

FUTURE OF DATA IN RETAIL

THE NEW OPTIMIZED CUSTOMER EXPERIENCE

Jane is in a trendy clothing store, carefully examining several tops. As she compares and contrasts, a small sensor monitors the clothing taken from each hanger Jane handles. Debating what color would go best with the outfit she has in mind, she selects a few garments to try and makes her way to the fitting room. Connected to the store's wireless network, Jane snaps a few pictures of her chosen top and sends an email to some friends for advice. Choice made, she returns unneeded clothes to the rack and proceeds to the sales counter.

At the counter, Jane provides her loyalty card, and is graciously thanked for her past business. The store associate suggests Jane take a look the new arrivals from one of her favorite designers. "They're in the back, near the fitting rooms," the associate offers.

Jane is amazed with the new arrivals, and finds something that she would like to add to her basket. She uses her smart phone to complete the purchase and calls a friend on the way out to tell her the good news. She shares her purchase, the new items, and her great experience. "It's like they knew what I wanted before I asked for it!" Jane exclaimed. She will certainly be back to this store in the future, and expects another positive experience.

CHALLENGES FACING RETAILERS TODAY

This hypothetical situation is clearly within grasp of today's retailers, but many organizations fail to connect the dots in order to create such unique customer experiences. Retailers have optimized basket analysis to determine upsell and cross-sell strategies, but they often don't connect them in ways that make the suggestion at the right time. Connected shelves and smart bins are an important form of data-in-motion that is often lost in transit if not collected to determine goods movement. Because retailers typically operate disjointed systems that create silos of information, they fail to effectively deliver a single unified consumer experience.

Data is the single most important driver of retail transformation, impacting product selection, promotion targeting—ultimately, the entire consumer experience. Today, the volume of this data is growing exponentially as consumers increasingly share opinions and interact with an array of smart phones, connected devices, sensors and beacons emitting signals during their customer journey.

POSITIVELY IMPACTING THE RETAIL EXPERIENCE REQUIRE DATA

Whether at the store or at corporate headquarters, there are a number of ways to leverage technology in order to enable a successful consumer experience:

- **Smart hangers, bins, and shelves**
Tracking demand at the source, these methods sense items taken from the shelf, bin, or hanger. Collecting this data continually updates item movement, either to the register or loss-prevention algorithms, detecting theft or shrinkage.
- **Traffic counters and beacons**
Traditionally used for inbound store traffic, this technology has now been greatly improved, detecting bidirectional traffic, determining age and even facial recognition. Beacons mounted throughout the store sense and record hot zones, cold zones, and dead zones that can impact traffic and sales. Beacons are now even placed inside mannequins, to communicate with consumers through mobile applications.
- **Routers**
Technology has matured to sense visitor browsing behavior, whether on the store's digital website, or on a competitive website.

This technology also provides phone location as the consumer moves through the store, mitigating the need to invest in beacons.

- **Basket analysis**
Traditionally Basket Analysis provides focus on popular products that need faster replenishment cycles, or on slow-moving items that trigger promotional offers. However, when traditional analysis is correlated with social media and sentiment analysis, retailers can determine consumer emotion, brand awareness, and sentiment supporting a transaction. Actionable intelligence gathered from basket analysis becomes a critical component in increasing customer personalization and satisfaction.
- **Clickstream data**
Clickstream data is critical for driving recommendations for suitable cross-sells and upsells as the consumer nears checkout. When these recommendations are updated with product availability, relevance to existing basket, and propensity to buy, the end result is a more profitable basket that improves the online shopping experience.
- **A single view of the consumer**
A unified customer view is at the heart of the retailer's ability to promote the right items, recommend the right products at the right, keep up with evolving preferences as the customer relationship matures and accurately predict future sales.

THE FUTURE OF DATA FOR RETAIL

Today's overwhelming volume of data is easily managed when harnessed properly. Retail organizations of all sizes and segments can benefit from an open enterprise data platform that supports data-in-motion and data-at-rest. From managing inbound sensor data to predicting online behavior by analyzing clickstreams, data that is constantly in motion must be managed and analyzed. Once collected, data-at-rest can then be mined to determine product trends, consumer demand, and future promotions.

The data propelled retailer has the advantage—the ability to drive more revenue, better margins, and greater consumer loyalty. Our customer Jane described above is not a hypothetical shopper. Her demands exist today and her loyalty is always at risk. Her shopping dollars will be spent where her experience is best, whether online, in-store, or a hybrid of both. By truly embracing data generated by all those experiences, retailers can better manage relationships with customers like Jane, and maximize her customer lifetime value.

About Hortonworks

Hortonworks is a leading innovator at creating, distributing and supporting enterprise-ready open data platforms. Our mission is to manage the world's data. We have a single-minded focus on driving innovation in open source communities such as Apache Hadoop, NiFi, and Spark. Our open Connected Data Platforms power Modern Data Applications that deliver actionable intelligence from all data: data-in-motion and data-at-rest. Along with our 1600+ partners, we provide the expertise, training and services that allows our customers to unlock the transformational value of data across any line of business. We are Powering the Future of Data™.

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