# The evolving landscape of supply chain and construction industries



As the year 2024 draws to a close, the rapid transformation taking place within the supply chain industry is becoming increasingly evident. An analysis by William Wappler, executive chairman and CEO of Surgere, detailed in RFID Journal, outlines several key trends that are anticipated to shape supply chain management in 2025 and beyond.

The integration of artificial intelligence (AI) into supply chain management software is emerging as a significant force, providing real-time analytics, predictive modelling, and automation capabilities that alleviate the burdens of inventory management and product tracking. However, Wappler points out the complexity stemming from the vast amounts of data generated by these interconnected systems. "Accurate data provides the basis for allowing AI to drive decision-making," he emphasised, underlining the necessity of reliable data to ensure the efficiency of advanced technological tools.

Amidst recent global supply chain challenges, including geopolitical unrest and domestic disruptions, the demand for transparency within logistics operations has escalated. Customers today expect a clear tracking experience akin to what is offered by major e-commerce platforms. Companies are responding by adopting technologies such as RFID, ultra-wideband, GPS, and Bluetooth to enhance asset tracking. The capacity for real-time tracking not only mitigates bottlenecks but also fosters trust and accountability along the supply chain. Wappler remarked, "In 2025, visibility is no longer a 'nice to have.' It’s a non-negotiable element of a resilient and competitive supply chain."

Sustainability remains another pivotal trend influencing the industry. Companies are increasingly recognising that environmentally responsible practices are essential, not only for compliance but as a critical differentiator in the marketplace. For instance, deploying returnable packaging systems significantly decreases landfill waste from single-use materials and reduces the costs associated with packaging replacement. Aligning sustainability efforts with operational efficiency is becoming a priority, contributing both to environmental goals and profitability. "Companies that fail to embrace these changes risk being left behind," Wappler cautioned.

In parallel, the construction industry is also seeing transformative changes driven by sustainability and technological advancements, as highlighted by 24housing. The growing climate crisis necessitates that building designs not only focus on reducing carbon emissions but also enhance resilience against its effects. Adaptations such as improved insulation and solar shading are becoming mainstream, addressing both energy efficiency and climate resilience.

Renewable energy sources are increasingly incorporated into building designs, notably through solar power, wind turbines, and geothermal systems. These initiatives aim to decrease dependence on fossil fuels and mitigate air pollution. Additionally, the use of sustainable materials, including recycled and engineered options, is becoming a staple in modern constructions.

Considerations surrounding water conservation are also rising in prominence as water scarcity escalates. Techniques like low-flow plumbing, greywater recycling, and rainwater harvesting are gaining traction in future building designs.

The role of AI in construction is notable, significantly enhancing project management by predicting potential issues beforehand, which helps in maintaining project timelines within budget constraints. Technologies such as Building Information Modelling (BIM) and smart equipment, including drones and autonomous vehicles, are also making operations more efficient and safer.

3D printing technology is revolutionising material production in construction, enabling precise construction that utilises only the necessary quantities of materials, thus minimising waste and optimising costs. The modular construction approach, that assembles parts in a controlled environment off-site, is praised for its efficiency and sustainability, resulting in reduced energy consumption and waste throughout the building process.

In summary, both the supply chain and construction industries are becoming increasingly interconnected through the integration of AI and sustainability practices. The emphasis on transparency, efficiency, and environmental responsibility is shaping a future where companies must adapt promptly to meet the increasing demands of both consumers and stakeholders. As these sectors continue to evolve, the technologies and strategies adopted will play a critical role in determining their competitiveness and resilience in a rapidly changing landscape.

Source: [Noah Wire Services](https://www.noahwire.com)

## References

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