Combining In-Store IoT Data, Online Shopping Data Builds a True Omnichannel Shopping Experience

Five ways to use an IoT data platform that delivers automated insights to enhance shopper engagement and optimize ROI

Retailers are swimming in data from every possible source and touchpoint, but such a wealth of information brings its own set of challenges, most critically the ability to integrate data from the digital experience to what's collected in the physical store. To achieve this is to truly become omnichannel — a retailer that sees a seamless view of the shopper journey.

A survey by Gartner Inc. and RIS News asked retailers what their biggest obstacles will be over the next year and a half when it comes to digital transformation. More than half said "optimizing digital commerce growth channels," 41% said "consolidating channel silos" such as e-commerce, retail stores and mobile, and 38% said "retiring legacy systems."

Adding to the data challenge for retailers is the impending growth of the Internet of Things (IoT) — with retail applications including shelves with sensors and Artificial Intelligence — that will generate even more data but can also efficiently automate merchandising and shopper insights.

While exciting, advancements like Amazon Go's cashierless shopping are clearly pointing to a connected retail future, but not everyone in retail is playing at the same level. Big names like Target, Kroger and Home Depot might have a head start today, but connected retail is well on the way to going mainstream. Forrester predicts companies will spend just shy of $435 billion to design, construct and implement IoT solutions by 2023 .

Further, Bloomberg reported in September that Amazon expects to open 3,000 Amazon Go stores by 2021, and Zebra Technologies found that 70% of the retailers it analyzed are moving to adopt IoT now, with nearly 60% expecting that automation will be driving its retail business by 2021 .

The first thing all retailers can do, regardless of their level of IoT implementation, is to set up an IoT data platform that can ingest data in scale from various sources, and gathers and centralizes in-store, real-time data as well as online shopper behavior data. By combining in-store behavior data from existing technologies already in place (cameras, Wi-Fi, beacons, POS data) and merging it with online behavior data, business operations data, weather data and other inputs into one cloud-based platform, retailers can generate automated insights that inform store associates, personalize promotions for shoppers, improve merchandising and pave a smoother transition toward a full embrace of connected retail.

To go further into what retailers can do today, here are five ways to leverage online and offline data through an IoT data platform to improve sales and engagement:

1. Align in-store inventory based on online data.

One of the more compelling uses of an IoT platform is how retailers can manage stock based on online behavior. For example, data on items purchased online and scheduled for store pick-up can be fed to stores to manage inventory. At the same time, data can identify adjacent purchases a store should have in stock based on levels of traffic driven to stores from in-store pickup.

Another example can be found in the practice of a brand rolling out geo-fenced digital promotions to drive shoppers to the store. In a recent case study from Arm, a leading IoT solutions provider for retail, the company worked with Japan's no. 1 beer Asahi to ensure corner stores were well stocked with Asahi beer on hot days, when sales tend to spike. The goal was to have corner stores gain a 10% increase in sales for the period. Using Arm's IoT platform, real-time data tracked where a store was in sales, enabling Asahi to trigger a digital promotion to drive traffic to the store to reach that 10% goal. At the same time, if a store was near its goal, Asahi could turn off the promotion so shoppers wouldn't show up to find the store was out of stock.

2. Create behavior-based audience segments.

By integrating a retailer's first-party customer data and third-party sources, retailers can create segments of shoppers based on digital behaviors such as purchase intent, demographic information and online purchase history. Stores can then integrate in-store activity data linked to that online customer profile and target specific messaging to customers in each segment.

Auto manufacturer and retailer Subaru leveraged Arm's IoT platform to integrate data from its loyalty program, engagement at dealerships, maintenance support history, web ads, social channels and other tools. The platform engineered segments based on shopper knowledge and affinity for Subaru, personalizing offers and messaging aligned to where they fell on the sales spectrum. The targeted web ads saw a 350% increase in click-through rates. And buyer insights were delivered to the affiliate dealership staff in advance of scheduled test-drives, leading to a 15% increase in revenue from a single campaign.

3. Get personal in-aisle.

Retailers using an IoT platform that is being fed a shopper's social profile can leverage that data to send personalized messaging in-store at the point of purchase. For example, when a shopper connected to a retailer's mobile app is walking down the shampoo aisle, the platform can take in her social profile revealing that she's part of a non-GMO community. An IoT-powered shelf display in the aisle can then be sent a message that directly speaks to that shopper, highlighting where the non-GMO shampoos are shelved.

4. Deliver a delightful and consistent omnichannel shopper experience.

Merchandising is the core of retail. A McKinsey survey of more than 30 retailers discovered that merchants spend two-thirds of their time harnessing data, managing and organizing it, and sitting in meetings to syndicate it throughout the organization. Only one third of their time was invested in the areas of strategy, analytics and insights. Freeing merchants from data management tasks and providing them with omnichannel shopper data will enable them to focus on products, categories and improving the omnichannel customer experience.

5. Drive foot traffic.

Many retailers, especially in apparel and technology, know their shoppers tend to browse online before going to the store. IoT can be leveraged to convert more of those highly sought-after physical shopping trips. Global retailer Muji, for example, leveraged Arm's IoT platform to increase sales in stores by 46% over a two-year period. The Arm platform integrated in-store purchase data and online browsing data to generate comprehensive customer profiles. The platform could then trigger personalized offers to customers, based on their interests, that drove them to stores for redemption. All told, the program saw a 100% increase in coupon fulfillment.

Conclusion

Muji's stores, it should be noted, are not lined with the latest in IoT technology, but their success goes a long way to show what's possible using technology already at hand. In fact, the majority of retailers using IoT platforms today aren't fully equipped with seemingly future-state technology like shelf sensors and computer vision cameras that can enable autonomous shopping experiences and beyond. It accelerates the time to business insights by helping organizations easily connect trusted IoT devices on global networks, invisibly administer them, and extract data from them to drive competitive advantage.

For more information, visit www.arm.com/pelion.

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