The anatomy of retail success

Powered by analytics

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Retail giants are harnessing the power of analytics to optimize their operations, understand customers better and maximize margins. Analytics helps retailers improve shopping experience, enhance customer support, measure real time store performance, and prevent loss, among other positive outcomes. There are multiple areas in the lifecycle of a retail company where analytics makes a significant contribution to take retail business to new heights.

Market research

Analytics helps retailers gather and interpret information about the target audience and the target market. It analyzes market needs, market size, and potential competitors, and provides an in-depth view of customers, markets, and other players in the industry. Research results explore audience behavior, personality traits, likes, dislikes etc. Analytics helps with competitive profiling by assessing the size of the market share held by competitors, their strengths, and weaknesses. This study helps in making critical strategic business decisions.

Analytics answers questions like - Is the location ideal for a store? What are the characteristics of the population? Who are the potential customer groups? Who are the leading competitors?

Supply chain management

Retailers are dependent on IT-enabled systems for real-time overview of the supply chain. IoT connects entities, and collects and shares enormous data like inventory status, shipment routes, location and status of stock via radio frequency tags. Advanced analytics processes this data to enable predictions on multiple aspects and enables retailers to make data-driven decisions that reduce transportation costs, improve inventory productivity, streamline supply chain processes, and improve supplier performance and negotiations.

Analytics answers questions like - Who is the best vendor for similar products? What is the likelihood of late supply of an order? What will be the best mode of transport for supply?

Merchandising management

Analytics assists merchants to maintain inventory stocks, have a comprehensive view of existing stocks, and add fresh collections to increase sales and gross margins. With merchandising analytics, retailers validate new product performance, optimize promotions, and improve conversion

rate. They get a granular view of demand determinants by performing forecasting and simulation algorithms for predicting demand across multiple dimensions - product, category, store, and cluster.

Analytics answers questions like - Do we have stock to satisfy current demand? How is price realization affecting products' sale? Has the new promotion strategy been effective in terms of sales growth?

Store operations

Through store analytics, managers are able to schedule and place store associates at high traffic areas at the right time. It provides powerful insights, such as the effect of product placements on shopper movement and investigates the direction shoppers traverse. Predictive analysis warrants right products on the right shelves, and optimum exposure and engagement for the products. Store analytics provides real-time intelligence on traffic cycles, store performance, personnel placement, sales promotions, and stock levels across the day, week, month, or year. Store operators make timely business decisions and achieve highest levels of operational efficiency, customer satisfaction, sales and profit margins by leveraging these insights.

Analytics answers questions like - Are the products available at the right time at the right place? What is the fitting room conversion rate? What would be the expected footfall on a given weekend in a store?

Customer insight

Understanding the customer's behavior and needs is pivotal in today's competitive retail realm. Retailers equipped to screen customers and capture relevant insights can drive successful business outcomes by engaging more customers and improving their experience. Customer analytics enables customer profiling on common characteristics like age, race, income, gender, household structure and more. It makes possible a single view of the customer across multiple channels and predicts customer behavior, buying patterns, tastes and preferences to realize next best action, retention drivers and opportunities. By harnessing these insights, retailers make effective decisions and build targeted promotions, customize store collections specific to a targeted business, and design personalized shopping experience for customers at all stages of the buying cycle.

Analytics answers questions like – How many visitors left the store without making a purchase? Which segment of customer to target for promotion? What is a customer's purchasing trend?

Promotions & offers

Analytics equips retailers with actionable insights for developing marketing strategies. Discriminant analysis classifies advertising channels based on their efficiency with different types of products. It estimates the best fit for advertising by looking at how sales revenue varies with significant changes in expenditures on advertising, advertisement channels and timings. Promotion analytics helps in preparing targeted list of consumers for marketing campaigns, simplifies tracking of campaign and channel effectiveness, and brings accountability and agility to campaigns. It increases customer engagement with personalized offerings and recommendations through sms, email, and push notifications.

Analytics answers questions like - How much advertisement is required to promote an offer? What is the best channel for advertisement? What is the performance of marketing campaigns?

Loss prevention

One of the biggest challenges for retailers is the threat posed by frauds. Retail crime leads to immense pressures and shrinking margins. Loss prevention analytics identifies fraudulent transactions; evaluates various sources of shrinkage caused by theft, vendor and supplier fraud; and processes loopholes, accounting errors, pricing lag and inefficient inventory management. Advanced analytics plays a major role in blocking leakages in the business processes and quickly takes corrective actions to stop fraudulent activities. This minimizes the time spent on investigations and maximizes operational return on investment.

Analytics answers questions like – What was the loss due to fraud in a given period of time? What is the root cause of shrinkage? Who is the perpetrator of retail fraud?

Analytics for retail

Analytics solutions for retail can have multiple phases and each phase can possess different functionalities and capabilities:

Data management

Data management activity starts with data collection that includes gathering and measuring data from diverse sources like transaction systems, data warehouse, unstructured sources, data marts, flat files, social media etc. Data

Preparation activity includes collecting, cleaning, transforming data into a form suitable for further processing and finally aggregating data into a data table for further analysis. This also includes missing values treatment and outlier treatment. Data management takes up 50% to 80% of the analytics effort. Poor quality data yields incorrect and unreliable data analytics results.

Descriptive analytics

Descriptive analytics concentrates on "what has happened", analyses the historical data through multiple lenses to gain insights. The objective of descriptive analytics is to understand the data and find out "what is hidden in the core of the data". It helps in finding the reasons behind previous success or failure. Descriptive analytics estimates the performance at an aggregate level and explores various aspects.

Diagnostic analytics

Diagnostic study, usually done before predictive modeling, concentrates on root cause analysis and answers questions like "why did it happen". This is a form of analytics that uses techniques such as slicing-dicing, drill-up, and drill-down to understand contexts such as purchase, trends, preference, behavior, root cause, correlation etc.

Retail analytics empowers retailers to take informed business decisions.

Predictive analytics

In predictive analytics, a series of predictive models are developed and validated. It helps predict the likelihood of a future outcome by using various machine learning and statistical models like classification models, linear regression, tree-based modeling, and time series that run on different statistical algorithms. These algorithms analyze past data patterns, identify significant contributors and, based on complex mathematical calculations, tells, "what could happen in the future". Few of the widely developed predictive models are churn prediction, propensity model, customer lifetime value, behavioral clustering, and fraud and sentiment analysis.

Prescriptive analytics

Prescriptive analytics is an advanced analytics technique that throws light on the possible results of actions that are likely to maximize key business outcomes. It mainly uses simulation and optimization to answer questions like "what should a business do". Prescriptive analytics combines data, statistical models and several business rules, and explores numerous possible actions and recommends actions based on the descriptive and predictive analysis results

Reporting & visualization

A wide array of reports, charts, maps, dashboards and insights based on the various analytics results help businesses sharpen decisions and enhance productivity and profitability.

Retail analytics empowers retailers with relevant customer and competitive insights, leading to informed business decisions. A retail business, bolstered by analytics, stays ahead of competition with enhanced customer experience and business performance.

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