

**disruption is the New  
Normal for supply  
chains.**



# introduction.

2020 saw huge pressures and new challenges put on global supply chains. While the fallout from the pandemic undoubtedly forced retail businesses to adapt their processes, the reality is that there were many issues placing strain on supply chains well before 2020.

The disruption that plagues supply chains in the modern day has been shaped by increasingly complex consumer demands, the shift to e-commerce, smaller pick volumes and the increasing disengagement of workforces. Covid-19 has accelerated these issues, and for retail distribution centres and warehouse operators, a drastic change was required to meet evolving demands and mitigate business-threatening consequences of the volatile retail landscape, with research showing that even a short disruption of 30 days or less has the potential of a 3-5% impact on an organisation's entire EBITDA. **Disruption isn't going to go away, so how can retailers embrace the opportunities in their warehouses and tackle it head on?**

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opportunities explored with this factsheet:



going digital



warehouse twinning



the human element



dealing with disruption

## going digital.

Technology in supply chain management has enhanced dramatically in recent years, especially in the area of artificial intelligence and advanced analytics. Despite this, new research from REPL Group has uncovered that only 40% of global retailers asked have the flexibility within their systems to model for different scenarios, with an unsurprising but huge 83% saying COVID has heightened these issues and made forecasting a challenge.

AI can be leveraged to harness data, such as IoT-enabled fleet information, and help drive efficient decision making, while demand forecasting enabled by machine learning can help reduce waste, cost and ultimately improve the customer experience. Research by McKinsey found that 61% of executives reported decreased costs from the utilisation of AI in their supply chains.

The expansion of IoT into a wide range of devices also has its part to play here. Dynamic inventory tracking can provide real-time, automated feedback, while advanced management systems can automatically send and receive inputs from different stages of the chain back to centralised software, with advanced algorithms helping to raise efficiency. Connecting siloed data to a centralised system enhances the business's overall resilience to external influences through better connectivity and increased visibility across the whole network.

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## warehouse twinning.

It's not just AI and IoT that has a role to play in managing disruption effectively for supply chains. As interruptions add a heightened level of pressure on warehouses, many have the catch-22 situation of needing to make improvements to layouts and workflows within their buildings to ease these challenges, but cannot afford to take the time to shut the premises down in order to do so. Digital twin simulations can provide the solution by creating a digital replica of the warehouse space. Here, operators can experiment with customised floorplans and workflows to decipher more efficient strategies for the future. Implementation of digital twins has only been accelerated by Covid-19 this year, with a third of mid to large-sized companies with IoT implementations looking to incorporate at least one digital twin by 2023.

Utilising a twin digital environment allows warehouse operators to analyse areas of the SKU mix for improvements, gain insight as to the where spikes of seasonal demand lie in certain products and gain visibility of the parts of the warehouse floor and supply chain process where automotive technologies can make a difference.



## the human element.

Elements of digitisation can also work towards freeing human resources from the mundane tasks that can easily take up most of their time. Goods to person systems allow for items to be brought to pickers, reducing time spent travelling across the warehouse floor, while self-driving carts reduce an employee's mileage by completing most of the aisle movement while travelling from the plant to the warehouse.

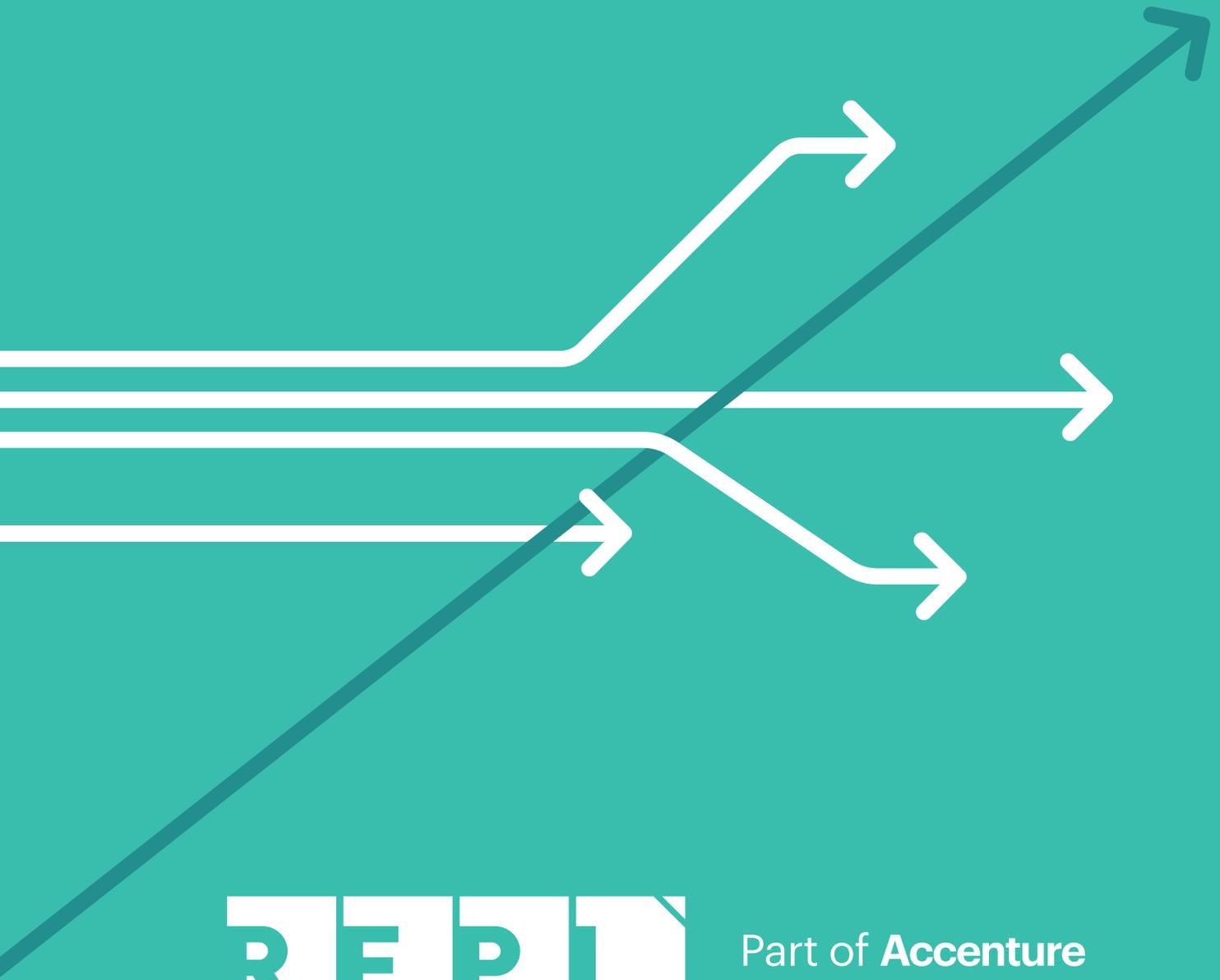
While extremely valuable during a time where social distancing between human workers should be maintained due to the pandemic, giving more time back to warehouse employees through these technologies also allows them to dedicate focus on more engaging and challenging tasks within the businesses, while meeting increased consumer demand.



## dealing with disruption.

While disruption now comes in many forms for warehouse operators, pursuing digitisation can provide the productivity, agility and robustness needed to deal with developing external pressures. The Covid-19 pandemic has undoubtedly pushed supply chains to make efficiency-driven changes, but it has also introduced a change in consumer shopping habits, with REPL's research all highlighting that 53% of retail decision-makers were anticipating an increase in online sales at the start of 2021, bringing with it concerns on the supply chain impact.

Rather than viewing this shift as a further challenge for business operations this year, warehouse operators must instead consider the opportunities, acting now to increase supply chain efficiency and compete more strongly in an ever-more complex market.



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