
Top 3 Uses of Predictive Analytics in Merchandising Decisions

Retailers need answers to the question 'What is likely to happen next?' if they are to manage smart, customer-centric merchandising decisions.



A shopper in your store does not particularly want to see shelves loaded with a dozen brands of peanut butter or an overkill of granola bars. What he needs instead are smart, lean assortments, the brands he is looking for and the colours and styles that work for him.

The critical question here is how can a retailer know what will work and what will not?

Referred to as the scientific equivalent of the proverbial crystal ball, predictive analytics is the way forward for retailers trying to shift focus from a rear-view mirror approach to a radically different, forward-looking approach – in sales and merchandising.

Every-time a customer browses your website, makes a call to your contact-center, downloads an app, searches for one of your stores, uses a loyalty card, redeems an offer or orders a product via his smartphone – he leaves behind a wealth of personal information about himself with you.

These should form the basis for in-depth data mining, analytics, demand planning and forecasts – the foundation for predictive analytics.

It helps you get answers to questions such as:

- What will be the hot sellers next season?
- What SKUs will need replenishment mid-way through the season?
- Will shades of fuschia and lime still be popular?
- Are fruit extracts just a passing fad or should you put your money on it?

Given its tremendous potential, you will be surprised at the so few numbers of retailers that use predictive analytics to their advantage.

Here are the top 3 ways in which predictive techniques are adding value to retail merchandising models:

'You may also like our new pepper salami': Recommendation Engines that Personalize the Experience

Product recommendations and decision engines are an area of predictive analytics that has emerged as a winner in the past few years – particularly among online retailers. Amazon.com and Netflix were the pioneers of recommendation engines based on predictive models. They changed the customer experience with “you might also want” or “next best offer” prompts for each product bought or page visited.

Having sold a product to a customer at a low price and shipped it to them at an even lower cost, Amazon suggests that they buy another product – guaranteed to match their taste and selected just for them. Shoppers simply love it and express amazement at the recommendations – which they claim are a perfect fit with their tastes. At the backend, is a complex algorithm which makes the recommendations based on search history and previous purchase of each customer.

Accurate and data-backed product recommendations have also helped traditional, brick-and-mortar retailers to improve sales and bottom-line. An example of this is Schwan's Home Service, the largest direct-to-home food delivery provider in the US. With a moving team of over 6,000 personnel, Schwan's delivers frozen food products to over three million homes across the US.



In recent years, it was seeing a sharp decline in sales with large scale customer churn and inventory pile-ups. Schwan's management recognized the need to dig deep into customer data, gain insights and to personalize the experience at the point of contact. An advanced predictive analytics backend helped Schwan's delivery teams to make recommendations to customers based on their profile, purchase history and food interests. They closely tracked customer spending in specific categories such as breakfast or cold cuts and offered timely offers and recommendations to ensure the spending did not dip. With more targeted cross-selling and up-selling, sales volumes and customer satisfaction levels at Schwan picked up.

Knowing that pastel palettes will be hot next spring: The right buying decisions

Traditional retailers waited to close the season's sales cycle to get inputs on how different product types, styles and colours worked with customers. Considering that the next season's buying decisions are based on these insights, it's a long wait for any retailer waiting to hear the verdict from the market. These delays can have a far-reaching effect on retail bottom lines, particularly for short life-cycle product retailers in the fashion, consumer-electronics, books and music industries.

Predictive models and forecasts based on early sales data are the smart and scientific way out of this challenge. It can form a scientific basis for decisions on production, buying and assortment planning for the next season – and give an indication on the styles and colours that you should be looking to buy.

Spanish fashion retailer Zara systematically examines early sales data to predict future demand for their clothes lines. Their buyers analyze early sales trends of every product at regular intervals in the sales cycle and follow this through by immediately reordering items that appear to be fast moving. They also take early buying decisions and base their assortments for the next season on predictions that emerge from this one.

The strategy has worked with Zara's gross-margin return on inventory investments reaching higher than the industry average. Customers love the retailer's distinctive lines, colors and styles – and sales and market-share has been on the rise.



Left, Right or Centre Aisle: Spacing and Layout Decisions based on Predictive Models

Retail analytics and emerging retail technologists are using a wealth of real-time, streaming data from multiple touch-points to gain insights into an altogether new area of the retail store – store layouts and shopper navigation. RFID tags on shopping carts (to track shopper movement inside stores), analysis of POS data and techniques such as Market Basket Analysis are helping retailers to piece together the puzzle on how shoppers go about their shopping path and why they buy what they do. Many retail researchers are creating agent-based models of supermarkets with virtual shoppers and simulations. For instance, simulated studies show that the average time a customer spends on buying milk is five seconds, versus 90 seconds for selecting a bottle of wine.

Leading British supermarket chain, Sainsbury's, developed a predictive computer model to improve the layout of its supermarket at South Ruislip, West London. The simulated model helped Sainsbury's to track customer densities throughout the store and wait times at checkout counters. It enabled the retailer to test out different layouts – such as relocating the frozen foods department or moving the dairy products to the further end of the store – and judge the impact of these layout changes on store congestion without actually affecting store operations.

Such simulated models also help to separate high-traffic areas such as the meat and deli sections and encourage impulse buying as shoppers travel between these 'hot spots'. The Sainsbury's study also revealed interesting insights such as more



customers in the store meant a drop in wine sales as fewer customers wanted to make their way to the wine section located at a far corner, when the store was crowded.

Macy's used a virtual store model to improve its physical layout and its staffing in different departments based on predictions of expected store traffic and customer shopping paths.

Futuristic Predictive Models in the Retail Industry

Predictive analytics and simulated models are being used by retailers in many other intriguing ways to help align offerings more closely to target markets. For instance, Kraft has showcased a new in-store kiosk that predicts the products and recipes a shopper is likely to buy based on the shopper's perceived age and gender based on face scanning and video analytics. The kiosk also uses smartphone-enabled barcode scanners to help customers plan shopping lists and saves recipe ideas for future reference.

Predictive models are also helping retailers to match their promotion campaigns and offers to the right audience. Sainsbury's performs advanced analytics to reams of customer data to predict in real-time the exact offers that will be attractive and are likely to be redeemed by customers at the retailer's checkout. Their scheme 'Coupon at Till' offers loyalty card members coupons on their favourite products and most purchased items as they check out their purchases at the store.



Effective predictive analytics is increasingly an essential tool for retailers to answer the question 'What is likely to happen next?' as compared to traditional models that dwelt on 'what happened last season?'

Are you one of those retailers making merchandising decisions based on guesstimates? If yes, perhaps you should rely more on predictive analytics to chart your future course of action.

ARC Merchandising Analytics from Manthan

Manthan helps you take uncertainty out of daily decisions with analytics-driven recommendations for every critical business process - assortment and price tuning, inventory management, category assessment, store performance and more. ARC Merchandise Analytics ensures that you do it right - from product placement and pricing, to timing and quantities; all offered to your customers through the right channel. Every decision can now be based on an informed analysis of product, category and store performance; leaving you with a lot of possibilities, but never a doubt.



About Manthan

Manthan is the Chief Analytics Officer for consumer industries worldwide. Manthan's portfolio of analytics-enabled business applications, advanced analytics platforms and solutions are architected to help users across industries walk the complete data-to-result path - analyze, take guided decisions and execute these decisions real-time.

Sophisticated, yet intuitive analytical capability coupled with the power of big data, mobility and cloud computing, brings users business-ready applications that provide on-demand access and real-time execution - the only path to profit in a contemporary, on-demand and connected economy. Manthan is one of the most awarded analytics innovators among analysts and customers alike - with over 170 customers across 21 countries. To see how your business can gain from analytics, visit www.manthan.com.