIF) results since 2022, delivering thousands of loads safely and efficiently.





Enhancing visibility and efficiency

As part of its service, bwd plans all loads and ensures timely customer notifications. The customer is provided with a versatile service model tailored to its individual needs, ranging from fixed date to fully flexible week-commencing deliveries.

bwd efficiently manages load planning and stock checks, while also providing Wienerberger customers with delivery updates 24 hours in advance. With a streamlined supply chain model, bwd is able to book specific delivery days directly with Wienerberger's customers, offering a more structured and reliable scheduling service that enhances planning and coordination across the supply chain.

The partnership between wienerberger and Barron Wood Distribution (bwd) more recently advanced with the introduction of the RoadRunner transport management system app. With live tracking, wienerberger can see the location of any vehicle in real time, and receive proof of delivery documentation within 10 minutes of a load being delivered.

Going the extra mile

bwd also works closely with wienerberger to maximise cost efficiencies through improving average load size. By ensuring that vehicles are only dispatched to ports once inventory has been verified and marked as ready for collection, bwd effectively avoids abortive loads and the high costs associated with wasted journeys.

Part of these efforts include working with wienerberger on its Load Optimisation Project that's designed to improve the efficiency and sustainability of its logistics operations. Through continuous efforts to reduce the weight of bricks via dematerialisation, wienerberger identified an opportunity to optimise brick pack weights and configurations depending on vehicle types and offloading options, for example double stacking of bricks.

As a result, bwd was able to contribute to wienerberger's achievement of 823 fewer journeys in 2023, resulting in 74,732 fewer miles travelled to deliver the same quantity of bricks, leading to a 125,619kg reduction in CO2e emissions.

Looking ahead: Evolution in construction logistics

Successful construction logistics is dependent on the continual evolution of service. Transport management companies must stay abreast of key industry developments, challenges and trends, adapting and optimising solutions in line with present and future customer requirements. Looking ahead, we anticipate several key trends will drive key changes in the construction logistics landscape in the coming years.

Industry consolidation

"The industry is broadly expected to move, in the medium to long term, towards a process of consolidation. In this scenario, older, more expensive-to-run plants and distribution centres are likely to be replaced by larger, more efficient and modernised delivery hubs, as the market continues to prioritise scale, efficiency and optimisation of supply chains.

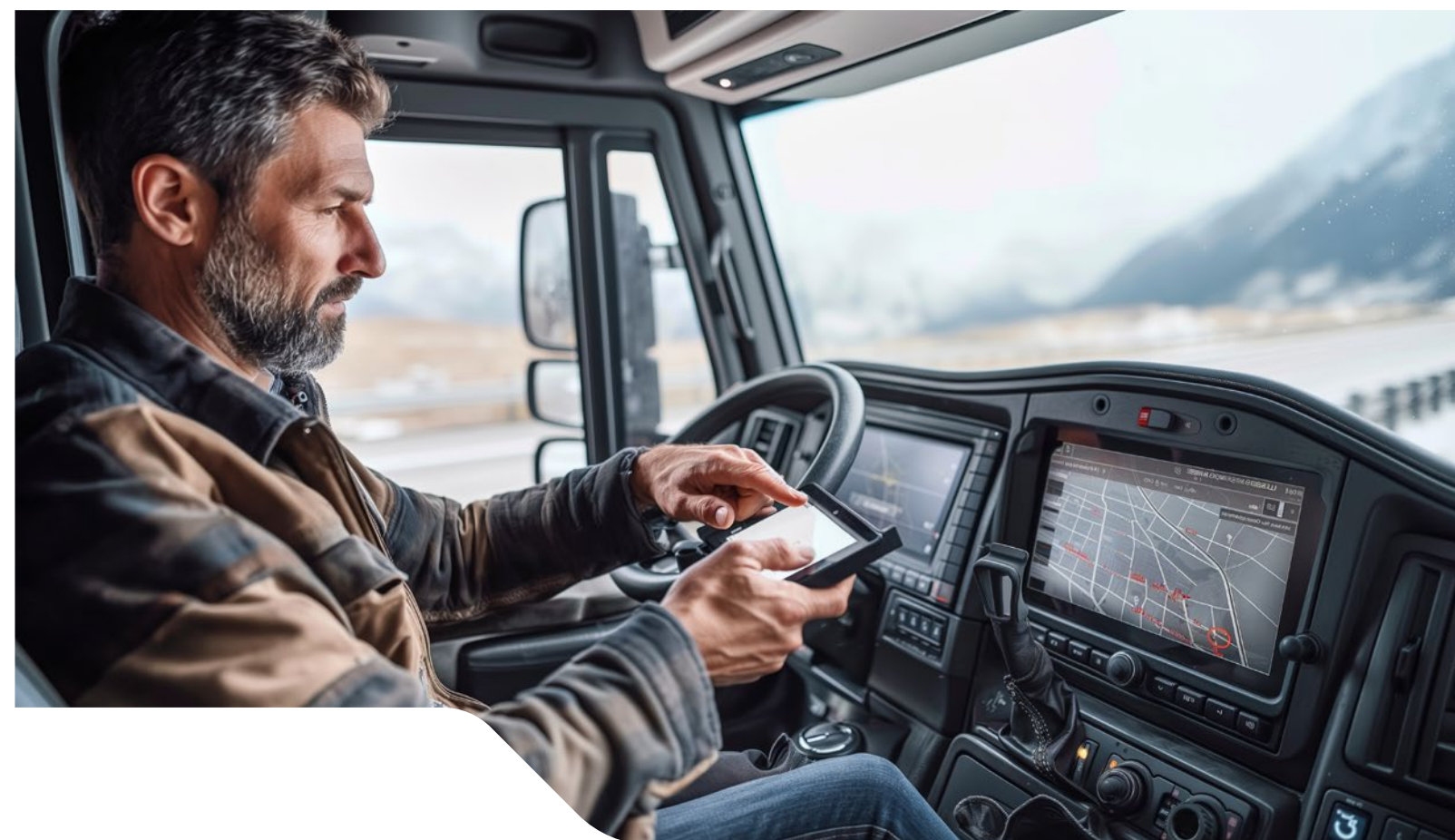
This shift will require logistics operators to prepare and adapt proactively. The centralisation and scaling up of fewer distribution centres will limit regional points of origin, thereby resulting in longer average hauls" – Andrew Vickers, Construction Director at bwd.

Transport management companies will need to rethink network design, invest in advanced route optimisation technologies, and build flexibility into their fleets and workforce planning to maintain service levels and cost efficiency. Collaboration with partners, including the leveraging of data-driven insight, will be critical to mitigate risks and ensure resilience during this transition.

Consortium operating models

To further optimise the use of resources, particularly in high-demand periods, logistics operators themselves should also consider embracing consortium models. In essence, this involves the pooling of fleets and shared expertise, while ensuring the customer still retains a single contractual point of contact.

bwd is pioneering this approach, which is already driving benefits across several contracts. This includes resource smoothing, greater cost control and improved adaptability, all while keeping administration low for customers.





Partner with a proven construction logistics partner

Modern construction logistics operations are highly complex, demanding highly specialised skillsets that are unlike any other logistics environment. Success in this industry means spinning many plates, from technology and equipment to trained people, compliance, planning, and adaptability.

It's a significant and complex puzzle. When managed well, it can look seamless. Yet minor slip ups can quickly escalate into a network-wide mess.

To avoid any potential pitfalls and establish and maintain best-in-class operations, it's important to look for several key capabilities and attributes in a construction logistics partner:

- Systems that deliver visibility, traceability, and proactive decision-making.
- People who understand site realities and act before issues escalate.
- Network intelligence that finds consolidation and protects first-time success.
- A partnership approach that shares risk, savings, and continuous improvement – without compromising health and safety.

bwd's construction experience

At bwd, we have 10+ years of experience in supporting major construction brands. Our in-house team brings more than a century of combined industry knowledge and specialist vehicle experience.

With our dedicated fleet and extensive network of haulier partners spanning bricks, blocks, roof tiles, landscaping, steel, and merchant networks, we can provide clients with nationwide coverage using articulated cranes, drawbar cranes, drop and go cranes, urban cranes, demountable forklifts and more.

By pioneering the consortium construction logistics model – an industry-first, customer-focused approach that combines resource pooling with a single accountable interface – we are already changing the game for our clients.

From flexible on-demand capacity to an excellent safety record, we're well placed to deliver leading, modernised, future-thinking construction operations for you.

Technology and AI

No construction logistics outlook would be complete without an acknowledgment of the impact and influence that technologies are set to have on the industry. Solutions such as AI can support with everything from site readiness signals to weather forecasting, helping to optimise operations and provide informed data and insights for proactive adjustments.

In terms of fulfilment, factory and warehouse automation is also set to increase throughput and product volume predictability – information that logistics providers must be across, leverage and adapt to, remaining cognisant of and aligned with customers' own digital transformation journeys.

Environmental transition

While the adoption of sustainable practices has been limited in some areas of construction due to barriers such as cost, the transition is expected to gather pace in the coming years as the 2050 net zero goals draw nearer.

Here, transport management companies will also need to adapt, aligning with client sustainability demands and construction industry requirements. This might include investing in low-emission fleets and optimising delivery routes to reduce carbon output. Providers may also need to integrate carbon tracking and reporting into their operations to meet regulatory requirements and demonstrate progress to clients.





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