

# Predictive analytics in retail:

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The next stage of the retail analytics journey

## *Summary:*

Advances in technology mean that customers provide digital footprints and create valuable data which retailers can utilize to improve the shopping experience. [The next step in this journey is predictive analytics](#): taking proactive action based on real-time data and predictions about future trends.

This whitepaper presents current uses of predictive analytics in the retail industry, the potential benefits of utilizing predictive analytics, and the expected impact on the future of retail.



**C24** LTD  
A Six Degrees Group Company



# Introduction

**M**any retailers are already collecting and analysing data, but this information is often only used in a reactionary capacity, such as correcting previous mistakes or taking action based on historical information which could be months or even years old.

The next step is to take this analysis and use it in a ***predictive manner***: one that can be used to optimize and streamline every step of the retail supply chain. This involves not just reacting to previous problems, but tackling potential issues before they occur.



# Increasing Efficiency

## In-store:



A key performance indicator of many retail outlets is the ability to increase efficiency and reduce waste. A recent study undertaken by food retailer EAT found that analytics could play an important role in reducing wastage within stores. EAT partnered with cloud-based analytics provider, Blue Yonder, and their joint project resulted in a 14% reduction in food waste, creating massive savings.

Blue Yonder went beyond just looking at customer behaviour and purchase habits and instead developed a program to compare internal variables (such as sales, promotions, product types, store location and size, and more), along with external variables (such as weather patterns, holidays, week day, and important cultural or sporting events).

Blue Yonder found correlations and patterns within the data in order to make accurate predictions and forecasts to ensure that EAT were catering exactly to customer demand, whilst taking into account external influences such as weather.

## Supply chain:

Predictive analytics can also be used to reduce waste and optimize the **supply chain**. Real-time tracking of in-transit goods can be used to ensure that supply is reaching demand when it is necessary, and even provide accurate forecasts on the freshness of perishable goods on arrival.

This allows retailers to make predictions about when they will need their next round of stock ordering to prevent too much stock sitting in excess either on shelves or in storage. The use of analytics can ensure that the right products are in the right stores at the right time.



# Pricing Markdown Optimisation

Predictive analytics can play an important role in markdown optimization: deciding when to cut prices on certain products in store.

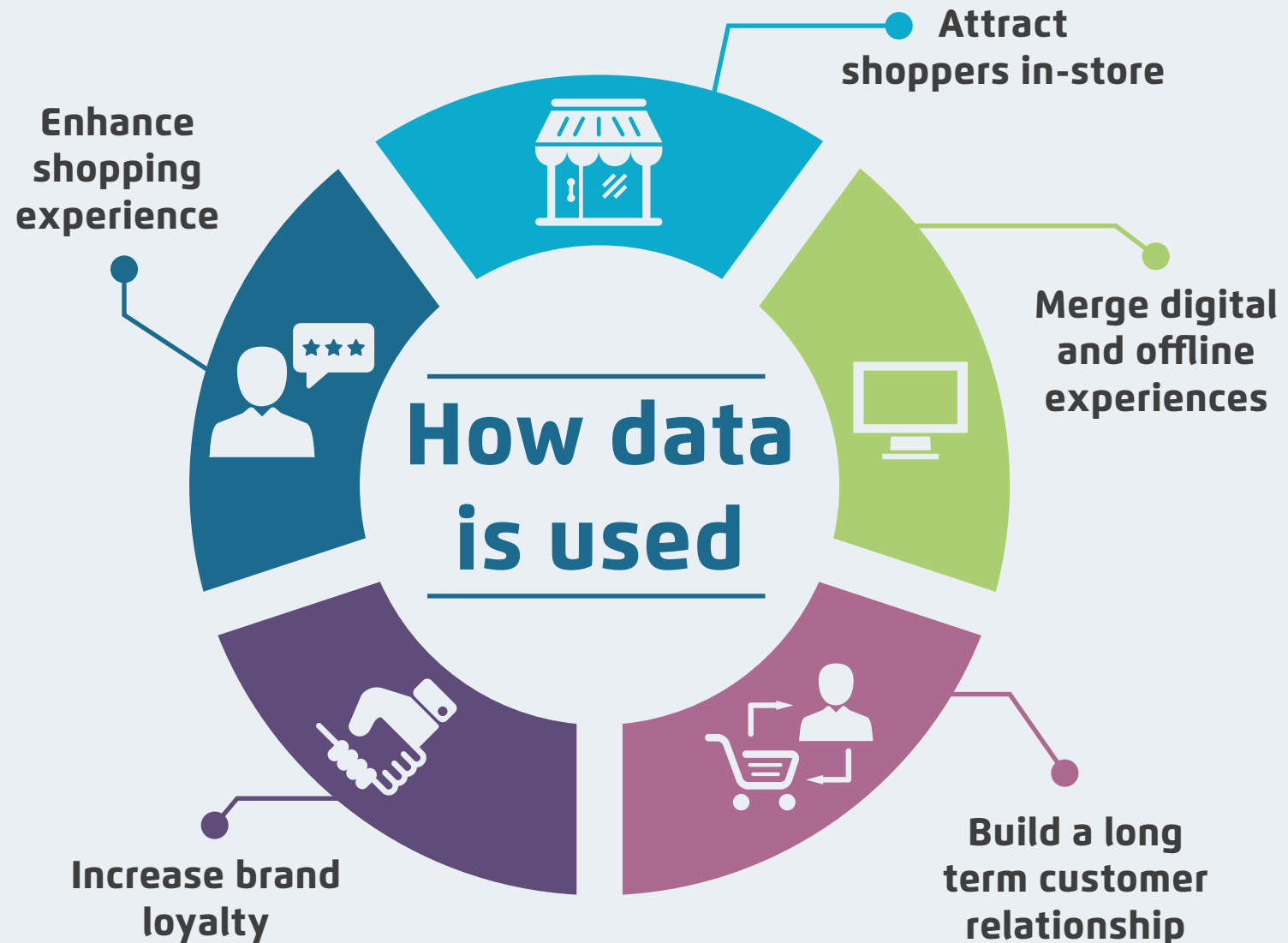


Previously, price markdowns have mostly been based on the store manager's discretion or even instinct. The American retailer, Stage, instead placed store managers directly against analytics software in order to determine the effectiveness of one party over the other in determining price markdowns.

The results were surprisingly conclusive. Rather than relying on instinct, predictive analytics were able to utilize past customer purchase patterns in order to accurately predict when the optimal time would be to introduce a sale or price markdown in order to best engage with customers. Steve Hunter, the CIO of Stage who oversaw the test, commented that "90% of the time, analytics won".

# Enhancing Customer Experience

All of these improvements made possible by data analytics build to one greater whole: **improving the customer experience**. If a customer finds that stock to their tastes is available in a store, and receives recommendations that are made specific to their sense of style, then it all adds up to providing a heightened in-store experience. Improving in-store experiences has been identified as an essential way to ensure the future of high-street retail against the growing online trend in shopping.



# Improving the Supply Chain

There are many ways that predictive analytics tools can be applied to improve the end to end operations of a retail organisation.



# 1

The shop floor is just one part of the retail system. Retail success is reliant upon an efficient supply chain and the more efficient distribution of stock and materials is made possible through predictive analytics.

# 2

By making analytics-empowered predictions based on supply and demand, manufacturers can order the correct amount of raw materials to optimise production lines.

# 3

Real time tracking and monitoring of products, particularly perishables, can be used to cut losses on spoiled or damaged goods by identifying particular trouble spots when goods are in transit.

# 4

Identify stages where the supply chain slows down or is impacted, making predictive suggestions that could target these trouble spots, leading to increased efficiency.

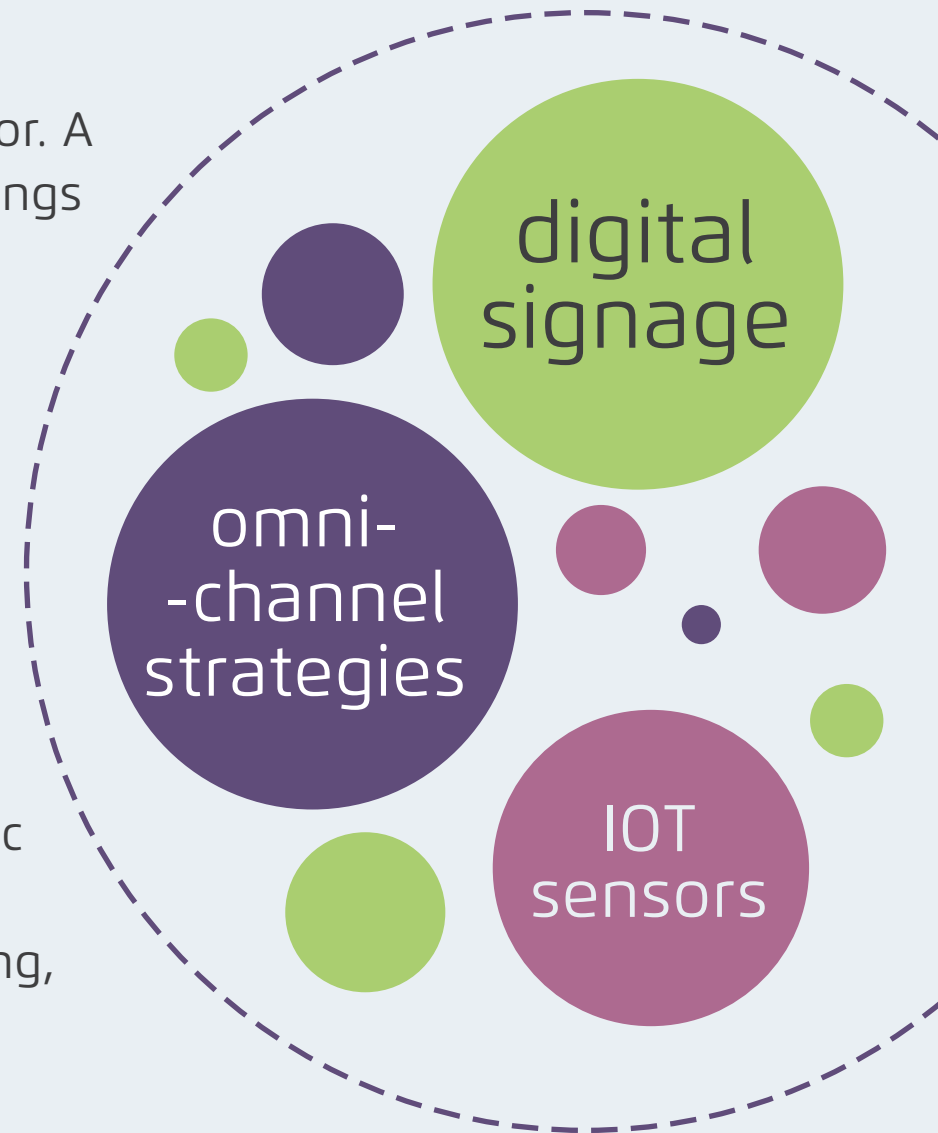


# Internet of Things in Retail

Future tech developments are likely to increase the opportunity for retail analytics within the retail sector. A major development is the increase in Internet of Things (IOT) devices across retail outlets.

On the shop floor, digital signage can be used to push content into the store based on location, trends and current events. Many retailers are also developing “omni-channel” strategies, which integrate offline, online, and mobile shopping experiences.

IOT sensors can even be used to track in-store traffic patterns or to monitor which displays are looked at, allowing for highly targeted positioning of advertising, produce, and valuable insights needed for changing store layouts, to ultimately maximise sales.





# Conclusion

**T**he potential opportunities for predictive analysis in retail are huge. It can allow retailers to go beyond just reacting to historic internal data and instead utilize an extremely broad range of variables to develop responsive marketing and retail strategies. These variables can range from internal, customer-based and external data points, which predictive analytics software can amalgamate in order to tailor each store experience directly towards individual customers.

Almost every step of the retail supply chain, from manufacturing to the shop floor, can be optimized and made more efficient by the integration of predictive analytics, leading to obvious improvements in a retailer's profit margins.

Retailers that are embracing analytics are gaining in-depth insights into their customers and the retail environment as a whole, data which would have previously been impossible to gain without current technology. These insights are being used to create a new form of retail: one that is **efficient, smart, and conducive** towards encouraging brand loyalty and better customer experience.





# Find out more



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