Differentiate your customer experience through real-time insights

Business Impact

"The question is, does IoT technology help retailers – particularly those looking to leverage stores in ways that Amazon cannot? The data suggests it does, and not only that, it can help retailers transform that business even faster than current technologies would allow."

Source: *Customers Use IoT, Why Can't Retailers?* Benchmark Report. RSR Research. October 2018.

Challenges

- **Responding proactively**. Having to rely on stored data that resides in disparate systems hinders retailers from acting on customer events as they happen.

- **Merging online and offline experiences**. Data silos make it hard to unify data that could be used to create more relevant customer experiences across geographies and channels.

- **Automating real-time recommendations and decisions**. Inbound shopper intent and outbound customer targeting are impossible without an infrastructure that connects digital devices and data.

- **Personalizing 1-to-1**. It's challenging to collect specific user data and device information, yet this capability is essential for knowing the best promotion for the customer on the fly and being able to communicate it with digital fidelity.

The Issue

Loyalty programs were designed to understand purchase behavior and reward customers. Now they're a tool through which retailers and customer-centric service providers can form a more intimate relationship with consumers. Internet of Things (IoT) devices combined with analytics capabilities (including AI) promise to make this goal more achievable by adding real-time contextual awareness to products and services. From wearables to cars to in-store beacons, IoT data becomes a rich source of information about consumer preferences and behaviors. Combining traditional and IoT data helps companies get much closer to each consumer so they can deliver unique, value-added services and targeted offers.

Analysts expect the IoT to soar to tens of billions of devices by 2020. But it's not enough to simply collect data from connected consumers, sensors, systems or products. IoT presents many challenges due to the complexity of capturing and analyzing extreme volumes and varieties of data from ever-increasing numbers of things. It's critical to understand which data is relevant so you'll know what to store versus ignore. A trusted, automated solution gives flexibility about where, when and how to manage and analyze IoT data. So you can capture value in real time – whether customers are walking down store aisles or driving to their favorite restaurants.

Our Approach

Building from a proven technology foundation, SAS integrates streaming data with analytics and visualization so you can get more value from IoT data. Whether data is at the edge, in motion or at rest, SAS helps you make swift, meaningful decisions while reducing data movement and storage costs. We deliver software and services to help you:

- Sense customer needs and preferences in real time. Collect IoT data from devices and use streaming analytics, including AI and machine learning, to process location-based information.

- Get contextual insights about the current shopping trip by integrating IoT data with existing customer history via a flexible, scalable analytics platform.

- Send relevant, personalized offers, promotions and discounts in real time. AI and machine learning applied to existing and IoT customer data reveal a deep understanding of behavior patterns.

- Use AI to build customer loyalty by delivering new, engaging and profitable services based on intimate knowledge of previous interactions and predictions of future needs.

The SAS® Difference

IoT analytics can transform the way you interact with customers, products, services and operations. To capture its full value, you need a solution that takes an enterprise approach. SAS supports analytics throughout the IoT infrastructure – from the data center or cloud all the way to the edge, and at any point in between. With SAS you can:

- Sense what matters – even at the edge. Our IoT solutions incorporate market-leading event stream processing technology, which analyzes data in motion by processing huge volumes at very high rates (millions per second) with extremely low latency (milliseconds). You can embed this powerful solution in devices to shift intelligence to the edge. SAS performs real-time data management for IoT devices, networks and usage data so you can deliver personalized offers. Intelligent filtering deciphers signals from noise so you'll know what's relevant for your operations and customers.

- Understand the signals in data. Mine and analyze IoT data throughout the connected ecosystem – and combine IoT data with other sources that add context and detect patterns of interest as events occur to improve your profitability and customer centricity.

- Act with speed and confidence. Running on a range of hardware or in the cloud, our edge-to-enterprise platform enhances collaboration between data scientists and IT to speed time to deployment. Access and prepare data, engineer features, perform exploratory analysis, build and compare machine learning models, and create score code for implementing predictive models faster than ever before. It's all accessible from the interface or coding language of your choice.

Case Study

Situation

A large retailer with stores throughout the US, Puerto Rico and Guam wanted to transform inbound and outbound marketing so it could get a better pulse on what each customer wanted, then make the best offer to individual shoppers. Because the retailer has brick-and-mortar and online retail stores, it needed to create an omnichannel solution that could intuitively send the right message at the right time, based on location and shopping preference.

Solution

The company used SAS to revamp its marketing infrastructure so that it could accommodate high volumes of customers and daily transactions. The new customer intelligence solution includes event stream processing, marketing optimization and automation, and real-time decision management software.

Results

With help from SAS, the retailer was able to:

- Integrate and analyze in-store beacon data to send immediate, customized offers to individuals based on shopping history and location – using more than 5,000 beacons across 700 stores.

- Quickly push personalized notifications to opted-in customers through a Bluetooth-enabled mobile app.

- Prepare to send future offers by integrating and analyzing beacon category, customer contact history, product preferences and historical clickstream (abandoned cart, browsed products, added to cart) data.

- See tangible transformations of people, processes and technologies that can unlock the full potential of the personalized marketing strategy.

What if you could ...

- Address customer needs and preferences in real time using smart devices to gather location-based information?

- Know your customers' patterns and tap into the full potential of all your data to discover what they truly need, so you can make meaningful, appropriate real-time offers?

- Differentiate your company by offering new, profitable services to customers based on a combination of existing knowledge and anticipated future needs?

- Bridge merchandising and marketing data and processes across the entire retail enterprise?

- Make swift decisions while reducing data movement, latency and storage costs – from data capture and integration to discovery, deployment, monitoring and governance?

You can. SAS gives you THE POWER TO KNOW®.

SAS Facts

- Worldwide, more than 900 retailers – including 66 percent of retail companies on the Fortune Global 500® – rely on SAS.

- SAS is a Leader in The Forrester Wave™: Multimodal Predictive Analytics and Machine Learning Platforms, Q3 2018.

- SAS helps you respond quickly and confidently in the connected world so you can claim new IoT market opportunities as you tap into the full potential of all your data.

Learn more about SAS IoT solutions for retail at sas.com/retail.

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THE POWER TO KNOW®