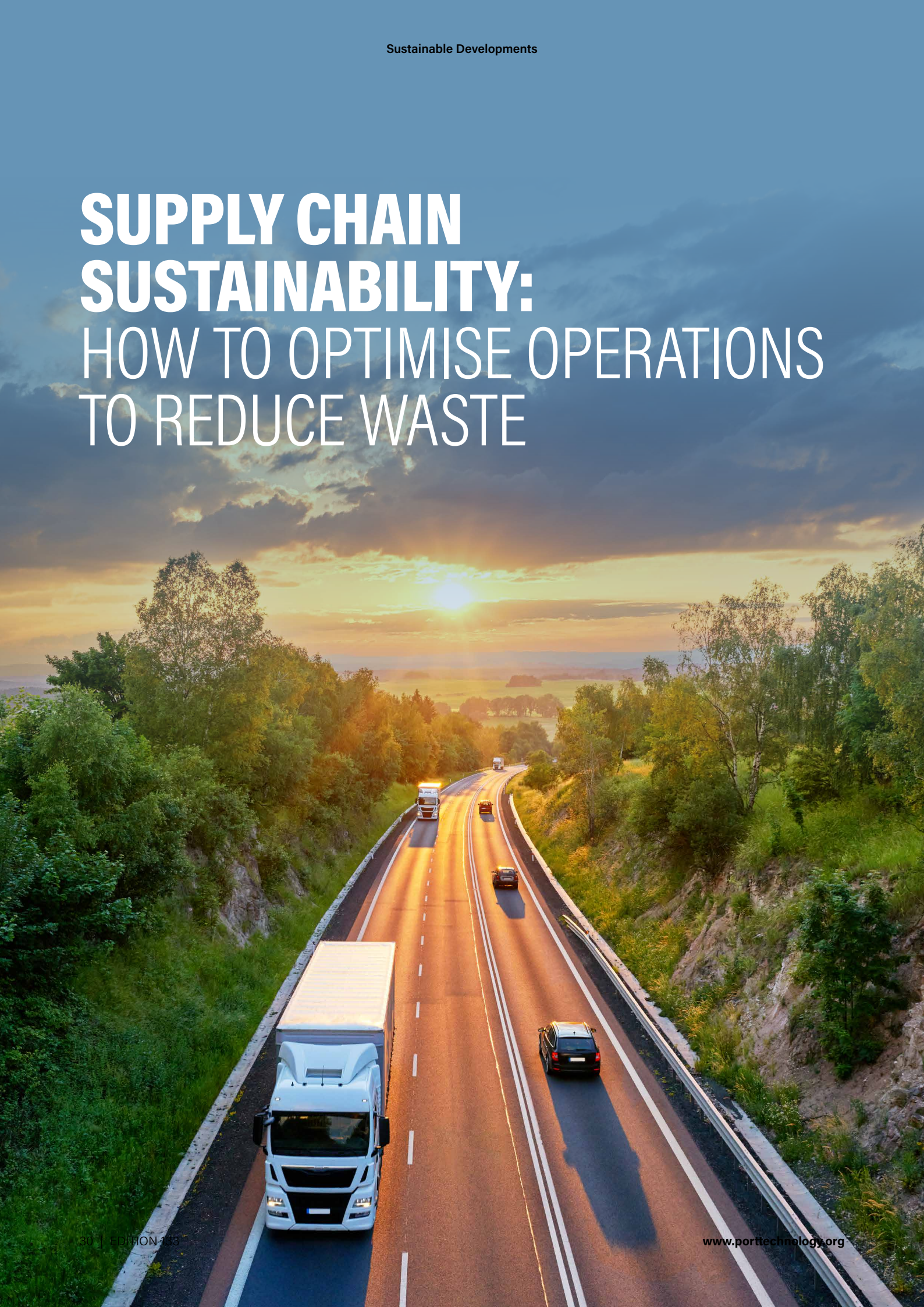# SUPPLY CHAIN SUSTAINABILITY:
HOW TO OPTIMISE OPERATIONS TO REDUCE WASTE

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Identifying and weeding out waste in your supply chain is not only paramount for sustainability but also for bolstering your bottom line.
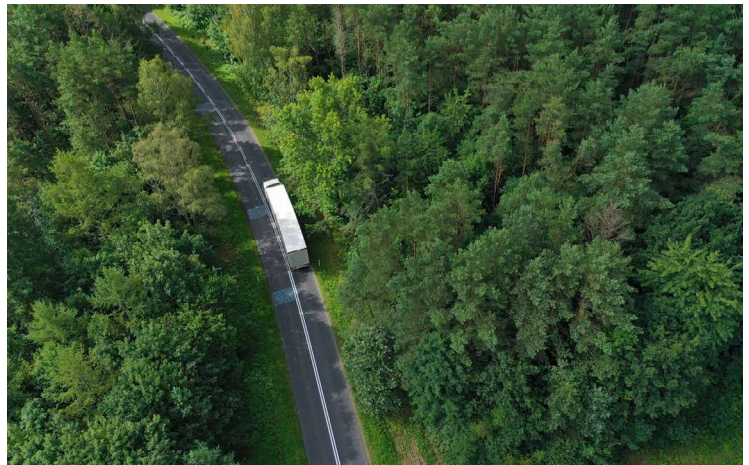
THE BENEFITS OF OPTIMISATION

At its core, a sustainable supply chain is centred around achieving greater results with less resource usage. With that goal in mind, optimising your operations is a necessity. Fortunately, making the business case for doing so is easy, given the benefits that come with optimisation.

Reduced Costs
Embracing sustainability doesn't have to equate to high costs. In fact, it generally means the opposite. When companies streamline their operations for increased productivity or enhanced quality, environmental benefits often naturally follow. Efficient manufacturing and supply chain processes are not only cost-effective, but they also consume less energy, utilise fewer resources, and generate less waste.

Transportation presents a multitude of opportunities for cost reduction. For example, optimising delivery routes using advanced analytics can reduce fuel consumption, leading to significant cost savings and a lower carbon footprint.

Investing in automation and technology can also lead to faster processes, fewer errors, and reduced labour needs. For instance, artificial intelligence (AI) can help forecast demand more accurately, reducing the need for safety stock and consequently lowering inventory carrying costs and the amount of real estate you invest in to store your goods.

Improved Performance
In addition to reducing costs, optimising the deliveries from suppliers to customers can greatly improve performance.

Real-time supply chain visibility allows companies to monitor and adjust delivery routes dynamically, reducing delays and improving delivery time key performance indicators (KPIs) such as Order Cycle Time and On-Time Delivery.

Concurrently, it aids in detecting potential disruptions early, enabling preemptive measures to be taken to maintain schedule integrity.

This added confidence helps remove a lot of the padding businesses bake into their processes. With a higher degree of confidence, throughput can be maximised, adding more deliveries in a day and helping businesses avoid growing pains.

In terms of supplier performance, real-time visibility acts as a catalyst for enhancing supplier capabilities. Through supplier development programs that leverage real-time data, suppliers can more effectively meet delivery schedules, boosting on-time performance and moving up on supplier scorecards.

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Happier Customers and Employees

From the customer perspective, optimised delivery routes and real-time visibility into the supply chain mean that their products arrive on time, more often. Consistent, timely deliveries lead to increased customer trust and satisfaction. Additionally, by lowering their carbon footprint through smarter logistics and supply chain practices, companies can cater to the growing demand among consumers for sustainable products and services.

Employee satisfaction, on the other hand, stems from the empowering effect of optimisation. When inefficiencies do not burden employees, they can focus their energy on strategic, meaningful tasks.. They can engage more directly in problem-solving and innovation, contributing to greater job satisfaction and ownership. For instance, employees can concentrate on enhancing customer value when you eliminate their need to constantly juggle spreadsheets or engage in time-consuming phone calls. This not only boosts employee morale and productivity but also improves talent retention.

AREAS TO HUNT FOR WASTE

While the benefits of optimising your supply chain make it a no-brainer, it can be challenging to know where to begin. The following areas are often riddled with waste, making them a great place to start.

Empty Backhauls and Route Optimisation

One of the most significant sources of waste is the empty backhaul – when trucks return empty after delivering goods. This represents not only wasted fuel and emissions but also an opportunity cost. By employing route optimisation software, you can minimise empty backhauls and maximise truck utilisation. This software can help find cargo that needs to be moved on the return route, optimising both the outward and return journeys.

Dwell Time

Excessive dwell time, the duration for which goods are stored in your facilities before they are shipped, is not only costly but can also result in product obsolescence. To reduce dwell time, ensure there is synchronisation between supply and demand, and foster real-time communication among suppliers, warehousing, and transportation.

Consolidations & Cube Optimisation

How often are you shipping multiple orders to the same consignee from the same facility in a day without realising it? Moreover, how often are you closing the doors on a trailer that is only partially filled? These are inefficient habits that are symptoms of an operation trying to stay on top of tight schedules and customer demand. Using bulk optimisation tools can help identify consolidations at a location or in a region to maximise cubage and use lower-cost modes.

Mode Conversions

Did you know that you can ship on a train from your facility without even needing rail siding? There are alternatives to truckload service that sacrifice a bit of time for significant carbon dioxide savings. With the right visibility tools and change management, tapping into 53' intermodal shipping can not only reduce CO_2 emissions by up to 65 per cent, but it can also slash your costs with it.

Yard and Facilities

Your yard and facilities can be treasure troves of waste. There's much to address, from inefficient use of space to energy consumption. Implement measures such as smart lighting systems, optimised storage layouts, and regular maintenance to reduce energy usage. Additionally, consider implementing waste reduction programs and recycling initiatives within the facility.

Disruptions in the supply chain often lead to outdated plant or distribution centre dock schedules, causing truck queues and idle times to grow due to schedule misalignment, which in turn increases carbon dioxide emissions. With a Yard Management System (YMS), companies can continually optimise schedules throughout the day to significantly reduce idle time, enhancing efficiency and sustainability. For example, Dynamic Yard users emitted 20 per cent fewer carbon emissions than non-users in the last quarter, thanks to reduced idle time.

TIPS TO START OPTIMISING

Begin the optimisation process by seeking feedback from customers, your team, and partners – even considering an advisory board that brings them all together. They have a unique perspective that touches so many different supply chains and can help shed light on best practices and opportunities. Establish KPIs and measure them regularly. Don't be afraid to make changes and experiment with different strategies. The key to optimisation is continuous improvement. Be prepared to iterate and improve as you gain more insights.

1. Start with your customers. Nothing you do should negatively affect the speed of delivery and quality of service; in fact, both should improve. Make sure that whatever you implement enhances your customer experience and use that as the benchmark moving forward. Make sure they recognise that they can claim this as a sustainability advantage for their business and stand to reap the benefits as well.
2. Then, get feedback from your team. They are at the front lines of your operation, so they will be the first to assess the value of certain tasks or identify unnecessary or redundant areas.. Use surveys and small group sessions to get feedback and brainstorm solutions. Dive into any pushback to determine if it stems from pragmatic thoughts or resistance to change.
3. Review communication channels. Are breakdowns occurring because information is not flowing in the right direction, or are there gaps that are creating bottlenecks? Is everybody even working from the same set of data? Analyse and flag areas of improvement in how your supply chain operators communicate with one another and consider smart technology that creates the highest form of visibility into the process.
4. Identify how smart technology can help. Automating your supply chain process gives organisations greater transparency into every movement of the product, from the moment it is picked to the moment it appears at the doorstep of the consumer's home. Sensors, AI and other technologies also give companies greater control to reduce operating costs, create forecasts with greater accuracy, and make better decisions to optimise inventory, remove communication gaps, and identify smarter routes.

CONCLUSION

Supply chain sustainability is an ongoing journey, not a destination. By focusing on reducing waste in key areas like dwell time, backhauls, and facilities, you can make a significant impact. Remember that the optimisation process should be data-driven, and human insights from customers, employees, and partners are invaluable. Keep an open mind, measure, iterate, and evolve. Not only will you see your supply chain thrive, but you'll also be contributing to a more sustainable and prosperous world.

ABOUT THE AUTHOR:

Prior to FourKites, Todd spent over seven years at Gartner's Global Enterprise Supply Chain organisation helping support global companies solve complex supply chain issues. While at Georgia-Pacific/BlueLinx, he was responsible for all aspects of sales and operations for the Greater Los Angeles area, including sales, customer service and logistics management for a distribution centre that generated $75 million revenue.

ABOUT THE COMPANY:

Supply chain visibility platform FourKites extends visibility beyond transportation into yards, warehouses, stores and beyond. Tracking over 3 million shipments daily across road, rail, ocean, air, parcel and last mile, and reaching more than 200 countries and territories, FourKites combines real-time data and machine learning to help companies digitise their end-to-end supply chains. Over 1,200 top global brands trust FourKites to create more agile, efficient and sustainable supply chains.

www.fourkites.com/