5 BENEFITS OF CLOUD RETAILING YOU MAY HAVE OVERLOOKED

LAY THE GROUNDWORK NOW FOR KEY RETAIL CAPABILITIES
The cloud quickly moved into the mainstream of IT due to its ability to reduce costs, increase security and simplify business processes. But today’s cloud offers far more. To meet consumer demand for seamless, personalized and localized services, retailers must establish an underlying technical infrastructure that is far more attainable in the cloud.

The cloud can bring new tools and technologies within reach, including machine learning, inventory and social analytics, and wearable technology. Cloud also more easily facilitates the use of the rapidly evolving Internet of Things. Gartner projects that the number of connected devices globally could exceed 6.4 billion by the end of 2016, growing to nearly 21 billion by 2020. Forward-thinking retailers will take advantage of this opportunity in the near term.

Retail is in the midst of a fundamental transformation. Yesterday was all about pushing products to a mass market. Tomorrow is about real-time hyper-personalization and localization, based on visibility to the individual shopper. Today is the time retailers need to lay the groundwork to attain that vision, before it all becomes the new norm.

The cloud represents the only practical way to deliver much of that vision. Following are five building blocks retailers will need to implement in the cloud to transform their own organizations.
Consumer shopping behavior is in many ways still a mystery for many retailers. While some trends are easy to spot — such as buying umbrellas when it rains or bikinis before beach season — others are non-intuitive and even surprising: Perhaps a product surges when a sports team makes the playoffs or when political poll numbers trend in a certain direction.

Mining data to discover correlations between products and other characteristics, events or other factors is painstaking trial-and-error work — for humans. For computers, it’s easy — as long as that computer has unfettered access to the right data and is making use of the right algorithms.

That’s where the cloud comes in. The hardware and software required to identify such correlations is costly to acquire, operate and maintain. When they are performed in the cloud, however:

- Retailer data can easily be combined with any other data stream to discover correlations; for example, weather.gov, polling numbers or sports scores;
- Calculations are performed only when needed, so costly IT investments aren’t sitting idle; and
- Because databases and analytics solutions are set up to share data most easily with other cloud solutions, the IT team can avoid the headaches of setting up security authentication, VPNs and the like needed to bring third-party data in house.

The cloud doesn’t just make external data easier to access: A retailer’s internal data also is more easily available in real time as needed when housed in the cloud, such as when a designer with company stores decided to set up a trunk show — and needed access to POS and CRM data.

Retailers should be careful about selecting cloud partners to enable machine learning, forecasting, analytics and other strategic applications. IT service providers can assist in identifying cloud providers, ensure seamless integration with on-premises systems, and set up and automate the machine learning and analytics needed to discover and predict customer buying patterns, both on the mass level and according to individual customers.

Machine learning excels in solving complex, data-rich business problems where traditional approaches, such as human judgment and software engineering, increasingly fail.

GARTNER
WHAT WE CAN DO WITH MACHINE LEARNING, JUNE 2016
Placing critical business functions in the cloud can be an effective strategy, but it also comes with implications for security. Used appropriately, the cloud can help retailers mitigate and simplify PCI, PII and other payment and privacy issues. Retailers can take advantage of the services and expertise of third parties that specialize in helping retailers take systems out of scope and apply compliance security measures.

But security and privacy are more than just technology. Process is key as well, and that is where many retailers falter. It is common for retailers to rally in time for quarterly PCI audits, for example, but then let those processes fall away in between. To gain the full benefit and protection of PCI DSS and privacy compliance, retailers need to not only choose highly secure cloud partners, but ensure they are maintaining their own internal processes that protect sensitive data. A trusted advisor with cloud and compliance expertise can be the most effective strategy to ensure retailers are maximizing the cloud opportunity while ensuring protection for themselves and their customers.
Influencers are a key part of many brands' social media activity. Discovering personalities with a significant following among a retailer’s target audience and forging relationships with them can be a highly effective way to boost sales. Peers often can be more effective than brand outreach in driving consumers along the path to purchase. But identifying those influencers, then nurturing and monetizing those relationships, has been a largely human-driven, one-off process that does not scale.

Peers can be more effective than brand outreach in driving consumers along the path to purchase.

### “MOST VALUABLE” CUSTOMERS IDENTIFICATION METHODS

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Source: Boston Retail Partners, Enhancing Customer Engagement Through Social Media, 2016
Leveraging the cloud enables retailers to automate and scale social media management, helping to maximize the use of influencers and optimize inventory to drive sales. Strategies include:

- **Collecting and analyzing** relevant videos, reviews, shares and images from social touch points to identify influencers.

- **Serving social media activity indicators** directly to merchandisers within their merchandising tools, alerting them to opportunities. For example, transferring goods to a Northeastern distribution center to support an anticipated sales increase after a Massachusetts–based influencer posts a positive comment.

- **Automatically identifying slow-moving inventory** and those social media influencers best suited to approach with an offer to try the item.

- **Measuring the impact** of social media influencer activities.

Many retailers already are actively involved with influencers. The cloud enables them to automate and scale those relationships because it removes the technical obstacles. These strategies require multiple databases and systems to work together; the closer these databases are, the easier it is to build the custom workflows needed. Cloud architecture removes the barriers that make this difficult and costly to achieve with on-premises systems.
The Internet of Things (IoT) is set to become part of a digital grid that could affect every facet of our daily lives in the future. For retailers, IoT can help deliver relevant and personalized communications with consumers who are in or near the store. By the end of 2016, more than 6 billion connected “things” will be in use worldwide, up 30% from 2015, and the total may reach 20.8 billion by 2020, reported Gartner in the 2015 report titled Predicts 2015: The Internet of Things.

Forward-thinking retailers are actively seeking ways to tap into IoT. For example, Amazon’s Dash IoT button — such as the Tide-branded button consumers can mount to a washing machine to automatically reorder the detergent from Amazon — is an early marker of the push toward using Internet of Things to automate the ordering process. Current versions of Amazon’s technology can be used to execute any number of actions, from serving as a remote control for Netflix, a check-in/check-out device for Airbnb guests, to ordering a pizza. The common denominator is the cloud, which effectively serves as the conduit to merge Internet-connected devices.

Retailers can leverage the same technology to create customer-facing automatic reorder buttons of their own.

But that’s not the only useful model. For years, retailers have based auto-replenishment orders on actual sales data, filling in the gaps with spot checks of inventory levels. But ensuring that data is clean and accurate has proved difficult, and that leads to order inaccuracy.

By equipping shelves with sensors and products with RFID tags, retailers can “see” an exact count of what is really on the shelf or hanging on a rounder, and automatically trigger a replenishment order with more accuracy and without the need for intervention.

IoT not only automates reorder processes, but generates rich data that can be leveraged to drive future product and service offerings. Amazon, for example, uses previous orders, product searches, wish lists, shopping cart contents, returns and other online shopping practices to create “anticipatory orders,” positioning inventory closer to where it forecasts demand by specific customers. IoT data will generate data-on-demand patterns that retailers can use in a similar way to anticipate replenishment needs and move shipments accordingly.

There’s a big potential for IoT to impact auto-replenishment — and product maker business models.

**GARTNER**
EDI TURNS API MEETS IOT TO ENABLE DMI – A GOF-SMACKING B2B IT MASH-UP, MARCH 2016
Many retailers see global expansion as the answer to stagnating growth opportunities at home. But setting up a business infrastructure in an unfamiliar setting can be daunting, with many new customs, processes and regulations to learn. The cloud can be a critical factor in enabling rapid expansion, but cloud partners must be selected with care. Cloud partners assisting with global growth should be able to:

- Provide day-to-day technical operation and maintenance of the system;
- Supply the needed business model (SaaS, on-demand, hosted);
- Offer facilities to house sensitive customer data in-country, when that is a requirement;
- Customize sites and systems for each international market;
- Exhibit the expertise and compliance knowledge of local privacy and security risks, and laws;
- Come to the table with experience working with similar retail businesses;
- Scale to accommodate surges during holidays and promotions;
- Institute a technology road map that supports the retailer’s strategic goals; and
- Be a trusted advisor with knowledge of both global cloud providers and the retail business.
It is difficult to understate the sea change that mobile represents to retailers. Mobile devices are intimately connected to their owners, who carry them everywhere and rely on them to help drive moment-to-moment decisions. For retailers, that intimacy is a gift: The mobile device represents an unprecedented opportunity to communicate one-to-one with shoppers.

When a shopper uses the retailer’s app or engages with the store’s beacons or WiFi, retailers can leverage that opportunity to understand more about that shopper and offer value, in the form of messages and offers that will resonate. That may include greeting the shopper at the point of store entry; using beacons to push SMS messages in-aisle related to the products in front of that shopper; or offering exclusive VIP experiences to loyal customers visiting the store.

Cloud makes those processes easier because the cloud marketplace has evolved. While cloud continues to deliver an outsourced, highly secure, expertly maintained infrastructure that enables users to attain computing power more affordably, cloud offerings have now entered a new era. Cloud 2.0 wraps services around that infrastructure, such as Microsoft’s Azure IoT hub or its Cortana analytics suite. This makes it easier than ever for users to obtain sophisticated IT services tuned to particular needs, such as machine learning, IoT and location services.

Highly targeted push messages drive a 293% increase in consumer response, on average, compared to broadcast messages.

FORRESTER
PUSH NOTIFICATIONS CHANGE THE WAY CONSUMERS ENGAGE WITH APPS, JANUARY 2015

70% of shoppers would be willing to opt in to interactions with beacons if retailers offered the right incentives.

Source: Walker Sands, Reinventing Retail: Four Predictions For 2016 And Beyond, 2016
5. **EMBRACE WEARABLES TO HELP CUSTOMIZE THE SHOPPER EXPERIENCE**

Wearable technology takes the intimacy of phones to the next level, because they literally are attached to the consumer as he or she goes about the day. Wearable doesn’t just mean a watch. The same capabilities also can be incorporated directly into clothing or a personal item, such as glasses or the RFID devices already incorporated into high-end handbags for security and anti-counterfeit.

Retailers can take advantage of this extreme proximity in several ways. Forrester identifies this approach in terms of “micro moments”:

- **Inviting shoppers to scan items** via their wearable device to view product information, reviews or social feedback.

- **Suggesting products based on information gleaned from wearable fitness devices**, such as: A user has taken 10,000 steps and receives a coupon for a granola bar as a reward.

- **Connecting the dots between pre–store and in–store behavior**, to better understand customer interests and preferences.

- **Making transactions painless**, allowing customers to simply enter the store, take what they need and leave, automatically charging the purchase.

- **Streamlining in–store communications** and task management among managers and associates.

Today, some of these applications appear to cross the line from valuable to invasive; retailers hesitate to make use of them even though they are all now possible. But that will change. Consumers already have demonstrated that they will trade information for value, and analysts are in wide agreement that the line between welcome and unsettling is already shifting and will continue to do so.

“Cellular connectivity on a wearable can transmit and receive data, including time, location, and other data about a user and his or her surroundings,” explained IDC in its *Worldwide Quarterly Wearable Device Tracker*, June 2016. “Imagine what that means when tracking steps, analyzing patient activity, or shopping; the information can be shared immediately with a second or third party, and the user can, in turn, receive context appropriate information back.”
Worldwide shipments of wearable devices are expected to reach 110 million by the end of 2016 with 38.2% growth over the previous year.

IDC
WORLDWIDE QUARTERLY WEARABLE DEVICE TRACKER, MARCH 2016
Retail is moving inexorably toward delivering brand experiences that are personalized, localized and highly sensitive to the interests and needs of individual consumers. The technologies that will facilitate this vision include Internet of Things, machine learning, social analytics, location services and wearable technology. There are many technical hurdles associated with deploying those solutions against on-premises business data that are no longer impediments when those solutions are entrusted to the right cloud providers.

Setting up the right foundation now will enable retailers to grow and compete, so it’s important to get it right. The cloud means different things to everyone, so it is important to work with a trusted advisor to plan out a secure path tailored to a retailer’s specific customers. A trusted advisor that takes a systematic and secure approach to selecting and integrating today’s breed of cloud services helps retailers maximize the cloud where it makes sense and lay the groundwork to keep pace with the rapidly changing retail landscape.
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