Retail Tech Innovation eBook

Samsung SDS shares thought leadership inspirations around the future of retail by introducing solutions that enhance technology and customer service in the retail environment.

SAMSUNG SDS AMERICA

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How to Make Retail Data Analytics Actionable in Your Store

by Arnaud Cazaledes, Head of Solutions Business Operations
for Samsung SDS America

While it can be fascinating to look at beautiful, visual dashboards and colorful charts, the data you gather through your retail analytics software is only useful if it helps you make more informed business decisions. The amount of data you gather may seem overwhelming, but we are here to help. In this article, we look at what you need to do to make your in-store data actionable.

REMEMBER STRATEGY

The assumptions you outline and the S.M.A.R.T. goals you set are the guides that tell you which metrics within your data are most important to your business. Every business will have unique goals that are influenced by their market, location, business model, and a number of other factors. Knowing the ins and outs of your industry will give you an insider's perspective to your data that, when aligned with your goals, will enable you to use your data to address the underlying strategic assumptions you've defined.

"Knowing the ins and outs of your industry will give you an insider's perspective to your data."

ORGANIZE YOUR DATA

Once you have aligned your goals with your perspective, it will be time to take a look at the data you've gathered and organize it into meaningful categories that can peel back the layers of your traffic and give you actionable insights. We recommend organizing your data into two main categories: workforce optimization and customer behavior. These two categories are the first and highest levels of your data departments. Keep in mind that both of the two main categories take their data from the foundation of your in-store analytics: traffic count. Let's take a deeper look at traffic count data and how to segment traffic data into workforce optimization metrics and customer behavior metrics.

TRAFFIC COUNT

While traffic counting is the foundation from which you will build your data house, retail data analytics involves more than just a count of people that crossed the threshold of your storefront. Put this metric further under the microscope by:

- Segmenting traffic count by demographic variables such as height, gender and age.
- Looking to analyze the performance of a particular display or marketing campaign? Track the number of people who enter certain zones of your store and judge the effectiveness of marketing displays by comparing traffic count.
- Comparing traffic counts across days, weeks, months, or years for improved schedule optimization to make sure you are always prepared for peak traffic.
- Taking a measure of the relationship between your store's sales and traffic. This figure, known as a conversion ratio, is a highly actionable, measurable KPI for any retail store.

"Track the number of people who enter certain zones of your store and judge the effectiveness of marketing displays by comparing traffic count."

WORKFORCE OPTIMIZATION

Effective staff management and retail management go hand-in-hand. As I mentioned, you can use your traffic data to optimize your workers' schedule according to expected demand. There is much more to workforce optimization than a weekly work schedule however. It also provides a mechanism to measure and react to customer service satisfaction, segment traffic reports by time period and cross-reference those with monetary data to optimize your payroll. Data that falls under workforce optimization will tell the story of the relationship between your customer conversion rate and your staff deployment strategy.

Another great way to capitalize on workforce optimization is to let the data drive inventory replacement decisions. In this case, retailers that gather data on product stock in relation to peak periods should be able to appropriately schedule employees, re-stock order, and even prepare cross-sell and upsell marketing campaigns to unload excess inventory.

CUSTOMER BEHAVIOR

Like millions of other business owner and managers, you'll likely agree that understanding the activities of your customer base is essential to your bottom line. While most understand the importance of customer behavior metrics, only the best are able to measure, organize, and act on data that speaks to customer behavior inside a brick and mortar or pop-up concept. The key is to gather data that tells you what people in your store are actually doing as opposed to relying on your initial assumptions. The actionable data you put in this category will enable you to make data-driven decisions on store design, product layout, store navigation lanes, as well as influence how your staff interact with customers throughout the

customer experience from path-to-purchase. Customer behavior data are metrics that target brand positioning as well as brand messaging. These metrics will also help you implement marketing campaigns at the right time, to the right people. throughout the customer path-to-purchase. Customer behavior data are metrics that target brand positioning as well as brand messaging. These metrics will also help you implement marketing campaigns at the right time, to the right people.

Customer behavior metrics are the bread and butter of your customer demographics. You will store age, gender, height, income level, and other demographic information here. You will also monitor your point-of-sale metrics, as they will speak to your customer's engagement metrics. By pairing your POS metrics with your customer behavior analytics, you will be able to increase your conversion rate through better product positioning. Additionally, as you benchmark key metrics like dwell time, competitor engagement rates, and service times, you'll be able to build-out initiatives that transform your business to better respond to customer needs and market trends.

ANALYZE

Analyzing data can get complicated but that doesn't mean it has to get complicated for you. This gets back to the analytics software you have landed on; if your solution provides visual dashboards that can be intuitively understood, then all you have to do is locate the key metrics you need to speak to the issue at hand.

For example, understanding your conversion rate is a key indicator of store performance. In the past, retailers simply hoped to increase transactions but knowing the conversion rate will provide a much clearer picture. Take a look at these two charts, one chart only looks at transactions, while the other incorporates conversion rate.

Performance	Last Week	This Week
Transactions	200	252
Product Price	100	100
Sales	20,000	25,200

By including the amount of foot traffic and the conversion rate of that traffic, you can see that even though traffic and transactions increased, the ability to convert the additional traffic into buyers decreased by 1.6%. It is quite clear that decisions based on incomplete, unprocessed data can immediately handicap your retail efforts, and even impact your long-term strategies.

Performance	Last Week	This Week
Transactions	200	252
Product Price	100	100
Sales	20,000	25,200
Foot Traffic	2,000	3,000
Conversion Rate	10%	8.4%

"By pairing your POS metrics with your customer behavior analytics, you will be able to increase your conversion rate through better product positioning."

REPORT

If you made it to this stage, you have put in quite a bit of work into your strategy as well as the implementation of your retail store analytics. Before you take action on these analytics, make sure you are communicating these insights to the right people. Depending on your reporting structure and business model, consider establishing period reporting meetings with either key members of your sales team or regional and corporate management. This is the perfect opportunity to 'sense check' your findings and recommendations and track these

against the goals and assumptions you defined previously.

TAKE ACTION

Using simple methods like those I outline above, you can see how to make your in-store data actionable by properly gathering and organizing your data. Customer behavior analytics yield insightful metrics that speak to your store's overall performance, like conversion rate, or get more granular in order to provide insight into employee performance. At the end of the day, none of these metrics matter if you do not use the data to drive your decisions and engage with your customers or employees in more meaningful ways.

If you're stuck at any point in the journey, let us help you break through. Contact Samsung SDS for a personal consultation on how you can make data work for your retail stores.

Top 4 advantages of business intelligence in the retail industry

by Diane Carlson, Vice President, Digital Retail Transformation
for Samsung SDS America

It's not secret that e-commerce has cut into the growth of brick and mortar retail sales.

E-commerce giants like Amazon have experienced astronomical growth over the last decade and brick and mortar giants like Walmart and Target are investing heavily in their online presence. Online retail sales were up 15.2% in Q2 2018 compared to the same period last year, while total retail sales were up only 5.7% (Source: Census.gov). Couple that with the alarming number of mall or major retail outlets that have closed over the past year, and you begin to understand why some are painting a bleak picture for brick and mortar retail.

However, the narrative that brick and mortar retail is dying is simply not backed by statistics or objective empirical evidence. E-commerce accounts for less than 10% of all retail sales, and Forbes calls out that the number is expected to remain under 20% until at least 2022. Additionally, retail giants like Walmart and Target are doubling down on their investments in brick and mortar and the poster child for e-commerce, Amazon, is investing heavily in brick and mortar with acquisitions like the Whole Foods purchase and their own Amazon 4-Star, Amazon Pop-Up, and Amazon Books physical retail locations.

What does all this mean? Physical retail isn't going away, it's evolving. Retail consumers are price sensitive, short on time, and convenience driven, and this is what has allowed e-commerce to capture so much of their business. By leveraging analytics and business intelligence (BI), e-commerce retailers are able to optimize their product offerings, price points, and promotions to target consumers on a very personalized level. While it is true that retailers relying on traditional sales, marketing, and operational tools and strategies are likely to get left behind, BI can enable brick and mortar retailers to not only survive, but thrive in this new retail ecosystem. By bringing business intelligence into the brick and mortar space, retailers can reap many of the same analytical benefits their online counterparts do, modernize their operations to meet the demands of the modern consumer, and offer an in-store experience that can outstrip anything currently available online.

In this piece, we'll dive into 4 specific advantages BI can create in the retail industry and explain how BI can drive retail business to new heights via a data-driven approach to strategy and customer service.

1. Enhanced customer experience

The fundamental advantage brick and mortar retail has over online shopping is person- to- person interaction. BI helps retailers lean into that and make sure that the look and feel of the store, as well as the interactions with retail staff, are strategically designed to enhance the customer experience. For example, Nexshop Behavior Sensing is capable of capturing and analyzing data of customers in a store, enabling management to allocate staff in a way that is conducive to "nudging" a customer into making a purchase decision or understand the effectiveness of a given promotion or marketing initiative. All this comes together to lead to an enhanced customer experience that can be the difference between leaving a customer satisfied with their trip or regretting they ever left the comfort of their couch.

2. Personalization & Engagement

The traditional in-store retail marketing paradigm inherently paints with broad strokes. Promotions and signage may be targeted to a given demographic or target market, but drilling down to the individual level is near-impossible using traditional marketing tools. When organizations do attempt to make targeted efforts in their in-store marketing it is often using decisions based on the gut feelings of staff and management. Simply put, these subjective efforts aren't nearly as effective as data-driven approaches made possible by BI.

For example, BI data can empower sales staff with knowledge of customers' purchase history, shopping habits, and

"Nexshop Behavior Sensing is capable of capturing and analyzing data of customers in a store, enabling management to alllocate staff in a way that is conducive to "nudging" a customer into making a purchase decision..." .

recommend specific promotions to help sales reps offer targeted advice and recommendations at the right time. Additionally, interactive in-store technologies powered by BI can help steer customers towards a purchase in a "self-serve" manner that is easy to scale but also effective in getting the customer the information they need in a timely fashion. Tools like Nexshop Digital Experience can deliver content based on the demographics of individuals that walk by digital signage and displays.

To further contextualize this point, consider a situation where a group of young people approach a digital ad or kiosk. If there are more young men than young women in the group, the rule-based engine that drives BI enabled digital signage and kiosks can display an ad strategically designed to attract and engage young men, or do the opposite if the next group to walk by has a different demographic makeup. This can have a profound impact on engagement.

Additionally, BI enables funnel analysis with a level of granularity that would otherwise be impossible. This allows organizations to iterate and improve their engagement efforts at a velocity that far exceeds traditional approaches to brick and mortar marketing techniques.

3. Reduced operational expenses and enhanced operational efficiencies

BI makes data-driven, efficient operations achievable in ways never before possible. From a staffing standpoint, BI can help you understand how to staff your retail location to match the ebb and flow of traffic in the store ensuring you have enough staff to keep customers happy, but aren't overstaffing and being wasteful due to inaccurate, subjective predictions.

The data-driven, analytical approach BI makes possible from a marketing and promotions standpoint help ensure you get the best ROI on each in-store marketing effort. By understanding how customers respond to a given promotion, you are able to better allocate resources and marketing funds. Referring back to the Nexshop Digital Experience example, imagine the difficulty of tailoring a traditional ad, even using digital signage, to a given customer demographic based on foot traffic in real time. It simply would not be possible. With BI and modern technologies, not only is it possible, you can measure effectiveness as you go and make tweaks based on analytics as opposed to gut feelings.

4. Optimize floor plans and product placement

One of the biggest drivers of sales in retail is creating a floor plan that is conducive to sales. Floor space is limited and maximizing revenue per square foot is vital to turning a profit. BI takes the guesswork out of getting your floor plan right. Using insights from BI, store managers can not only tell where customers are spending most of their time in the store (by tracking "dwell time") but also identify slow-moving product and displays that are not attracting much customer attention. This allows managers to not only create displays and sales to help push slow moving product, but also to plan a floor layout to better drive traffic to the right places. For an example of the possibilities, check out this short video detailing how Nexshop can help identify "hot spots" on the sales floor and help managers switch up a floor plan to better engage customers, push slow moving product faster, and drive sales.

Conclusion

Brick and mortar retail isn't going anywhere anytime soon. It's evolving and beginning to leverage the tools and techniques e-commerce has benefited from in recent years. By leveraging BI, organizations can make their brick and mortar retail experience highly personalized, data-driven, customer friendly, and engaging while also improving efficiency in operations. As BI continues to mature in the retail space, we will see continued growth and adaptation in the market, likely bringing the level of intelligence in brick and mortar retail on par with, or exceeding that found online. In the years to come, wearables for sales staff may enable them to react to and engage with customers based on data inputs from nearby beacons and sensors. Whatever the future may hold, it is clear that retailers that embrace a data-driven, BI powered approach to retail are well positioned to compete moving forward.

Go beyond measuring retail store traffic with a data-driven customer feedback loop

by Arnaud Cazaledes, Head of Solution Business Operations
for Samsung SDS America

The world is awash with data. Everywhere you look, people are collecting, sorting, and analyzing data to make informed decisions on their business strategies. Businesses that are dominating the digital space with effective e-commerce strategies are doing so by leveraging customer data. Time and again, brick-and-mortar retailers ask us how they can bring the same data-driven strategies to an offline distribution channel.

Luckily, we have some experience in harnessing the power of data to work in your favor. Due to the rapid pace of advancements in retail technology, the digital experience can now be brought to the mall, shopping center, or any other model of traditional brick-and-mortar concepts.

If you are thinking about how you can make data work for your retail store(s), we suggest a staged approach. Of course, the natural starting point is the question: How do I measure my retail store traffic? I recommend taking a bit of a step back to make sure you're seeing 'the forest through the trees' first. Then, once you have a big picture strategy you'd like to realize, implement this strategy on a local level first. Hopefully, you'll be able to use your learnings from the initial implementation to scale the concept in a way that guarantees a rich feedback loop throughout your operations, wherever they may be. Sounds complicated? Well, it does not have to be. Let's dig a little deeper for clarification.

"The digital experience can now be brough to the mall, shopping center, or any other model of traditional brick-and-mortar concepts."

Think Strategically

The first order of measuring retail store traffic is to take a strategic approach. Figure out exactly what you are trying to accomplish and why. Use a brief bulleted list to outline what you believe to be true regarding your retail success. Whether these underlying assumptions come from your natural business instincts, management theory, or deep industry expertise, it's worthwhile to write these down. Since assumptions give you a launching pad to work from, they form the backbone of any strategy. Using these assumptions, develop a set of hypotheses you'd like to test out. As a data scientist might say, hopefully you'll be able to use the data gathered to verify your hypotheses 'beyond a reasonable doubt'!

From here, I suggest setting up S.M.A.R.T. goals: Specific, Measurable, Attainable, Realistic, and Time-based. Before the emergence of retail technology that allowed for traffic data gathering and analysis, retail strategies were essentially driven by guesswork. Retailers would simply conduct A/B tests, over and over and over, until they figured out what worked, what their customers liked, or what sold the most. While that strategy was effective, it was costly. By utilizing technology to measure your retail traffic, you are optimizing your in-store strategy to take out the guesswork. You are now creating a targeted in-store experience that allows you to engage with your customers in a more meaningful and impactful way.

Implement Locally

Once you have your strategic level overview down, it's helpful to think about the in-store experience as sort of a testing ground – or 'feedback loop'. Start with one or two pilot stores and work on closing all of the gaps in the loop by implementing interactive IoT technologies in areas

of need. Some of these will be existing tech you have in your stores now - such as mobile phones, displays, or pinhole and security cameras. For a true closed loop, you may need to supplement the technology with more advanced elements such as beacons, interactive displays, and a robust analytics platform that delivers real-time actionable insights – thereby closing those data gaps in your feedback loop. Use tactical deployments of in-store retail technology to gather this data and with those data-driven insights, you will be able to captivate your customers like never before, sell with confidence, and attract new clientele. Literally, reinvent the customer experience.

What are the stages and elements of your customer feedback loop?

One critical step in creating a 'pilot' that provides meaningful, real-time insights is addressing high-impact areas of the in-store experience. Areas of maximum impact typically fall into two categories: Behavior Sensing and Digital Experience. In both categories, retailers can leverage a variety of different approaches to gather data (behavior sensing) and then leverage that data to digitally enhance in-store offerings (digital experience). Incorporating these elements into your retail pilot program will enable you to gather real-time data insights, enhance your in-store experience and contribute to omni-channel capabilities.

1. Behavioral Data: Looking to gather behavior data? For straight traffic numbers, set up cameras that count people as they walk in and out of your store. Analyze in-store traffic with these cameras to measure customer flow, customer engagement, promotional engagement, and other key metrics that will allow you to optimize your visual merchandising strategy.

2. Zone Targeting with Heat Maps: Get even more granular by using cameras that count people that walk through specific "zones" of your store. This is a great way to see which areas of your store people visit the most. Leverage a visual heatmap of your store to easily view which experiences are drawing the most attention. Even better, combine heatmap and zone analysis to optimize your product placement.

3. Facial Analysis: Facial analysis technology can identify age, gender, and even visitor sentiment information. All this data, when delivered in real-time, seamlessly guides the execution of targeted marketing campaigns that connect your store's visitors with the right brands, at the right time, at the right place, for the right purpose.

4. Data Filtering: Filtering out extraneous data ensures that your analytics are accurate and actionable. Removing employees from foot traffic counts, for instance, is an important step to maximize data hygiene.

Scale the Experience

One of the greatest aspects of technology innovations is that they continuously evolve over time to become better and more accessible. Displays and IoT triggers are constantly improving and should be part of a scaling plan from a management perspective. Once a retailer has implemented a successful 'data-driven' feedback loop at one store, the natural progression would be to bring those same positive outcomes to other key stores.

"Displays and IoT triggers are constantly improving and should be part of a scaling plan."

As with the initial pilot, take a well-considered approach that makes sense for your business to

identify the stores you'd like to scale this to next. For instance, you might decide to start with your highest grossing stores in either one graphic market or with stores that are underperforming. There is no one size fits all here, but there are certainly efficiencies which can be gained by looking at implementation at scale.

- Give thought to the leadership that will lead the charge. To ensure success, identify a project team or committee in charge of scaling the initiative and maximizing its impact.

- From a management and strategy perspective, digital technology that allows your headquarters to have oversight into the distribution of content across divisions and stores ensures consistency of process and message throughout your operations.

- Prioritize systems and processes that enable real-time sharing of data analytics both at the store level with your feet on the ground and with corporate and regional management. When implemented properly, each bit of technology should seamlessly interact with others in the system as well as a central analytics engine that delivers an integrated dashboard with user-friendly reports detailing every piece of relevant data related to in-store marketing performance.

One Final Note

Consumers now demand interactive, engaging personalized in-store or pop-up experiences. As a modern retailer, your business must seamlessly tap into new and better data about your customer that allows your brand to tell your story in an engaging and insightful manner. Digital technology transforms your brick-and-mortar business into a continuous learning environment that will give you real-time insights into the behavior of your customers and the performance of your marketing initiatives. This type of dynamic environment allows you to get to know your customer on a deeper level and create a more meaningful shopping experience. Implementing your digital customer experience strategy is just the first step in truly harnessing the power of the technology available.

7 ways retail operators can benefit from IoT

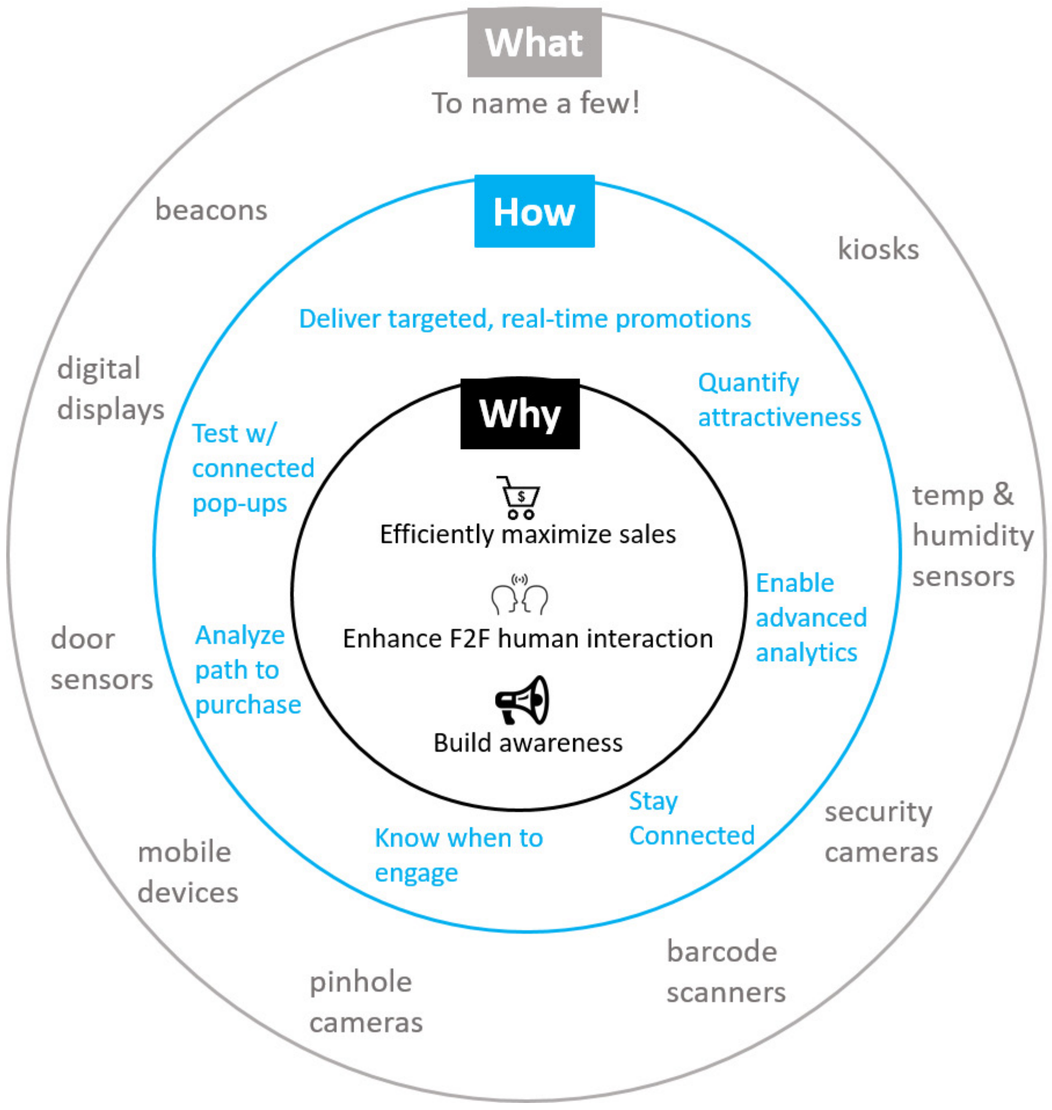
by Joseph Warner, Solutions Architect
for Samsung SDS America

Data-driven decision making has a profound impact on a retail business.

Understanding real world data and processing it in a timely fashion is the difference between dominating a market or lagging behind the curve. In truth, not everyone in the retail sector understands the specific whats, hows, and whys that enable data-driven decision-making in retail.

IoT (Internet of Things) is one of the major components of making data driven decision-making in retail possible and adoption is growing fast. In fact, Statista projected the IoT U.S. retail market will grow to $11.26 Billion USD by 2025. In this piece, I review the IoT devices commonly found in retail to acclimate you with the "whats" and then dive into 7 benefits of IoT in retail to help you better understand the "hows" and, most importantly, the "whys".

"Statisa projected the IoT U.S. retail market will grow to $11.26 Billion USD by 2025."



Which IoT devices are found in retail & what do they do?

Let's start by looking at what IoT devices are and their role in retail. In short, an IoT device connects to the internet and captures and transmits data while interacting with the environment in near real-time. Examples of IoT devices commonly found in retail environments include temperature & humidity sensors, cameras, barcode scanners, door sensors, and more. These devices generate a wealth of data insights, such as, product touch, and sales lift, from analytics and processing by business intelligence (BI) software.

Consider this scenario: an IoT camera tracks foot traffic into a store, and facial recognition software determines the demographic makeup of people who visit the display. IoT devices have gained significant popularity retail because they are a cost-effective way to amass a wealth of data about customers, products, and promotions. This data enables better strategic decisions to create demand that increases foot traffic, basket size, and revenue per square footage. For a deeper dive into IoT and big data in general, check out chapter 5 in our Big Data Series.

"IoT-enabled digital signage and kiosks use facial analysis... to display engaging and targeted messaging."

7 benefits of IoT in Retail

Now that you understand conceptually that IoT captures data in near real time for quick processing, we'll dive into some of the specific ways businesses use IoT to enhance their brick-and-mortar retail operations.

1. Deliver targeted, real-time promotions to customers

IoT devices can significantly enhance a customer's digital experience inside and even outside of a brick-and-mortar location. For example, IoT sensors identify which specific products interest customers, then targeted promotions trigger digital content on signage or mobile devices. Similarly, IoT-enabled digital signage and kiosks use facial analysis in conjunction with pinhole cameras to display engaging and targeted messaging defined by a set of rules.

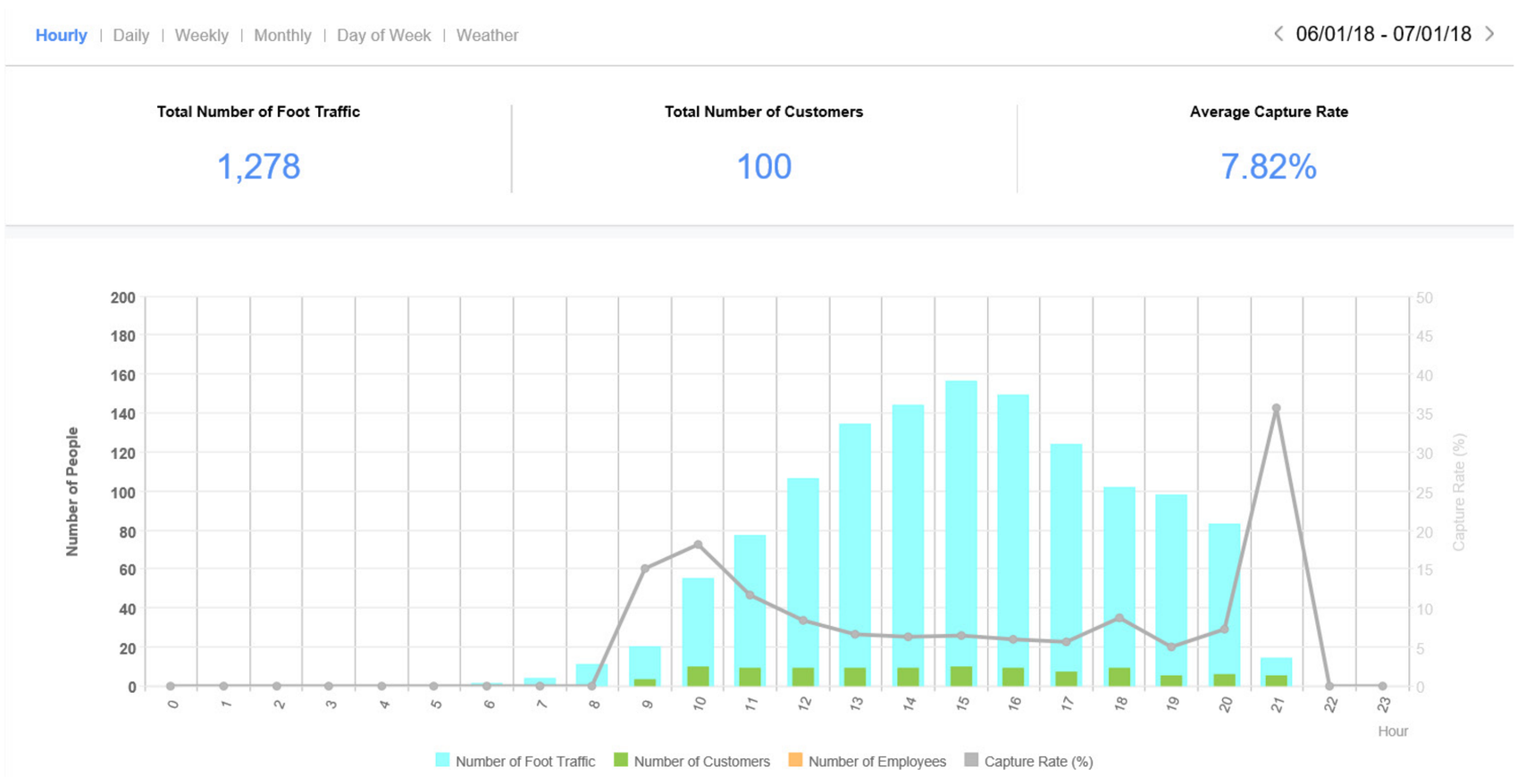
2. Measure the attractiveness of your storefront

The attractiveness of your storefront drives how many people actually decide to enter the shop. In fact, retailers can assess their "attractiveness score" by simply following the conversion ratio. IoT-enabled cameras and sensors near storefronts and doors provide a reliable way to automate people counting. Then, by comparing the data from different storefront configurations and displays, you gain valuable insights as to what drives traffic from the street and into your store.

For instance, create metrics to quantify your store's attractiveness, such as the conversion capture rate.

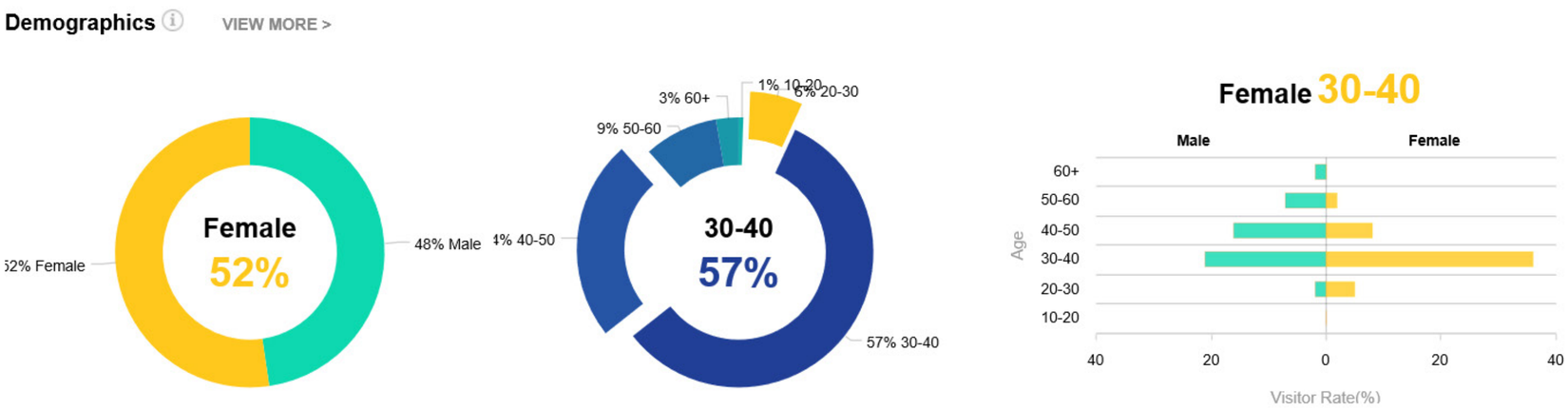
$$\frac{\text{People who walk by}}{\text{People who come in}}$$

Once you obtain the initial baseline, compare future campaigns messaging to continuously assess and improve your performance.



"By comparing the data from different storefront configurations and displays, you gain valuable insights as to what drives traffic from the street and into your store."

Capture the right audience, target new segments and grow their interest level.



3. Enhanced visibility into the customer's path to purchase

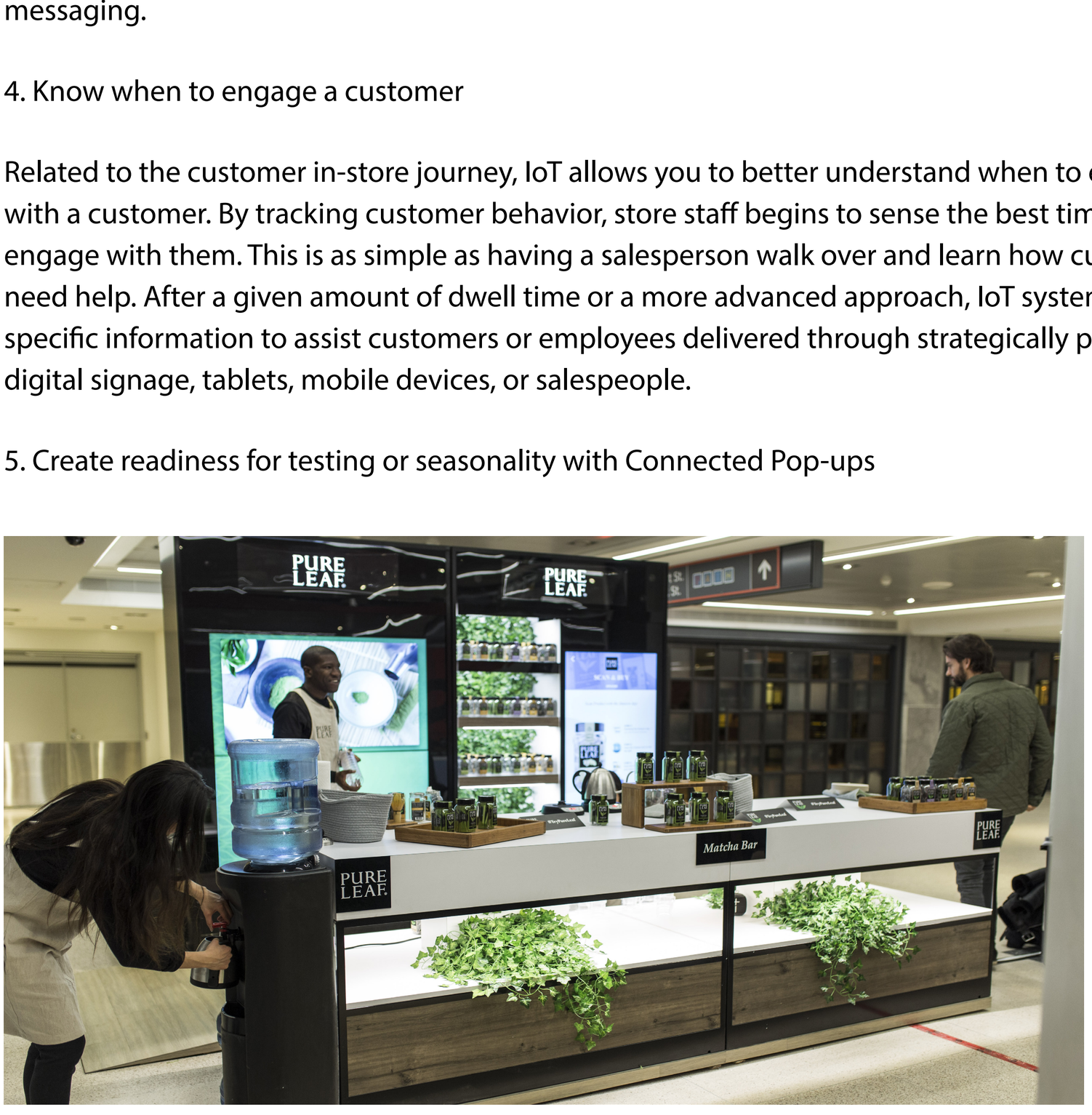
IoT sensors even track their eventual path to purchase within the space. "Heat maps" show the most heavily trafficked areas, and "dwell time", the time a customer spends in a specific location, measures what's catching their attention. As you identify dwell time patterns, and piece together the consumer path to purchase, you develop responses to convert more sales (for example by pushing a specific promotion to a customer or mobilizing a sales rep with useful information).

Similarly, by mapping out traffic within your store, you get an idea of what promotions work to capture customer attention, what promotions get ignored, and the areas of highest visibility for messaging.

4. Know when to engage a customer

Related to the customer in-store journey, IoT allows you to better understand when to engage with a customer. By tracking customer behavior, store staff begins to sense the best time to engage with them. This is as simple as having a salesperson walk over and learn how customers need help. After a given amount of dwell time or a more advanced approach, IoT systems provide specific information to assist customers or employees delivered through strategically placed digital signage, tablets, mobile devices, or salespeople.

5. Create readiness for testing or seasonality with Connected Pop-ups



"Connected pop-ups allow companies to create consistent, positive customer experiences at every customer touch point."

Pop-up stores are a hot trend in the retail industry. They typically launch in less than 90 days from inception to execution and replicate quickly. However, if executed poorly, pop-ups can leave opportunity on the table and result in millions of dollars of wasted time and resources.

As The Atlantic pointed out, big brands often leverage temporary pop-ups to collect useful data for their programs and new launches. Connected pop-ups allow companies to create a consistent, positive customer experiences at every customer touch point. IoT plays a central role in enabling connected pop-ups to quickly assess and make changes daily with a flexible design and cloud-managed platform. Further, they provide all-important quantifiable data to assess the effectiveness of marketing programs and product-market fit.

6. Stay connected

Here is an opportunity to make sure every impression is the highest value a store can offer. If a person walks into your store and doesn't purchase, the store should have all the tools to develop that interest further. Being able to connect on a personal, one-to-one basis is what consumers are looking for. They want a personal touch that's helpful and authentic. A positive instore-experience compels consumers to follow-up even if they didn't buy. Most likely, they will revisit the product that piqued their interest, whether in-store or online.

IoT devices are the engines behind many 'wow factor' experiences which drives customers to voluntarily participate in the activation. It's important to stay connected with these potential customers and learn from them. By leveraging IoT, you enable workflows that identify an individual shopper's interest so that brands follow up with them using surveys, social media, targeted promotions or mobile technologies. Well-developed strategies create additional touch points, opening the door for valuable feedback on ways you can improve.

7. Enable advanced analytics

Business Intelligence and retail analytics software thrive from the wealth of data processed by IoT. Using the right software solution, like Samsung Nexshop Behavior Sensing, retailers transform this data into useful information that drives business forward. By building a holistic solution that focuses on the customer experience and measuring engagement, IoT and analytics allow retail management to better implement marketing, training, and sales strategies based on actionable real-world data and objective insights. It's like having a localized retail consultant giving you their best recommendations for improvements every day in every market area.

Takeaways

As you have seen, there is no shortage of use cases for IoT in retail. My big picture takeaways?

- IoT-enabled insights go beyond 'gut feel' to drive better retail decision-making, efficiently maximizing sales for existing programs and brand new launches.

- To make the shopping experience more enjoyable, it is more important than ever for physical stores to integrate technology to enhance human, face-to-face interactions. IoT is instrumental to learning buyer behavior and preferences. In order to provide the best customer service, the staff needs to understand how to engage before, during, and after the in-store experience.

- Building brand awareness improves customer sentiment and increases the chances of success for new launches. Brands with a strong following cut through the clutter of competition by standing out. IoT enables you to understand your target user segments, develop a social presence, and creates an authentic connection to your customers.

"IoT & analytics allow retail management to better implement marketing, training, and sales strategies based on actionable real-world data and objective insights."

Coming up with the right solution to meet the needs of your unique use case is one of the most important pieces of the puzzle. For more on how IoT can drive your retail business forward or to discuss your unique needs, contact Samsung SDS today.

Nexshop, plus HARMAN, equals a better in-store experience

by Patrick Sullivan, Senior Manager, Partner Enablement & Training
for Samsung SDS America

Is it the retail apocalypse?

With hundreds of brick-and-mortar stores shutting their doors, many store owners certainly feel that way. The good news-this is not the end. It is the beginning of a more engaging and relevant in-store retail experience. Brick-and-mortar stores are evolving from places of purchase into brand experience hubs. With Nexshop and Harman, you can ensure your store experiences are strong enough to survive the changes coming to the retail industry.

Smartening Up the Store

Nexshop is a cloud-based platform that eliminates the need for a huge enterprise solution. With a few sensors, captivating signage, and an Internet connection, you can be up and running. Once Nexshop is deployed, customer behavior analytics appear in near real-time. You can count people going into and out of your store and people who pass by on the outside. Once customers are inside, you can see where they go and what they do. The Nexshop sensors also collect demographic information to provide deep insights into who your customers are and whether they are in a happy, sad, or neutral mood.

Traditionally, it was hard to tell if you had a profitable day until you closed shop and counted the money in the register. With Nexshop, within hours (sometimes even minutes), you can see how changes in store layout or product offerings influence sales, traffic, and dwell time. So if a certain area of your store impacts a customer's mood, you can begin to determine what that's happening. Is it the lighting? Do you need to add more seating outside a fitting room? The ability to A/B test and modify product presentations in real-time puts you miles ahead of your competition. By accessing usable information, you can quickly act and troubleshoot what isn't working – or do more of what is.

Let Experts Be Experts

When we developed Nexshop, we wanted to let experts be experts. Retail storeowners are experts at finding products and distributing and selling those products in store. Our role is to develop solution stacks that target exactly who and what you want. As a one-stop solution, our platform provides everything you need, so you do not have to deal with the hassle of integrating different products, databases, and infrastructures. We take care of it. We handle implementation, integration, and troubleshooting, so retailers are free to excel at retailing.

The Harman Experience Center

For retailers interested in learning more, Harman created the Harman Experience Center in Northridge, California. The center exhibits all of Harman's audiovisual solutions from background music to architectural lighting to digital signage. Within the retail solutions presentation, you can learn more about Nexshop Behavior Sensing as well as targeted in-store messaging displays.

As changes continue to disrupt this industry, it's imperative for retailers to craft stronger in-store experiences. Nexshop and Harman are at the forefront of these changes and are helping store owners adapt. By designing and personalizing experiences to consumer tastes and preferences, physical stores leverage their unique value and increase ROI in the long run.

"Brick-and-mortar stores are evolving from places of purchase into brand experience hubs."

The role of retail technology in 2019

by Ian Hutchinson, Head of Business Development, Retail Vertical
for Samsung Electronics

A survey from the Economist Intelligence Unit found that 81 percent of millennials use their mobile device as their main purchasing channel. Beyond that, the 51 percent of consumers who do not use mobile devices for shopping plan to in the future. If you've bought anything in the last few years, these statistics shouldn't come as a surprise.

While these statistics might sound intimidating, retailers don't need to feel afraid. Consumers still need brick-and-mortar stores. In the age of mobile, retailers must clearly articulate the value of in-person experiences using digital data and technology to their advantage.

Data Shines Light on Retail

Have you ever looked at sofas online only to close the tab and see ads for local furniture stores on your social media feeds? If so, you know websites can track how long customers view an item, whether they made a purchase and how much they spent. The .com and mobile app properties completely leap-frogged traditional retail, growing and expanding the market online. This growth is largely thanks to ecommerce's ability to collect data and connect consumers to the right goods and services. Fortunately, data-driven retail doesn't have to be exclusive to the Internet.

In-store sensors and beacon technology, for example, can send personalized behavioral and demographic data to a business's cloud computing system, offering insight into who customers are. This data can educate product, layout and display strategies by providing information on consumer preferences, budgets and more as customers make multiple visits to a store.

Informing Better Experiences

While it is hard to compete with the lure of shopping from a couch or bed, brick-and-mortar retail stores can tap into data to craft in-store experiences that will make shoppers want to leave the house. Executed well, these experiences have the ability to connect consumers and brands in a significantly more immersive way than online retail can. Indeed these experiences are so powerful that many exclusively online retailers like Everlane and Warby Parker have opened physical locations in efforts to increase the strength of their brands among customers.

Beacons can already detect mobile devices and trigger offers, call-to-actions and welcome messages directly onto in-store displays and signage. By combining artificial intelligence with data collected about the customer from the current and previous shopping experiences, retailers can use beacons and enticing digital signage to deliver personalized recommendations about products and services consumers might not otherwise consider or find on their own.

Retailers can also use data to smooth over pain points during in-store shopping experiences. Connected devices and cloud technology can gather data on the length of a typical transaction and the time shoppers spend in-store to monitor and iron out inefficiencies.

The Internet is not replacing brick-and-mortar retail, but it is forcing retailers to reconsider how they run their stores. The .com and mobile spaces have created natural efficiencies for better, more personalized shopping experiences. A consumer can discover in 30 seconds what used to require visiting three stores. Instead of thinking in terms of online versus physical retail, business owners should take a cue from ecommerce and integrate data and emerging technologies to deliver richer in-store experiences. Retailers can take the first step toward success by sticking to their core competencies and leveraging strategic partners who can handle everything else.

"The Internet is not replacing brick-and-mortar retail, but it is forcing retailers to reconsider how they run their stores."

Now smaller retailers can step up the "wow" factor for their customer experience

by Thomas Lee, Project Manager, Retail Operations
for Samsung SDS America

When retailers sell to millennials, they need to bring their "A" game to customer experience. That means bringing the "wow" factor to the shopping experience and eliminating anything inconvenient or annoying—like long lines at the checkout counter.

Already, large retailers like Apple, Home Depot, and Nordstrom, have rolled out mobile point-of-sale (mPOS) systems that streamline and up the coolness of the checkout counter by allowing sales staff to ring up customers from anywhere in the store. Customers are quickly coming to expect this level of service.

Yet Mom-and-Pop and medium-sized retailers hoping to take advantage of Mobile POS have encountered challenges. These matters include relatively high cost, lengthy training time, and an inability to track customer information. Samsung SDS America enables smaller retailers to overcome these issues with sophisticated mPOS solutions built to ensure success.

"Apple, Home Depot, & Nordstrom, have rolled out mPOS systems that streamline and up the coolness of the checkout counter."

High Costs

Keeping costs in line is a priority for businesses of all sizes. But it's especially important for smaller retailers who lack large corporate backers. Startups feel this problem even more acutely because expenses during the first six months typically exceed revenues.

Initial set up and recurring costs for mPOS solutions can be substantial for companies with tight budgets. One-time set up costs for mPOS solutions can range from $6,000 up to $20,000. Additional recurring service fees run about $150-$180 per month.

Samsung's mPOS solution has no set up fees. In addition, we offer flexible monthly service fees that are affordable for even the smallest mom- and- pop shop.

Training

Training on a traditional or mPOS system has always presented a conundrum for smaller retailers. Staff need to remain on the floor because retailers can't afford for customers to leave when they're not being served. On the other hand, retailers can't allow poorly trained employees to perform improper transactions, such as charging a customer $4 instead of $40.

Retailers need to provide the appropriate training in as short a period as possible to ensure employees know what to do without taking excessive time away from the floor.

Many legacy POS systems have evolved incrementally over many years, which can lead to redundant features that are difficult to learn and use.

The Samsung mPOS solution has been designed specifically for ease of use. Employees typically get up and running in one to two hours.

Tracking Customer Data

Go to any large retail chain and you'll encounter all manner of sophisticated loyalty programs. They may give customers a membership card that rewards them with a small percentage refund for their purchases in exchange for personal information. With that, the retailer can track what and when the customer bought and use that data to guess what they're likely to buy in the future in order to create appropriate promotions.

Mom and pop shops are often unable to track customer information. Mobile POS systems tend not to capture this information or run loyalty programs. These retailers might have to purchase thousands of plastic cards to give to customers, or send tens of thousands of dollars for an IT system that can manage loyalty programs. These retailers are unable to send targeted promotions and lose business they might have otherwise received from repeat customers.

Samsung solutions capture customer data at checkout and allow retailers to later use that data to send out promotional emails.

If you're a small retailer, it's critical to give customers the experience they demand. With Samsung, not only can you now give customers the in-store experience they want—you can look cool in the process.

"The Samsung mPOS solution has been designed specifically for ease of use."

Customer Service

Looking for a distinctive way to seize attention for your brand?

by Joseph Warner, Sr. Technical Account Manager, Sales Engineer
for Samsung SDS America

Walk around any mall or mass transit hub during the holiday season, and you'll see any number of pop-up stores selling cosmetics, calendars or cat-themed socks.

These temporary stores—which usually stay up for anywhere from a day to several months—are becoming increasingly popular any time of year. Indeed, the pop-up industry has grown to approximately $10 billion in sales, according to PopUp Republic.

Pop-ups give retailers or brands the opportunity to generate interest in products that might otherwise get lost in the shuffle—for a cost that's 80 percent less expensive than opening a traditional brick-and-mortar location, according to StoreFront.

In today's retail environment where customer experience is king, queen, and court all rolled into one, the more alluring a retailer or brand can make this pop-up experience, the more attention they'll see.

At the WPP Global Retail Forum in Miami, Florida this past May, Samsung Electronics partnered with Barrows to display a proof of concept for an intriguing new pop-up design. Based on the Samsung SDS Nexshop Marketing retail sales and marketing platform, the prototype is an inexpensive, modular unit that delivers an omnichannel experience and collects vast quantities of customer data.

An omnichannel experience in a small space

The pop-up consists of two 10-foot walls with 10 feet of floor space in front. In the proof of concept at the WPP Global Retail Forum event, three, 55-inch screens hung on the wall. Retailers also have the option to put shelves on the wall. The floor area contained three pedestals for tablets and kiosks although a retailer could also use the floor area for shelves, tables, podiums, kiosks, and plinths.

The pop-up was specifically configured to achieve three objectives: attract an audience, engage customers, and personalize the experience.

Digital signage on the digital screens was specially designed to attract people's attention and encourage them to come over to see what the pop-up was all about. Pedestals in the gallery displayed tablets that customers could tap to learn more about products of interests.

Sales associates could also come over and use a tablet-based clienteling system to take control of the digital signage and give customers a personalized demo based on what they're looking for.

Or the associate could give the customer virtual reality goggles (VRG) for an immersive experience. For example, a pop-up retail selling shoes might only be able to display the latest and greatest styles. If the customer was looking for something in particular, the sales associate could use the VRG to "take" them to the flagship store where they could virtually see all the styles available.

And the goodies for the retailer don't stop there. At the WPP event, six cameras were trained on the space at all times. Video analytics performed demographic, age and sentiment analysis. The pop-up owner can receive a report with all manner of data about the guests and their experience including who the pop-up visitors were (male or female), their approximate age, what they felt about the experience, where they were standing, how many people were in the booth and more.

Better yet the entire pop-up was a snap to install. With the furniture prefabricated and the content in the cloud ready to go, Samsung Electronics and Barrows arrived at the show floor at 7 p.m., built the walls, put up the kiosks, wired everything, and had everything up and running in just three hours
Pop-ups are an increasingly popular way for retailers and brands to get attention. That makes it more difficult than ever to stand out.

"Pop-ups give retailers or brands the opportunity to generate interest in products that might otherwise get lost in the shuffle.".

Your stores are talking. Are you listening?

by Romulus Stoian, Director, DOOH Marketing Solutions Leader
for Samsung SDS America

When it comes to your online store, you probably have more data than you know what to do with. Thanks to web analytics, you know what pages are popular, what offers get noticed, how long shoppers visits, and more.

Thanks to the latest people-counter solutions, retailers can now gather deep insights about their customers' in-store activity and, as with their websites, use that data to drive improvements.

Why focus on the in-store experience

Just a few years ago, industry experts were spouting that brick-and-mortar retail was dead. But is it?

Despite retailers' laser focus on improving the online shopping experience, consumers still prefer to shop in-store. In fact, according to The International Council of Shopping Centers (ICSC), 78% of consumers prefer to shop in-store and spend almost $1,500 more per month at physical stores versus online.

In-store shopping is clearly alive and well, but the experience could definitely be improved. That's where new people-counter technology comes to the rescue.

How People Counters Have Evolved

Most stores have a traditional traffic-counter system in place. Maybe it's a store greeter who does a manual count, or an electronic entrance counter. Both have been the mainstay for collecting store traffic counts, but neither is highly consistent. Store greeters get distracted helping customers, while laser-based systems often make incorrect counts when large groups come through the door. Today's advanced systems use a store's existing security cameras and gather more precise "head counts." They also apply advanced analytics, transforming head-count data into insightful information retailers can quickly use for more than just knowing how many people visited their store.

"According to ICSC, 78% of consumers prefer to shop in-store and spend almost $1,500 more per month at physical stores versus online."

Additionally, if a store visitor has a mobile device, this technology can add even greater detail, such as demographics, visit duration, and visit frequency, that retailers can use to transform many elements of the in-store experience.

Improve Retail Store Layouts

An effective store layout can be a huge boon to a retailer. Using camera images, people-counter solutions create customer traffic patterns (sometimes referred to as heat maps) over time and in real time. These maps help retailers quickly identify store hot spots, dead zones, and bottlenecks—information that can be used to improve a store's layout. These solutions also make it easy to determine which products spur the highest interest, where people spend the most time, and also address queue times.

Optimize Staff Schedules & Improve Customer Service

With detailed customer traffic information by day, week, or year, retailers can easily align their staffing schedules to ensure just the right number of available sales associates. Additionally, heat map data can identify locations in the store where shoppers need the most engagement. Or conversely create a complete interaction analysis of shoppers and sales associates to identify service issues.

Transform Window Displays to Boost Sales

Retailers put considerable time into their window displays in hopes of enticing shoppers to come inside and buy. Advanced people-counter technology enables retailers to quickly determine window display effectiveness, encouraging more testing of different variables to find what really "speaks" to shoppers. This same technology can also be used to measure in-store displays and signage.

Deepen Customer Loyalty

For retailers with loyalty apps, every time a customer with the app installed enters, the technology can track their movements and send promotional messages. What else?

A customer journey into the Connected Future of Retail

by Diane Carlson, Vice President, Digital Retail Transformation
for Samsung SDS America

What makes for a truly exceptional in-store customer experience?

For retailers catering to millennial consumers, the bar is quite high. Millennials expect:

First-rate customer service with access to an in-store associate when and where they need them. Many people welcome a relationship with their store associate. If the associate is attentive, helpful, and follows up, most shoppers will want to seek them out for a repeat purchase experience.

- A personalized "know-your customer" (KYC) experience with a well-informed store associate who can anticipate, deliver, and add value to the experience—because time is always at a premium.
- Items that are customized and curated based on individual needs and tastes.
- A fully digitized experience that integrates online with traditional "brick and mortar" commerce.

"If the associate is attentive, helpful, and follows up, most shoppers will want to seek them out for a repeat purchase experience."

- "Endless aisle" service enabled by real-time inventory management.
- Rewards in exchange for loyalty and the ability to easily access any offers when needed without difficulty.
- An exciting and pleasing in-store experience—neat, well organized, interactive, and endless aisle.
- Expedited checkout. No waiting in lines, please.

At NRF, Samsung took visitors on a customer journey that brought retail innovation to life. By combining Samsung devices (mobile phones, wearables, tablets, and large format displays (LFDs), Samsung SDS Nexshop solution and SapientRazorfish's Razorshop, the IoT-driven experience showcased how retailers can reconnect with customers by bringing the best of online to the in-store shopping experience.

Visitors to the booth saw actors portraying a shopper and an employee.

As visitors entered the booth, they came upon the shopper, "Alex Smith." Proximity-based technology recognized the loyalty application and Alex was immediately recognized at the door. A large interactive display began showcasing items and promotions personalized to Alex's tastes and needs. At the same time, a notification was sent to the wearable devices (Gear S3) of the employees on the floor, alerting them that Alex was in the store.

As the shopper continued her journey in-store, she begins to engage with a store associate. Once an interaction was initiated, the store associate used a tablet device running Nexshop Sales Mobility, an assistive selling tool, to view Alex's profile and purchase history in order to engage in a more meaningful exchange. The store associate recommended a curated set of items tailored to Alex's tastes and displayed these items on a large interactive display for further consideration. Feeling special and well taken care of, Alex chooses items to complete her new look.

When an item was out of stock, real-time inventory management running on the associate's tablet gave Alex the power to ship the item home free of charge. It also pushed another item, which was nearly out of stock, to the cart in Alex's store loyalty app for future consideration, either in-store or at home. When the assistive selling tool, Nexshop Sales Mobility, is integrated with an analytics engine, the sales associate could also see recommended items based off the out-of-stock item and Alex's purchase history, providing Alex a more personalized shopping experience. Alex then purchased shoes in-store to match her look using near-field communication (NFC) to enable a customer-to-business payment without a POS or dongle, avoiding the hassle of waiting in line. Alex was a very satisfied customer.

The store associate was pleased. He felt confident in his sales approach because of Nexshop Training, a cloud-based, on-demand mobile training app that improved his productivity and increased his product knowledge.

The retailer won as well. By using Nexshop Marketing, a cloud-based analytics tool, the retailer strengthened the relationship between the store and its customers by capturing and analyzing real-time data and using it to improve staffing schedules and in-store layouts. The solution could also be used to target ads and promotions to the correct target audience using Samsung's prescriptive analytics.

In scenarios like this one, retailers with the right tools and technology are well poised to surprise and delight their customers.

"By using Nexshop, the retailer strengthened the relationship between the store and its customers by capturing and analyzing real-time data…"

Arnaud Cazaledes
Head of Solutions Business Operations

As Director of Solutions Business Operations, Arnaud Cazaledes is a vital strategic force at Samsung SDS America. His time with Samsung Group began with Samsung Electronics in Seoul, Korea and has continued in various strategic leadership roles at Samsung SDS HQ and Samsung SDS America. A self-described globetrotter originally from Montpelier, France, Arnaud has spent time in over 40 countries and has lived in 5 different countries across Europe, North America, and Asia. In his spare time, he enjoys reading, eating, drinking wine in true French tradition, and spending time with his wife and two young children.

Diane Carlson
Vice President, Digital Retail Transformation

Diane began her career on the ad agency side before holding leadership positions at various start-ups in New York and San Francisco. Diane has a "roll-up your sleeves" mentality and a passion for technology, innovation, and disruption to create new markets and value networks. In her current role as Vice President of Digital Transformation at Samsung SDS America, Diane executes on that passion by overseeing business development, strategic partnerships, and solutions delivery to help companies improve customer experiences.

Joseph Warner
Sr. Technical Account Manager, Sales Engineer

Joseph Warner's experience spans across industries from being an early entrepreneur building circuits and programming collaborative network applications, managing QA labs and field support resources for enterprise cloud data centers, to his current positions at Samsung SDS as Business Development, Technical Account and Product Manager leading the sales engineering function as a member of the Digital Transformation Team.

Patrick Sullivan
Senior Manager, Partner Enablement & Training

In his current role as Sr. Manager of Partner Enablement and Training at Samsung SDS America, Patrick builds and maintains partner relationships by introducing them to ground-breaking technology, teaching them how to use it, and enabling their sales forces to position and sell it. Patrick holds a BS in Business Administration from California State University, Chico, and as a West Coast resident with East Coast family ties, he has a well-rounded perspective of American business and what it takes to be successful. Patrick loves to restore cars, hike and ski with his wife and two children, and play fetch with his Golden Retriever.

Ian Hutchinson
Head of Business Development - Retail Vertical

Ian Hutchinson leads Samsung's Business Development efforts for the retail vertical and is currently focused on the strategy and go-to-market for Connected Pop Ups. He is passionate about enabling enterprises to move the needle with their customers by applying unique technology solutions. He holds multiple U.S. and International patents in the field of interactive spaces. When He is not opening Pop Ups, he is a lead facilitator in the Mobile Innovation Workshops for Samsung enterprise customers.

Romulus Stoian
Director, DOOH Marketing Solutions Leader

Romulus Stoian leads the digital out-of-home solution business in Samsung SDS America. With Samsung SDSA, He develops exclusive and custom tailored solutions in smart retail and digital marketing, nurturing partnerships across the advertising ecosystem and supporting SDS' global solutions business with DOOH insights, critical expertise, guidance on signage standards and latest trends. Deeply in tune with the advertising space, Mr. Stoian brings to bear a 13-year track record in business development at Clear Channel Outdoor. He received an EMBA from Fogelman College of Business and Economics, University of Memphis, and BA in Journalism and Communications from University of Bucharest.

Thomas Lee
Project Manager, Retail Operations

Thomas Lee is an experienced Project Manager responsible for managing the Nexshop retail solutions at Samsung SDS America. In addition to commodity trading for several years, Thomas spent the majority of his early career working at Thomson Reuters as a developer and business analyst. Thomas earned a bachelor's degree from Dickinson College with dual major in computer science and mathematics. Born in American Samoa and raised in South Korea, he has lived in Jersey City for nearly two decades. In his free time, Thomas enjoys urban farming and spending weekends in NYC with family, including his young daughter, Jia.

ABOUT SAMSUNG SDS AMERICA, INC.

Samsung SDS America (SDSA) is the U.S. subsidiary of Samsung SDS, a $8B global software solutions and IT services company. SDSA helps companies optimize their productivity, make smarter business decisions, and improve their competitive positions in a hyper-connected economy using our enterprise software solutions for mobility, security and advanced analytics.

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