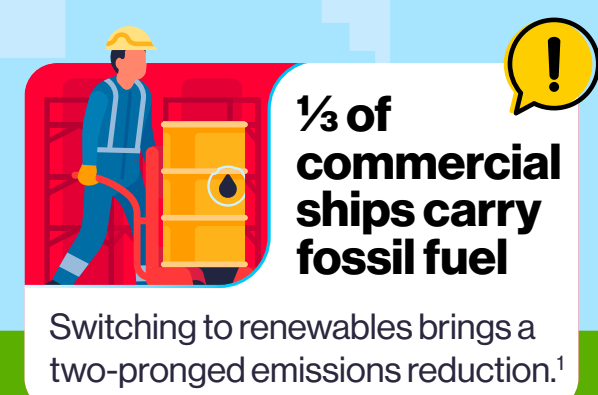


The hidden heroes of green logistics: Precise inventory and demand forecasting



Imagine a logistics business of the future.

The warehouse roofs are covered in solar panels, the trucks recharge while goods are loaded, and only the stock purchased is the stock produced. In the not-too-distant future, sector leaders will benefit from the push to green logistics:



Barriers to sustainable logistics

Adoption of game-changing technology

93% of shipping and warehouse companies plan to increase technology spending in the next 3 years. Adoption of robotics and digital twins is slower, hindering the potential for sustainability simulations in virtual environments.²

Oversight over the entire supply chain

Almost 1/5 of trade professionals list tariffs and geopolitical challenges as the biggest disrupter to the supply chain.³ To take back control of projections, warehouse owners are adopting machine-learning based forecasting and automated replenishment.²

Consumer expectations for faster delivery

2/3 of consumers expect to receive their items within 24 hours.⁴ For logistics operators, this expectation is incompatible with sustainability, FedEx go so far as to describe the last mile delivery as one of the most carbon-intensive stages of operations.⁵

93%

of operators will increase tech spending

1/5

are working to overcome geopolitical challenges

24h

Consumers expect delivery within 24 hours

How 5G enables warehouses - A use case

1

Drone inventory management

In just 20 minutes, a drone can count an entire warehouse inventory allowing for more frequent stock taking.

2

AR vision picking

Wearables allow workers to find items with ease. With AR goggles, pick accuracy is 100% and productivity increases by 30%.

3

Drone space utilisation

Automated warehouse mapping helps operators make optimal use of warehouse space as well as checking for heat and cooling loss in hard-to-reach areas.

4

High speed, low latency network

As the business grows, throughput demand increases and puts pressure on existing systems. 5G enables data increase without lag.



Technology for sustainability in the optimised warehouse

5G enables sustainability-promoting technologies in warehouse operations. Supporting that shift:



Cyber security

Unhindered digital transformation



Network slicing

Reliable connection in a device-dense, wide area



Computing at the edge

Increased penetration of AI/ML applications

Efficiency and sustainability powered by Singtel 5G+.

Contact us

References

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²McKinsey, Digital logistics: Technology race gathers momentum, 2023

³Thomson Reuters, 2025's supply chain challenge: Confronting complexity and disruption in global trade

⁴Statista, Expectations of online shoppers for 'faster delivery' times in selected categories worldwide, 2024

⁵FedEx, Navigating customer demand for fast, sustainable delivery in Australia, 2023