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# Journal of Retail Analytics

**Bringing Research  
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**ARTICLES**

**PAGE**

<b>Creating a Compelling Customer Experience at Blue Nile</b> <i>Joey (Jiayi) Chen, Research Assistant, Platt Retail Institute</i>	<b>5</b>
<b>Driving Retail Performance With Mobile Payment</b> <i>Scott Shamberg, U.S. President, Performics</i>	<b>14</b>
<b>How the Internet of Things is Reinventing Retail</b> <i>Ifti Ithar, Chief Executive Officer, ComQi</i>	<b>17</b>
<b>Location-Based Analytics Yield Customer and Inventory Insights</b> <i>Mackenzie Lane, Contributing Author</i>	<b>21</b>
<b>Mobile Device In-Store Data Collection and Related Privacy Issues</b> <i>Gweneth (Mengye) Luo, Communications Director, Retail Analytics Council</i>	<b>24</b>
<b>Mobile on the Horizon: Modeling Customer Dialogue via the Mobile Channel</b> <i>Kiseol Yang, Ph.D., Associate Professor, University of North Texas, College of Merchandising, Hospitality, &amp; Tourism, Department of Merchandising &amp; Digital Retailing</i>	<b>28</b>
<b>Retail Analytics Council Event Focuses on Using Analytics to Develop Customer-Driven Retail Solutions</b> <i>Sara Romano, Contributing Author</i>	<b>32</b>
<b>The Retail Digital Dilemma and a 'Nearby' Solution</b> <i>Colin Pizey, European Regional Director, MoZONE</i>	<b>37</b>
<b>Industry Snapshot: Retail Sector Performance Charts</b>	<b>3</b>
<b>PRI Research Articles</b>	<b>43</b>
<b>PRI Research Publications</b>	<b>44</b>
<b>PRI Research and Event Sponsorship</b>	<b>45</b>
<b>Industry Events Calendar</b>	<b>46</b>
<b>Contact PRI</b>	<b>47</b>

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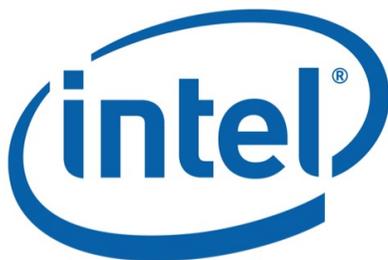
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## Industry Snapshot:

# Retail Sector Performance Charts

The following table and charts provide a snapshot of retail sales performance during the second quarter of 2015.

Retail Spending (%)	July	June	May	July Y/Y	2014	2013	2012
<b>Total Retail Sales &amp; Food Services</b>	0.6	0.0	1.2	2.9	3.9	3.7	5.0
Excluding Autos	0.4	0.4	1.0	1.7	3.1	2.7	4.1
Non-Auto Less Gasoline & Building Supplies	0.3	0.2	0.8	3.6	3.3	2.7	3.6
<b>Retail Sales</b>	0.6	-0.1	1.3	2.0	3.7	3.8	4.9

Source: Haver Analytics

Chart 1. Retail Sales: Total (Excluding Food Service).



Source: Federal Reserve Bank of St. Louis



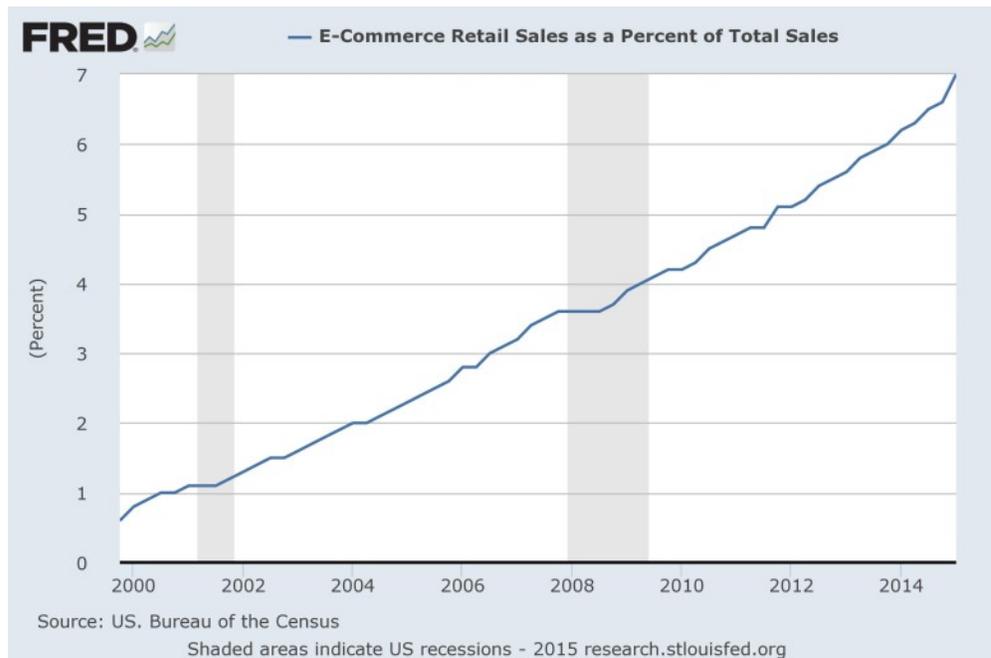
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Chart 2. Retail Trade: Nonstore Retailers.



Source: Federal Reserve Bank of St. Louis

Chart 3. E-Commerce Retail Sales as a Percent of Total Sales.



Source: Federal Reserve Bank of St. Louis



## Creating a Compelling Customer Experience at Blue Nile

An interview with Harvey Kanter, Chairman, Chief Executive Officer, and President, and David Binder, Executive Vice President, Chief Administrative Officer, and Chief Financial Officer, Blue Nile

By Joey (Jiayi) Chen, Research Assistant, Platt Retail Institute



**B**lue Nile is an online retailer specializing in diamond engagement rings and other high-quality jewelry. The business model focuses on creating a compelling experience by educating customers and guiding them through every step of the buying process, from selecting a diamond and a setting to having the finished product delivered – often overnight. Founded in 1999, Blue Nile has seen steady growth and is now one of the largest online retailers of diamonds. The specialty jeweler also has tested a store-in-store concept at Nordstrom, and more recently opened a small “Webroom” in a New York shopping mall. Blue Nile’s Harvey Kanter and David Binder shared the story of Blue Nile in a recent interview with the *Journal of Retail Analytics*.

**JRA:** You earned your undergraduate degree in marketing from Arizona State University. What made you choose marketing, and what motivated you to enter the retail industry after graduation?

**Kanter:** My dad was in retail and I always wanted to be in retail, which is a very dynamic business. Back when I started in the mid-’80s, there were still cash registers and you could see sales tabulated every day as the customer “voted” on whether or not they liked what you were doing. That’s ultimately how I defined marketing – understanding how to fulfill consumers’ needs.

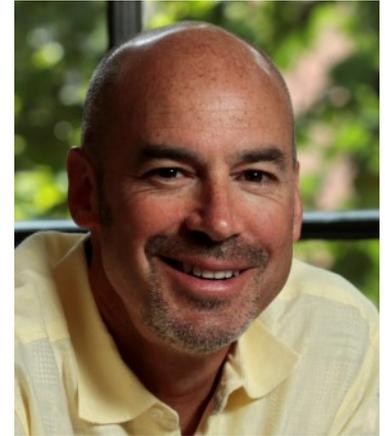
After Arizona State, I went to graduate school at Babson, which is one of the top schools for entrepreneurship and retail, and then entered the retail business in Los Angeles with a major department store that is now owned by Macy’s. My daughter is now in retail as a senior buyer, so the family tradition just keeps on going.



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**JRA:** What has been your greatest business achievement so far?

**Kanter:** My greatest business achievement is really about being part of compelling businesses where you build a brand, and you create the opportunity to fulfill customers' needs and expectations. Its one part aspiration and one part fulfillment. For Blue Nile, there is a level of actual fulfillment because most people need a ring when they get engaged. But more importantly, there is the experience and the interaction you have with customers, which is so compelling.



*Harvey Kanter is the Chairman, Chief Executive Officer, and President of Blue Nile.*

One of the things that I am proudest about at Blue Nile is our associates. We are creating an incredibly dynamic retail experience, where people are passionate about what they do because of what it means to our customers. Putting all that together, there is no one singular achievement as fulfilling as just being part of compelling businesses. It's not just the job; it's not just earning the paycheck. You are actually creating something that is really engaging and sustainable. I think that in itself is a really great achievement.

One way we assess the experience we create for customers is using the Net Promoter Score.<sup>1</sup> It's a measure of whether consumers want to tell other consumers about their experience. This is important because 75 percent of consumers decide where to buy an engagement ring based on friends and family. We want them recommending Blue Nile, and the way to do that is to create a compelling experience and build a relationship with each and every customer.

**JRA:** Since an engagement ring is supposed to be a "once-in-a-lifetime" purchase, I'm guessing you don't get a lot of repeat business.

**Kanter:** Actually, there is a pretty rich repeat business. The elements of bridal are more than just engagement rings. The reason I talk about relationship building in the experience is because customers come back to buy a wedding band more often than not, and that's repeat business. Then they come back for a five-year anniversary, then for a 50th birthday, then for a 25th wedding anniversary gift. Thirty percent of our business is on the repeat side, and that's why the experience is not just important for engagement rings, but important to the total relationship with the customer.

Mark Vadon founded Blue Nile based on his own experience buying an engagement ring. The short story is he was 20-something years old, trying to buy an engagement ring, and having a hard time with what could be described as an "opaque" industry. He had done a lot of research, went to one well-known retailer, and looked at two, seemingly identical rings, but they were priced about \$5,000 apart. Mark asked a simple question: Why should I pay \$5,000 more for this one than the other one? And the salesperson said, "Whichever one speaks to your heart is the one you should buy."

That was a wake-up moment when he said, "I can educate consumers, I can provide transparent guidance, and I can work without the overhead of brick-and-mortar stores to bring greater value through a fundamentally different business



<sup>1</sup> Net Promoter Score (NPS) is a management tool correlated with revenue growth and is used to gauge the loyalty of customer relationships. The score is based on a single, direct question: *How likely is it that you would recommend our company/product/service to a friend or colleague?*

model.” So that became the DNA of Blue Nile which 16 years later is nearly a half-a-billion dollar company and one of the world’s largest online retailers of engagement rings.

We have well-educated consumers; more than 80 percent of our consumers have four-year degrees or a master’s degree. Our core engagement customer is a slightly over 30-year-old male making just over \$100,000 a year. They do their research on diamonds, want to be guided, and appreciate the elements of what makes a diamond unique. That’s part of the value we bring to the market.

Our sales associates are not on commission, which is unique in the jewelry business, and the reason for that is we don’t want to create pressure. We want to provide facts, and ultimately, we want the customer to make the decision. When we first started, most people bet that Blue Nile would not make it past a year, much less 16. We were disruptive to the industry. Our average prices are generally 20 percent to 40 percent below traditional jewelry stores. Fundamentally we just have a completely different way we do business and we pass savings on to the consumer.

It’s really a modern way to shop. The millennial customers have begun to get married. They grew up with a smartphone in their pocket and they understand buying online, why it’s important, why it’s easier and smarter – among other things. It’s really about spending less and getting more.

That’s the history of the company and how it was founded based on the original founder’s personal experience.

**JRA:** Even if you go into a brick-and-mortar jewelry store to buy a diamond ring, it’s hard to know whether you are getting a good deal. How does Blue Nile build trust with customers?



**Kanter:** When the company was founded, we created a core requirement for the business: All diamonds are GIA-certified. The Gemological Institute of America is the gold standard for diamond certification. They basically certify the fingerprint of the diamond – the 4Cs and the more advanced elements of the diamond. The customer can buy off that certification with trust and confidence because they know exactly what they are getting.

Blue Nile, since the day it was founded, has a no-questions-asked return policy. You can buy what you want by 4 p.m. Eastern Time, have it sized to your finger, and delivered by 10:30 a.m. the next morning. You have 30 days to decide if you want to keep it. We will send your purchase overnight, for free, insured to your door. For some of the diamonds that are not in our vaults in Seattle, it might take three to five days, but within a week, you can have the same service. It comes with the GIA certificate. We have a buy-back program and a trade-up program. So, there is no risk and the price is 20 percent to 40 percent below traditional stores. So I would say, “How could you not buy from Blue Nile?”



**JRA:** How about the settings, which are typically more personalized?

**Kanter:** The majority of people who buy from us get their rings set with a diamond in the engagement setting. If you don't like it, you can just return it and have it reset. Our return rate is in the low single digits. There is a lot of energy and education around the stone, as well as the engagement setting itself. About 40 percent of the time, he picks it for her. The other 60 percent of time, she is involved and they are picking out the setting together. The majority of the time it never comes back because they are very comfortable with the setting and they know the quality of the stone they bought.



**JRA:** Beyond the cost advantage, what sets Blue Nile apart from other jewelry brands such as Tiffany and Zale's? What is Blue Nile's advantage?

**Kanter:** Today we have 225,000 stones on our website worth around \$2 billion of inventory. It's the largest collection of loose stones in the world. You have this incredible ability by looking at your phone, your tablet, or your PC, or if you live in New York, going to the Long Island Webroom, and exploring a selection that no one in the world can match. Stones are exclusively available at Blue Nile, so when a supplier lists the stone with us, they contractually obligate themselves to only list on the Blue Nile website. So it's not on any other website in the world. The quality of the stone is certified by GIA. Some jewelers do their own certification, which has obvious flaws.

Typically, if you buy an engagement ring from a traditional jeweler, you don't buy it out of the case. You usually have to order it and it takes two to three weeks to get the engagement setting, have the diamond set, and get it delivered to your home. At Blue Nile, we have something called a signature stone, which is a branded, exclusive stone for Blue Nile. If you buy a signature stone, which has specifications at the top 1 percent of quality stones in the world, you can order as late as 4 o'clock Eastern Time, and have the finished ring at your door by 10:30 a.m. the next morning.

At least once a month, I take calls from customers. I can't tell you how many guys call and say, "Listen, I'm shopping for an engagement ring. I'm thinking about getting married." You ask them when they are going to do this. Let's say it's Thursday and they say, "Saturday." So we have the ability to deliver in as little as one day, in direct comparison to traditional jewelers.

**JRA:** What motivated you to open the Webroom store on Long Island? How is it working so far?

**Kanter:** The jewelry category is actually the second-least-penetrated retail category online to our knowledge, somewhere between 5 percent and 10 percent. Compare that to apparel where today, 20 percent to 25 percent of business is done online. However, we believe that if a certain segment of consumers can touch and feel a ring, they would be more comfortable and see the great value to buying online.

We wanted to create a three dimensional, even more compelling experience, which is really important to millennial consumers today. We did this in a store environment that we call a Webroom, where customers come in, look at many of our actual settings and wedding bands, and try them on. They pick several different settings and then sit down at a table, which is similar to Apple's Genius Bar. They look at the rings, try them on, and take pictures. More importantly, they have a diamond and jewelry consultant to help them explore the website. Customers go



through the diamond search process, which is so easy and simple, to help them understand different shapes and different qualities. Ultimately, the question we had to ask was, "Will we convert materially higher in the Webroom than we do online if customers can see, touch, and feel?"

We tried this out for about a year in two Nordstrom stores with a shop-in-shop concept. We haven't released the data, but we sold millions of dollars of jewelry in these experiments. Based on this success, we asked ourselves, "With the sales success of Nordstrom, what if we open our own store, with much higher traffic capacity? Could we do even more business?"

That's what led us to open the Webroom in the Roosevelt Field shopping mall. The feedback from customers has been pretty incredible. They recognize the value because there are nine different jewelry stores in the mall, so they can cross-shop Blue Nile versus the others.

There is a lot of excitement about the store. We have to monitor the traffic because, on weekends, it is really crazy; there are 10 to 12 customers trying to get into the store, which is only 470 square feet.

We are happy with the result of this test location, so we will let this play out until the end of the year, and then make a decision about what it really means.

**JRA:** Do you have diamonds available at the store?

**Kanter:** All of our diamonds are virtual. They are either in the vault here in Seattle or somewhere throughout the world – that is the way it has been since the company was started. In the settings displayed at the store, we actually have cubic zirconia. If we put diamonds in all of those settings in the store, the inventory and insurance requirements would go up.

When you go to a normal jewelry store, if you are lucky, there are 100 to 200 loose stones and there may be 10 to 15 one-carat stones. On our website, there are 7,000 one-carat stones.

**JRA:** Do you have some customer feedback you could share with us?

**Kanter:** We had a customer that went to a competitor and bought one-carat diamond stud earrings. The customer didn't know about us until they walked by the store and came inside. They mentioned they already bought the studs from the other retailer, and said, "your quality is better. The price is almost half of what I've paid and you are so much nicer."



We had another customer who came in and bought a two-carat engagement ring from us. He had been at a luxury store where the same ring was over \$40,000. He came to us, and it was \$20,000.

**JRA:** Blue Nile went into the Chinese market and already has two offices in China. What market strategy did Blue Nile use to explore the Chinese market?

**Kanter:** We have been international for many years. We have had an office in Dublin since 2006. We opened our first Shanghai office in 2012 and now we have two offices in Shanghai. We ship to over 40 countries. Our website is in eight different languages and we speak 13 languages in our call centers. We are very oriented around international practice; it has never been exclusively U.S.



The Chinese market is one of the most important markets in the world today – the growing middle class, the Westernization of bridal, and the orientation moving from a ring which has many small diamonds to a more traditional center stone engagement ring like in the U.S. – is a trend. We opened in the Shanghai Diamond Exchange to bring diamonds into the country and have a call center there. We are on Tmall, Xiu.com, and through a partnership, we are on JD.com. In the last three years, we started going to wedding shows. At these wedding shows in China, people pick their wedding dress, car, hotel, caterer, and buy their wedding ring. There are 60,000 to 70,000 people in 48 hours going through wedding shows. We now do five wedding shows a year in Shanghai and we sponsored the last wedding show. These are all incremental elements in trying to grow the Chinese market.

Last year, coming out of the first-quarter earnings call, we were well over \$30 million on an annualized basis, moving toward an annualized number of \$35 million. That is a really meaningful number with an expectation that we will continue to grow. In the last four quarters, our business has gone up 48 percent, 32 percent, 50 percent and 59 percent year-over-year. That is quarter three, quarter four, quarter one and two for Blue Nile in China. In 2014, we grew in China by 37 percent on an annual basis. So that customer in China really understands the diamonds and has an appreciation for the value we bring to the market. We will continue to look to grow that business.

**JRA:** Is the Chinese customer different from the U.S. customer?

**Kanter:** There are elements that are unique to China. The average sale is less in China than in the U.S. There are more solitaire settings, which is a single-stone setting, than there are semi-mounts, which are diamonds on the side of the ring. There is a greater level of platinum metal used in China than in the U.S. Customers buying online, I think are driven by the GIA certification, so the Chinese customers know what they are getting, the value we created, and the ability to receive it relatively quickly.

**JRA:** What website metrics help you run the business beyond the P&L?

**Binder:** People are coming to us to find information as much as they are coming to make that first transaction. So we tend to see people who come to the website, they engage with the education portion of our content, they will read through pages and spend time trying to learn about the 4Cs, and to go deeper. We look at those metrics, but then we get more focused on people who start using the diamond search function on our website. Once the customer has done that, they are really qualifying themselves as being highly interested in purchasing a product that has a loose diamond in it. From there, we really defined the funnel of when do I look at a diamond detail page, when do I put those diamonds into a cart, when do I start looking at the engagement ring settings? Then we look at the percentage of that traffic that goes from step one through step seven and then eventually makes a purchase.



*David Binder is the Executive Vice President, Chief Administrative Officer, and Chief Financial Officer of Blue Nile.*

**JRA:** Do you change messages at different points during the purchase process?

**Binder:** It's really distinct to our category in the way we have it set up. I'm focusing on what's really driving 80 percent of our revenue. Products that are not diamond-based drive the other 20 percent. We are just focusing on those loose diamond products. Then we look at things that happen along that funnel that could influence whether or not a customer goes deeper, and eventually makes a purchase. So we



look at messaging that the customer sees. One thing we've talked about internally is adverse condition messages. That's when a customer is looking at a loose diamond that is not in our vault, rather it is virtual inventory that our suppliers list and have control over. When the supplier makes a change that raises or lowers the price of the diamond, or even if they remove the diamond from the website, the customer is seeing all kinds of different messaging. As we measure the conversion funnel, we are looking at these messages that will either accelerate or reduce the conversion rate. We try to pinpoint and quantify the impact of that and we look at ways we can offset that with our own retail tools.

**JRA:** Have you noticed an increase in mobile usage?

**Binder:** That has been fundamental to the user experience over the past four years. Now over half of our traffic is coming from a mobile device, including a tablet. That was in the low 20 percent-range four years ago. It's very quickly surpassed people coming from the PC. We believe that because diamonds are such a considered purchase, that same user who comes to us from a mobile device will come back on a PC at some point, either to make the purchase or to continue the investigation. Because one of the touch points is coming from a mobile device, we have to make that user experience compelling and consistent with the experience that they get when they come back on a PC. That actually has been a large source of investment for the business over the past three years. We are really changing the user experience across all platforms so that when a customer comes to us on a mobile device, it's consistent and positive.

**JRA:** Do you see many purchases from mobile devices?



**Binder:** We still see that conversion rates lag on mobile devices versus the PC, but the gap between conversions on mobile to PCs has shrunk. Typically, we will see a \$200,000 transaction every quarter coming from a mobile device, so people will even buy a large, exceptional piece of jewelry. In quarter four of this year, we sold an engagement setting on an iPhone for \$396,000. But more and more, that conversion rate is growing faster than the conversion rate is growing on a PC.

I think the 31-year-old male, who is the core demographic for our engagement business, has grown up surfing the Web on a mobile device and has done a lot of transactions on his phone. I think more and more we are going to see that buying decision is going to happen on the phone just as much as it happens on the PC.

**JRA:** Big Data is a hot topic. How does Blue Nile use this information to better understand consumer behavior and improve the shopping experience?

**Binder:** We are trying to flex our muscles with data and analytics. If you were to use a baseball analogy, we may be in the third inning. It actually has been a pronounced evolution over the past two years. As we've gotten to greater scale and really understood the purchase funnel, and where people can get hung up in the funnel, it has encouraged us to expand our analytics to move beyond just transactional metrics.

"Big data" is such a broad, murky term. For us, we have every click that has ever been logged on our website. We have virtually all changes that have happened outside of that user experience logged in our data warehouse as well. I can tell you every single change that happened to every single listed product and every single click that happened on that date, and how much of that converted to sales



and what those sales look like. I can do that for every day in the company's 16-year history.

Mining that data and concluding useful insights is a challenge. More and more we have started to leverage regression, multivariate analysis, to try to figure out what the baseline consumer behavior is in our category. What has created the inflections and drags on growth rates? Ideally, what we are trying to figure out, among other things, is what the right margin structure is for our business, what the right level of marketing spend is, and how to push incremental dollars to drive user behavior to convert better, and not just to drive more traffic to the site.

We have tried to expand a data science program, to use more statistical methods to find out that ideal behavior set. The big thing for us is, always align it to action that you can realistically take. Not just to have insights for the sake of insights, but to drive the analytics and the data science to make operational changes.

**JRA:** What is the future of Blue Nile? What's your plan over the next 10 years?

**Kanter:** Fundamentally, we will continue to bring a unique experience and value to the consumer. The "peel back" of that experience is basically giving them more choice. We give them the choice about what kind of device to shop on, or what kind of channel to shop in, for example, a Webroom. The millennial really wants choice, and in the simplest, easiest way.

We were one of the first jewelers to launch a responsive design website, so customers can have that experience and choice across any device. We believe we were the first jeweler ever to have an app. When you talk about vision, it's really about being where the customer wants us, when they want us, on their own time, in a way that's relevant and important. The question is, do you tease it out into

other categories? Do you push harder to bring that to life, e.g., China? Today we have one Webroom in the U.S. Will we have more? I don't know yet. If we have more in the U.S., is it logical that we might have them in China? Perhaps.

It all goes back to your initial question about why I am a retail marketer. Blue Nile is about satisfying consumers' needs and finding the best avenue to do that.

**JRA:** If you go to other product offerings, for example, watches, how will it impact the brand?

**Kanter:** We do not envision going to a broader product mix. We are a jeweler and I see us taking the jeweler specialty that we execute so well, across the world in a deeper, more profound way. We don't expect to be in watches or hand-



Creating Compelling  
Customer Experiences  
(cont'd.)

bags, or any other extensions. We are not a lifestyle brand. We are clearly the most demonstrative retailer of engagement rings and loose stones in the world.

**JRA:** Is there anything else you would like to mention?

**Kanter:** It's a dynamic business and we are appreciative of the response that the consumer has had to Blue Nile. I hope you can appreciate our strong orientation to the consumer experience. Experience is something that happens to you and then, what do you do about it? Do you tell the world about it? If you do – and our Net Promoter Score of 85 would say you are telling a lot of people about it – then that's something we are really proud of.



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## Driving Retail Performance With Mobile Payment

By Scott Shamberg, U.S. President, Performics

**T**he Amazon Effect has caused a dramatic shift in how consumers buy goods and services. The basic premise is simple: give consumers what they want, when they want it.

As Amazon has turned brick-and-mortar retail locations into showrooms, retailers have set out to redefine shopping experiences. Payment innovation is part of this, and retailers are currently trying to align with consumer demand in the quickly accelerating mobile payments space.

Starbucks launched its mobile payments and rewards app in 2011 and now has over 13 million U.S. users, representing 16 percent of all Starbucks transactions (Fast Company, 2015). Even Starbucks's numbers are relatively small compared to the estimate that, by 2019, 14.8 percent of all U.S. in-store payments will be mobile (Business Insider, 2015). The U.S. mobile payments space – now accelerated by Apple Pay – is expected to exceed \$800 billion by 2019 (Business Insider, 2015).



The struggle for merchants – big and small – is that technology remains fledgling, and consumers lack trust in existing solutions. In fact, 36 percent of consumers say that they haven't tried a mobile wallet due to lack of trust and security (MEF, 2015). Today, that is changing as a growing number of shoppers want to self-select how they pay for things. Now, 48 percent of millennials are interested in using their mobile devices as payment mechanisms (Deloitte & Touche,

2015).

It's imperative for retailers to own and drive how this self-selection takes place. If merchants are not able to put skin in the game on how payments innovation will evolve in the environments they own, technology companies will continue to chip away at both share and sales. If that happens, merchants of all sizes run the risk of getting blown away by the perfect payments storm on the horizon.

### A Short History of Mobile Payments

When the first commercially approved cellphone launched in 1983, commerce wasn't part of the product roadmap. In fact, it was utility that found its way onto the phones in the early 1990s, with Philips pushing "The Synergy," which included wireless access to email, Internet and fax. While many cellphone manufacturers concentrated on business utility (e.g. Palm Pilot and Blackberry), other visionaries were formulating new markets and uses. The first form of "mobile commerce" occurred in 1997 when the first two mobile phone-enabled Coca-Cola vending machines were installed in and around Helsinki. The machines took payment via SMS.

Fast forward to 2003. At one of the first *All Things Digital* conferences, Steve Jobs expressed an opinion that cellphones were going to become "important devices for portable information access." In 2007, Apple released the iPhone. "Portable information access" became the foundation for m-commerce – a watershed moment.



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This is not to say that other milestones did not have an impact. PayPal enabled mobility in 2006 (before the iPhone even launched). At the end of 2014, PayPal still ranked as the number one mobile payments app/service used for U.S. mobile payments at 43.1 percent [Google Wallet was 9 percent and Apple Pay was 4.9 percent (Federal Reserve Board, 2015)]. More than 20 retailers now accept PayPal payments in-store, including Dollar General, JCPenney, and The Home Depot. Furthermore, Square (launched in 2010) enabled smaller merchants to accept cards. Not to be outdone, Amazon launched Local Register, a POS solution for smaller, local merchants.



Apple announced Apple Pay in September 2014, its offensive push to conclusively win the digital wallet. It isn't just that the iPhone 6 includes Near Field Communication (NFC), but the scarier proposition for the retail industry is the retailers now accepting Apple Pay: Macy's, Bloomingdale's, Subway, Whole Foods, Disney, and McDonalds – which is losing its young audience.

Apple has the penetration, the relationships, the brand equity, and, perhaps most importantly, the muscle to change how commerce happens. When Apple walks into the headquarters of any retailer in America (or the world), that retailer must listen.

### Preparing for the Future

It is inevitable that self-selected forms of payment will shift dramatically as Gen Y and Gen Z use mobile as their main form of connectivity, and Apple Pay gains influence. To respond to this opportunity, retailers can either build, buy, or partner. Realistically, there are build elements to preparedness for all retailers. The technology foundation must be in place to allow for connectivity, and this starts with viable Wi-Fi.

The driver for how and when to be prepared hinges on three key factors.

**Audience:** Who is your current customer? Who is your aspirational customer? If your main customer is Gen Y, in-store connectivity around both payments and content should be a top priority. If Gen Y is your aspirational target, include self-selected payment methods on your roadmap in a test/beta form and identify partners who can grow with you.

**POS System:** Perform a real audit of your current POS system to determine whether (1) a more fluid and dynamic alternative can be placed on top of the legacy system or (2) a true reboot is needed. There are obviously sunk costs with both, but switching costs are considerable when replacing a legacy system.

**Online-to-Offline:** Perhaps the most interesting (and currently undefined) opportunity is the ability to leverage mobile – and specifically mobile wallets and payments – to bridge the gap between online behavior and in-store activity. As a growing number of brick-and-mortar retailers embrace in-store mobile interactivity, retailers will need to leverage more first- and



third-party consumer data to create more engaging store experiences. When this happens, the expectation of the shopper – regardless of generation – will be to self-select payments.

Currently, we are at a new watershed moment in the history of mobile payments. Younger consumers want to self-select payment type, and they now have the iPhone 6 with Apple Pay in their pockets, which stores are increasingly accepting. This future requires brands to redefine physical shopping experiences – with consumer needs and wants at the center.



*Scott Shamberg is U.S. President at Performics, a performance marketing agency with its headquarters in Chicago.*



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# How the Internet of Things is Reinventing Retail

By Ifti Ifhar, Chief Executive Officer, ComQi

**T**he buzz about big data and the Internet of Things (IoT) has started to seem more like a roar in 2015. The scope of potential devices is measured in billions, and the implications are vast. But what does all that IoT buzz really mean for retail marketers and how they interact with shoppers in stores?

This article goes beyond the big numbers and future forecasts to focus on one of the ways the IoT really matters for a retail group – how it can start to leverage IoT-driven systems and make shopping better for its customers through seamless, effective visual messaging.

## Background

Retailers and their suppliers can't help but see TV spots, print ads, and lots of blogging about the IoT.

Microprocessors and ubiquitous Internet connectivity mean we have transitioned from a retail world where the intelligence was all at the sales counter and back office, to one that sees smart devices everywhere, and on just about anything.

## Boiled Down

Billions, and eventually trillions, of devices are being deployed and connected – everything from the Point-of-Sale (POS) systems to sensors at dressing room doors. They can differ wildly, but all have enough built-in smarts and connectivity to report on what they are doing and what is going on around them.

Those devices can send data that can then be rolled up and analyzed to provide rich, invaluable insights about activity and status. IoT devices can make sense of and optimize entire mass transport systems, or they might be the triggers for simple customer service actions at a shop.

## Simple Example

A motion sensor located at the gateway to a dressing room triggers a notice to portable devices carried by sales associates, or at a service counter. The sensor has logged someone standing there for more than 10 seconds. So help is dispatched and shoppers get a better experience, because they are not left waiting and the retailer can optimize their in-store staff. The salesperson's device might be nothing more than a smart watch that vibrates and flashes a notice: "customer waiting at dressing room B."

That sensor and that watch are IoT "things." So is the software that brings those "things" together, raises a flag that someone is waiting, and triggers that message.

## Applying IoT in Retail

Consumer demand for convenience, product availability, and both personalized and contextualized interactions will drive retailers to adopt multiple IoT technologies in the coming years.

The use cases in retail cover a wide spectrum, and include:

- Product tracking/traceability.
- Interactive consumer engagement and operations.
- Smart operations (which includes interactive consumer engagement and dynamic, hyper-local message targeting).



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- Shopper intelligence.
- Mobile payments.
- Inventory management.
- Asset management.

There are huge efficiencies to be gained when devices can collect data and use real-time information in meaningful, actionable ways. Retailers grow more nimble because the information and insights they need are readily available.

IoT also has big implications for the in-store marketing efforts of retailers and brands. Connected devices – from POS and cameras to readers and beacons, can all help drive better, easier experiences for shoppers.

Driven by live data devices and systems, an “aware” store can deliver smarter messaging on screens of any size. Instead of canned, pre-determined messaging, smart screens in an aware retail environment are providing shoppers deeper information about what they are looking at, and influencing buying decisions, including up-sells.

Smart systems will trigger content based on multiple contributing factors, including what is underperforming and overstocked, what is running out of stock, time of day, environmental conditions, online trending, and countless other potential variables.

Retailers can also market and merchandise based on shopping and buying patterns revealed through loyalty programs, online browsing, and search trends. Bluetooth low energy beacons, when married to a retailer’s dedicated or partner shopping apps on phones, can generate visual heat maps that show how consumers move around stores. To generate even more detail, it is also possible to maintain individual privacy by anonymously triangulating and mapping how shoppers move around stores, based on their phone’s Wi-Fi being activated.

Though Hollywood sometimes suggests dystopian futures where retailers and brands obliterate privacy and market to individuals even inside a store, the real world application would raise few alarms. Retailers are looking for actionable insights to tailor what they offer to what consumers actually want. When they get that right, consumers tend to be happy, make purchases, and most importantly, come back for more.

This highly tuned, hyper-local and dynamic marketing and merchandising doesn’t happen without a back office system and store-level messaging platform. Those IoT nodes, the data, the many triggers and actions, all need to be aggregated and harmonized. Then a system is needed to dynamically turn insights into actionable, impactful messaging.

### **Retail IoT in Use**

Here are some examples of how major retailers are already applying IoT data to drive experience and sales:

Retailing giant Walmart heavily uses big data for consumer insights and store-level merchandising. The company mines social media trends to showcase prod-

***78 percent of consumers said they would be more likely to purchase from a retailer again if its offers were targeted to their interests, wants, or needs.***

***86 percent said they would be willing to pay up to 25 percent more for a better experience.***

Source: Infosys, 2014



ucts that are rising in popularity, and local weather data is compared against historical sales data to boost grocery sales. For example, Walmart's data shows that sales for salad ingredients rise when the forecast suggests temperatures above 80 degrees and light winds.

Nordstrom tracks pins on Pinterest to see which products are trending, and uses that on signs in-store to show shoppers what interests their peers.

Disney has RFID-enabled MagicBand wristbands that provide theme park access, entry access for guest hotel rooms, and cash- and card-free payment for food and merchandise. All of that activity is also tracked data that helps build a better picture of how guests use Disney services.

***“Digital Signage use in retail outlets will grow from \$6.0 billion in 2013 to \$27.5 billion in 2018, a 35.7 percent five-year CAGR, as retailers continue to digitize the consumer experience”***

Source: IDC, 2015

Online retailing giant Amazon is once again disrupting bricks-and-mortar retailing with the Dash Button, a Wi-Fi enabled device that is mapped to specific consumer packaged goods products like laundry detergent. Stuck to a washing machine, all a consumer needs to do when the current supply is running low is tap the button that generates an order, transaction, and delivery of a fresh supply of detergent.

### **Devices, Data, and Analytics**

IoT in retail has three key components: Devices, Data, and Analytics

#### **Devices**

IoT encompasses a wide variety of devices, including: point of sale, inventory management, card readers, scanners, cameras, access control systems, beacons, smartphones, contactless NFC tags, mobile customer/stock information applications, sensors, customer buying behavior analytics, merchandise supply chain planning applications, social networks, communications networks, business supply chain performance analytics, and in-store digital promotional systems (such as digital signage). Perhaps smart watches, refrigerators, and home thermostats will also have a role one day.

#### **Data in all its many forms**

Potential data sources are vast. Inside retail, there is the master data that describes pricing, transactions and customer relationships. “Current observations” data describes browsing and sales behavior, as well as external insights such as social media trending. “Action taken” data models things such as which items were purchased, which promotions were offered, and which were accepted. Then there is another layer of external sources that can be applied, from logistics information (if a shipment is late) to weather and news.

#### **Analytics**

The largest technology companies are making big investments in IoT (\$3 billion at IBM, for example) to develop systems and cloud infrastructure that can ingest, analyze, and act on all of the data being generated. Machine Learning systems are being applied to the data that is collected in order to create insights into how the market is evolving in near real-time. Analytics systems require ready access to data from a wide variety of sources, especially in-store.



## Making Insights Actionable

Technology is already well entrenched in retail environments – at the checkouts, back of the house, in distribution centers, and at the head office. Every supplier is looking for ways to expand its footprint with clients and provide more services. They are all good at what they do – like transaction processing – but can these suppliers also serve very different purposes, like making IoT data insights actionable?

Probably not.

The better option is a platform tuned to ingesting content and data, and then using that data to generate and target appropriate messaging across very large, distributed networks of displays across retail estates.

A system designed from inception to organize, schedule, and target content based on data will be highly efficient, saving on time and resources, and largely automating many processes.

Smart devices and sensors are not entirely new to the retail ecosystem. Sensors and readers have for years been a big part of upstream manufacturing, as well as supply chain management, logistics, and inventory.

But leveraging IoT for the biggest of retail moments – in front of shoppers, is very different. A solid IoT plan also opens wide the doors to more detailed analytics about what is really happening at the store level.

“Forrester predicts that 2015 is the break-out year for the digital store, unlocking new experiences and value that can only be delivered in a physical location”

Source: Forrester, 2015

There are two tracks for retailers and their technology partners wanting to deploy an IoT solution. One is to build it themselves. The efficient, safe, and fast track is to consider a retail-tested solution, open and ready for integration.



*Ifthi Ifthar is the Chief Executive Officer of ComQi.*



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# Location-Based Analytics Yield Customer and Inventory Insights

By Mackenzie Lane, Contributing Author

As the behavior of consumers changes due to continuous developments in digital shopping, retailers are investing in integrated information platforms in order to analyze and better understand their customers. Data accumulated both online and in-store allows retailers to find specific ways in which to enhance the shopping experience and gain valuable customer insights, as well as to improve inventory accuracy, demand forecasting, supply chain optimization, prevention of fraud, customer loyalty, and many other functional applications in their operations. Integrated analytics provide management with information to enable the best decision based on numerically measurable business outcomes consistent with the goals of the company.

A new Research Article from the Platt Retail Institute explains how changes in shopping behavior are driving retailers to become data-driven organizations. Sponsored by Tyco Retail Solutions, *Customer and Inventory Insights Generated by Location-Based Analytics, and the Introduction of an Online – In-Store Behavioral Bonding Model*, examines how retailers are seeking consistency in their operations across channels. The following is a summary of the Research Article, which may be downloaded [here](#).

## Digital Shopping

Online activity has an enormous influence on in-store purchases. With the advent of digital shopping, consumers expect more convenience from retailers. This



means that consumers are likely to buy more from retailers that provide multiple channels for shopping, including but not limited to digital shopping outlets, use of a digital device during their shopping journey, and social channels.

The digital impact on in-store shopping has also played a positive role in customer loyalty with 75 percent of consumers claiming that product information provided on social channels influenced their purchase decisions and enhanced their loyalty to the brand. In its 2014 study entitled *The New Digital Divide*, Deloitte Digital estimated that by the end of 2014, consumer use of computers, tablets,

and mobile devices would influence 49 percent of in-store sales. In the future, retailers will need to consider that consumers' expectations of the in-store experience will closely resemble their digital shopping experience, with sales associates equipped with mobile devices to provide immediate product information, instant answers to questions, and the ability to download video demonstrations.

Retailers may be faced with challenges when integrating organizational data. Some are hindered by a functional structure that siloes data within different areas making it difficult to derive analytics across the enterprise. Others are still not recognizing the value of analytics generally. Due to technological advancements, it has now become possible to collect and process vast amounts of data, in some cases in real time, which provides a significant competitive advantage. When online and in-store system processing is effective, then inventory, warehouse, marketing, pricing, and other software platform data can be integrated.



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In the process of developing an informational strategy for retailers, it is important to understand certain concepts. First, a retailer must define information, a sufficient definition being: "Information provides an organization with a goal-seeking system to decide and/or control." This will establish a benchmark against which information can be considered for inclusion in its data platform investment. Informational requirements would include determining a goal, deciding which alternatives are worth measuring, and what steps are required to meet this goal.

### **Value of Analytics**

In the effort to understand the value of information (VOI), the Research Article advances that every firm will have a differing perspective on VOI generated by the use of analytics. It is also suggested that as the value of a factory that turns raw materials is distinct from the value of finished goods, the value of the software and hardware that processes raw data is distinct from the value of the information that it produces for purposes of calculating the VOI. For example, one retail-focused study conducted by IBM in 2014 found that organizations using big data and analytics within their innovation processes are 36 percent more likely to beat their competitors in terms of revenue growth and operating efficiency. Retailers will benefit more from increases in customer analytics deployment than other industries due to access to large amounts of information.



### **Customer and Inventory Location-Based Analytics**

Many retailers fail to value the importance of analyzing in-store traffic because historically, the tools for performing these analytics were expensive, or they are not recognizing the importance of converting shoppers into buyers. New and less expensive technological advancements for in-store traffic measurement allow a retailer to understand consumer behavior based on information including: store traffic patterns, in-store location dwell time, repeat visits, and the date and number of customers detected in the store. Understanding these patterns of behavior may help a retailer understand and improve operations, customer engagement, marketing, and promotions.

The Research Article also discusses the importance of inventory analysis. One such technology for inventory analytics is Radio Frequency Identification (RFID), whereby merchandise information is imbedded into a tag that is captured by a reader. Unlike bar codes, it holds more information about the product and provides accurate, real-time tracking of movement in the supply chain. It has the potential to reduce inventory, save labor costs, improve supply chain coordination, as well as addressing inventory distortion, which is the difference between what inventory they believe is on hand versus what is actually available. Though inventory management systems may be in place, their effectiveness is impacted by unobservable inventory discrepancies that result in inaccurate inventory records. This may be due to shrink (such as physical loss or damage of the item), transaction error (scanning or counting errors), and temporarily misplaced merchandise in the store. Inventory distortion can have significant consequences involving loss in revenue and poor store performance.

### **Online – In-Store Behavioral Bonding**

As noted, online activity has a major impact on in-store purchases. Therefore, an understanding of the relationship between online behavior and in-store activity is



essential in helping retailers measure how an online-delivered stimulus may result in an in-store purchase. An “online – in-store behavioral bonding” model is introduced, using data sets such as POS, marketing, advertising, and promotion, among others. The impact of these messages is measured by considering the five stages<sup>1</sup> that consumers experience when selecting merchandise. These messages can then be tailored and fine-tuned to influence consumer behavior at those various stages based upon measuring the outcome.

In conclusion, with the rapid changes in shopping behavior and especially the relationship between online and in-store consumer activities, it is highly important for retailers to make technological investments in an integrated information platform. This will allow them to pull data and related analytics from various sources to provide consumer and operational insights.

[Read the full Research Article](#), “*Customer and Inventory Insights Generated by Location-Based Analytics, and the Introduction of an Online – In-Store Behavioral Bonding Model.*”



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<sup>1</sup> The five stages include the following:

1. Recognize needs – the consumer experiences an unsatisfied need (task or pleasure).
2. Search for information about the merchandise/retailer – motivated by a need, the consumer seeks out information based upon his past experiences and a consideration of external sources of information.
3. Evaluate and select merchandise/retailer – product and retailer attributes and characteristics are considered and weighed, which leads to decisions being made.
4. Purchase merchandise.
5. Post-purchase evaluation.



# Mobile Device In-Store Data Collection and Related Privacy Issues

By Gweneth (Mengye) Luo, Communications Director, Retail Analytics Council

Retailers are taking advantage of the opportunities provided by the collection of customer information to grow revenue. Data mining techniques are used to offer personalized and relevant products and services. Thus, it is not surprising that the “breach” of customers’ information has gone beyond selling the data to others to collecting information gathered by emerging tools, such as mobile phones or apps, for specific purposes.

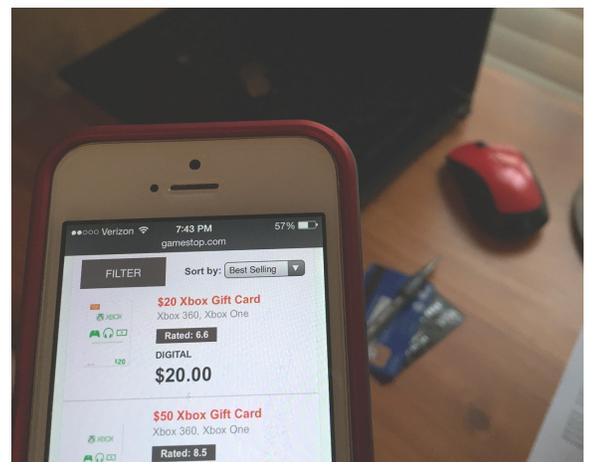
Retailers have adopted various approaches to the issue of whether or not data should be collected, or how it should be collected, so as not to violate customers’ privacy. For example, while testing Euclid Analytics data collection capabilities, Nordstrom posted signs in stores notifying shoppers that they could refuse to be tracked by turning off their smartphones. Similarly, Apple disclosed the use of beacons in its stores and received no customer complaints.

Both instances above showcase the importance of informing customers of retailers’ data collection and use. This article will discuss an empirical example of how Wi-Fi location-based analytics testing is used in a major retail store – referred to as Retailer X<sup>1</sup> – in terms of mobile device data collection, which later serves analytics purposes. This collection process adheres to Federal Trade Commission (FTC) guidelines. Privacy-related regulations also will be reviewed retrospectively, along with an evaluation of current guidelines, and suggestions for several options to better tackle customer in-store privacy issues, especially when using Wi-Fi location-based tracking.

## Research Introduction and Data Collection Methodology

The mobile device data aggregation at Retailer X aims to study the accumulated information on store traffic patterns, in-store location dwell time, repeated visits, etc., at a granular level.

In order to achieve the research goal, the basic methodology used is collecting anonymous and non-individual information, by scrambling mobile device IDs (a unique ID for each device that is tracked in store). Since the research goal is to analyze aggregated traffic patterns instead of the movement of each device, with no intention to leverage any individual customer’s data, this practice does not appear to violate any privacy laws or regulations. Also, the identification of a mobile device is considered as anonymous, because the data is not connected with an individual. One thing to note is that a key consideration in the research design is to develop and implement a discreet procedure, which follows FTC guidelines and thus protect Retailer X’s brand image.



<sup>1</sup> For business concerns, the retailer’s name is replaced with “Retailer X” in this article.



## Historic Challenges in Customer Privacy Protection

In the United States, customers' privacy protection has developed in a "patchwork fashion,"<sup>2</sup> according to Jay Liebowitz. The author notes in his book, *Business Analytics: An Introduction*, that instead of centralized federal laws, most privacy-related issues in the United States have been promulgated through scattered constitutional amendments, acts, court findings, or regulations. More importantly, these guidelines, except for FTC regulations, arose case by case in the realm of criminal investigations. In addition to the decentralization, another challenge is that these guidelines or regulations usually start in the citizens' privacy protection arena, and it becomes difficult to interpret these existing regulations in the digital space, especially when data mining is a new, evolving practice.

**"... the challenge with tort law makes it difficult to protect customers' privacy now."**

Meanwhile, Liebowitz also regards tort law as another strong "basis" for privacy protection issues. However, the four different tort causes of actions which are protected,<sup>3</sup> show that the conditions mentioned are not fully applicable in a retail environment where data mining is used, not to mention that quantifiable harm is also required in successful tort claims. Therefore, the challenge with tort law makes it difficult to protect customers' privacy now.

Last but not least, the FTC's *Fair Information Practice Principles (FIPPs)* is another regulatory framework that addresses privacy protection issues. These non-binding rules provide guidance as to the information practices companies should use to ensure adequate privacy protection. For example, from the customers' perspective, the core principles in *FIPPs* state that:

- Customers should be given notice of an entity's information practices before any personal information is collected from them.
- Customers should also be given choices related to secondary uses of information.
- Individuals should be able to view the data an entity has collected about them and contest that data's accuracy and completeness.

From a company's perspective, *FIPPs* gives explicit guidelines that "Data collectors should assure data integrity by taking reasonable steps."<sup>4</sup> The challenge about *FIPPs*, nevertheless, is that it should be "modulated to address big data by relaxing the principles of data minimization and individual control, while tightening requirements for transparency, access, and accuracy," according to Tene and Polonetsky in *Big Data for All: Privacy and User Control in the Age of Analytics*.

## Customer Privacy Protection: Current Status

Besides the regulations and case law above, additional guidelines have emerged in the United States in the past two years, which are more closely related to new technologies such as mobile phones and mobile apps. A U.S. Senate bill titled *The Location Privacy Protection Act of 2014* addressed a concern related to "stalking apps." In this regard, the sponsor, Senator Al Franken, stated his concerns about more and more stalking apps using tracking location data for commercial purposes

<sup>2</sup> Liebowitz, Jay. *Business Analytics: An Introduction*, 2014, p. 230.

<sup>3</sup> The four tort causes are: 1) Unreasonable intrusion or intentional interference with a plaintiff's interest in solitude or seclusion, 2) Public disclosure of private facts, 3) Publicity that places the plaintiff in a false light, and 4) Appropriation of a character's name or likeness.

<sup>4</sup> Federal Trade Commission. *Privacy Online: A Report to Congress*, June 1998.



without informing users. This bill broadened the previous scope of privacy violation to a wider but more specific level – the location tracking function. In the bill, Senator Franken also proposed a solution that “If a company wants to collect or share your location, it has to get your permission first and put up a post online saying what the company is doing with your data. Once a company is tracking you, it has to be transparent – or else it has to send you a reminder that you’re being tracked.”

Similarly, in *The Prepared Statement of the FTC before the Senate Judiciary Subcommittee on Privacy, Technology and the Law*, published on June 4, 2014, the FTC also noted its concern about geolocation privacy protection, which also is strongly associated with mobile app location functions. It states, “Because geolocation information can reveal a customer’s movements in real time, as well as provide a detailed, comprehensive record of a customer’s movements over time, use of this sensitive information can raise privacy concerns. Geolocation information can divulge intimately personal details about an individual.”

However, the *The Location Privacy Protection Act of 2014* did not pass, which again showcases the challenges and controversy concerning privacy issues.

In fact, the privacy problem has become even more complicated with mobile phones and a wider technology spectrum. One example is Personally Identifiable Information (PII), the definition of which has changed in the past few decades. The crucial role of PII’s definition lies in the fact that it determines what data is being collected, and whether the data collection violates an individual’s privacy or not. Until now, there was no standard definition of PII, and the term itself has evolved

**“In fact, the privacy problem has become even more complicated with mobile phones and a wider technology spectrum.”**

several times in the past decades. In the *Privacy Act of 1974*, PII was defined as “information about an individual that identifies, links to, relates to, is unique to, or describes him or her.” In the *Guidance for Agency Use of Third-Party Websites and Applications* introduced in October 2014, PII was defined as “Information that can be used to distinguish or trace an individual’s identity, either alone or when combined with other personal or identifying information that is linked or linkable to a specific

individual.” While the definition has expanded to better suit current technology development, the challenge is that what PII really stands for is still “not anchored to any single category of information or technology.” According to this same *Guidance*, “it requires a case-by-case assessment of the specific risk that an individual can be identified (whether it is PII or not).” Hence, the inability to define categorically what PII really means leads to the inaccurate boundary between whether or not privacy is violated.

### **Data Collection And Privacy Protection Approach**

Based on the historic and current concerns in the privacy protection arena, various methodologies were developed to collect data in this empirical Retailer X example. Of course, when designing all methodologies, some crucial aspects should be taken into consideration not only to adhere to relevant regulations, but also to better protect customers’ privacy. Such aspects include, but are not limited to, scope of private information, anonymity, transparency, accountability, accuracy, security, liability, remedies, and enforcement.<sup>5</sup>



<sup>5</sup> Liebowitz, Jay. *Business Analytics: An Introduction*, 2014, p. 228.

There are two major ways to collect Wi-Fi device data, which were available for use in Retailer X's traffic pattern analysis. One data collection method considers signals emitted from a device that is looking to join a network. Generally, most devices will actively look to join a network unless the Wi-Fi is turned off. The second method requires customers to go through an "on-boarding process" to get connected to an in-store Wi-Fi network. To be more specific, a simple procedure would be inserting in the "terms of acceptance" a step when an individual is on-boarding; the customer needs to accept the terms as a condition of use. However, this second method may be problematic, as despite the insertion of "fine print," customer fears may still outweigh the informational use intended.

Three approaches are illustrative of how to address customers regarding the data protection issue associated with data collection. One approach is to alert customers as they enter the store and advise them that if they want to opt-out, they should simply turn off their Wi-Fi. The second approach is to ease customer acceptance by offering them an incentive to agree to such tracking, such as an in-store discount coupon. The third approach is to set up a website that allows customers to opt-out for some or all information aggregation. In the first instance, customers may still respond poorly. To tackle that problem, one solution is to include this information in notices that are also disclosing the use of video recordings. As customers are familiar with the fact that in-store video is widely used, this "analogy" may make the practice more acceptable.

### Conclusion

In summary, privacy protection issues have been a concern for many years. In the example discussed in this article, Retailer X endeavored to collect mobile device data without violating users' privacy under a Wi-Fi location-based scenario. The approach in this case was to collect anonymous and non-individual information by scrambling mobile device IDs (a unique ID for each device that was tracked in-store). Several privacy-related regulations proposed in recent years have yet to result in a cohesive policy for protecting customer data. Finally, there are several approaches available to better address with customers the privacy protection issues associated with data collection.



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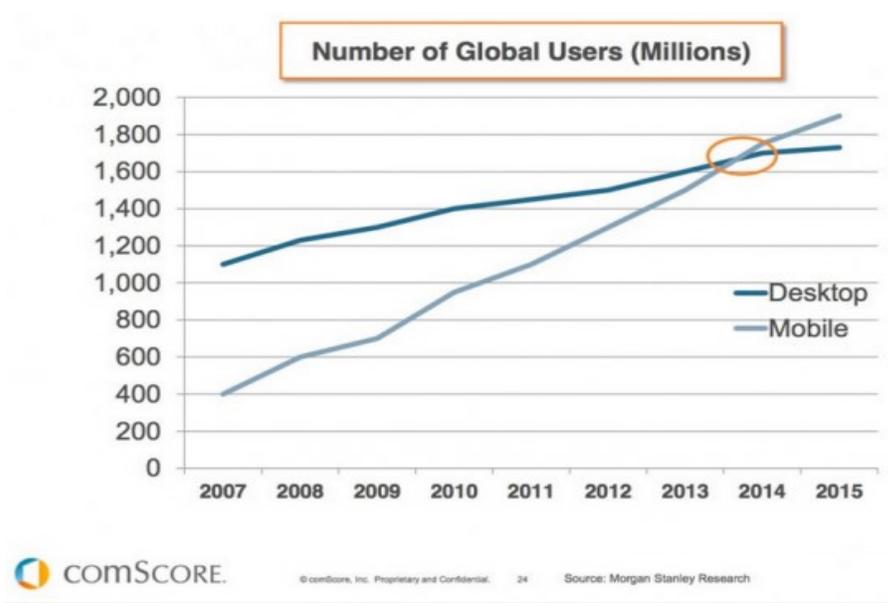
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# Mobile on the Horizon: Modeling Customer Dialogue via the Mobile Channel

By Kiseol Yang Ph.D., Associate Professor, University of North Texas, College of Merchandising, Hospitality, & Tourism, Department of Merchandising & Digital Retailing

According to a 2013 McKinsey & Company report, the number one disruptive technology that will deliver significant global economic impact by 2025 is mobile Internet. The capabilities of mobile Internet and data services have had profound effects on every major business sector. In the retailing industry, Internet-enabled mobile devices (e.g. smartphones and tablets) enable retailers to create optimal customer contact points and also facilitate omni-channel experiences in a real-time interaction with consumers, regardless of temporal and spatial constraints. Today, consumers have become savvier than retailers. They are technologically empowered in their shopping journey by connecting digital touch points (e.g., social media, Web, and mobile apps) via mobile channels. As shown in the comScore report (see Figure 1), interactions with consumers via mobile channels have dramatically increased in recent years. With the growth and popularity of channels, it is expected that the number of mobile phone users worldwide will reach almost 5.3 billion in 2017 (Statista, 2015).

Figure 1. Number of mobile phone users worldwide from 2013 to 2018 (in billions).



Source: ComScore

Further, the recent IBM Institute for Business Value study shows that 44 percent of consumers favor mobile interaction, wanting on-demand communication while they are shopping. While sales associates were ranked as least-trusted resources in accessing product information, 41 percent of consumers agreed that it is important for sales associates to offer personalized promotions based on the consumer's purchase history. This means that consumers prefer looking up the shopping information using their mobile device in-store. The IBM study also found that consumers would be willing to share mobile for text messages (42 percent), social handle (38 percent), and current location information (28 percent) with retailers they trust. While consumers become prosumers (i.e. co-producers and co-marketers) who actively participate in the market, retailers should lead the trend by placing their consumers at the center of their marketing. As consumers favor mobile interactions, meaningful mobile dialogues between consumers and retailers can increase consumer engagement, resulting in increased loyalty to the retailer.



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As a mobile devices become a necessity in our daily lives and there are users across multiple age groups, capitalizing on the promise of mobile channels to serve and connect with consumers is timely for retailers.

### Modeling Continuous Dialogue with Consumers

An increasing number of consumers use their own devices as a personal shopping assistant, and interaction with the mobile device may be higher than interaction with sales associates in the store. Digitally connected consumers experience information overload on their devices. Thus, more customized shopping information based on their preferences or shopping routines makes the interactions with retailers more meaningful in the context, transferring the interaction to dialogue that leads to conversational exchanges between consumers and retailers. Furthermore, retailers' dialogues with consumers in an appropriate context will make consumers willing to connect to and stay engaged with retailers when consumers perceive intangible/tangible benefits for which they are willing to trade their interaction time/efforts. While consumers can acquire benefits from retailers

**“Thus, every consumer interaction is an opportunity to retain valued consumers, resulting in increasing revenue, building loyalty, and strengthening brand equity.”**

through the dialogue, consumer loyalty toward retailers and brands will increase, driving more in-store and online sales. With the continuous dialogue with consumers, retailers can benefit by identifying consumer preferences/purchasing behavior, enabling more personalized and targeted shopping information to be offered to individual consumers. Thus, every consumer interaction is an opportunity to retain valued consumers, resulting in increasing revenue, building loyalty, and strengthening brand equity.

### Resource Exchange Theory

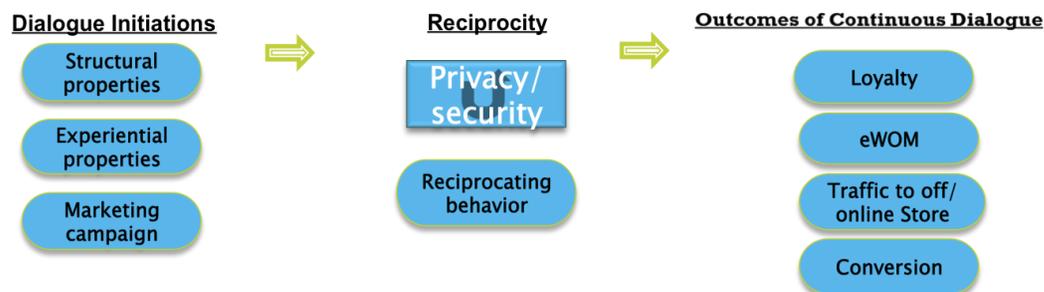
While consumers are connected to digital touch points via the mobile channel and are aware of the benefits from the dialogue with retailers, there are gaps interrupting dialogue between them. How can retailers continuously connect to their consumers? How can retailers initiate dialogues with consumers? What are the barriers to the dialogues with consumers? Grounded upon Foa and Foa's (1974) resource exchange theory, consumers will more actively participate in dialogue with retailers when they determine positive returns/rewards from the interaction. In resource exchange theory, resource is defined as anything that can be transmitted from one person to another. Exchange can be replaced with reciprocity, referring to voluntary and discretionary behavior, providing information and positive actions for mutual benefits (Chan and Li, 2010). Reciprocity is an important concept when investigating various forms of resource exchanges between consumers and retailers. Consumers tend to depend on their own decisions compared to their significant others or peers. When positive resources continuously return to consumers from retailers, consumers become willing to share their resources with the retailers. When retailers meet the consumers' information needs via the dialogue, consumers will be more willing and likely to return the favor to the retailer, and thus the dialogue will be rewarding to both parties. The theory explains that once consumers start a dialogue with retailers, and the reward from the interaction is perceived to outweigh the cost, consumers are more likely to engage in the dialogue and build long-term relationship with retailers.

Which factors help cultivate reciprocating consumer behavior? How can we implement the mobile channel to initiate consumer dialogue with retailers and information exchange to generate positive outcomes including loyalty, eWOM (electronic word-of-mouth), traffic to off/online stores, and increased conversions?



As shown in the model below, three variables are proposed as initiators to increase reciprocating relationships to create a long-term relationship with customers.

Figure 2. Customer dialogue on the move: Modeling reciprocating relationship via mobile dialogue.



### Consumer dialogue initiators

Structural route properties refer to those structure-based website features/store features that provide information resources to consumers (Chan & Li, 2010). The structure of the mobile site/apps/service features is the critical contributor to the capability to interact with consumers. Speed search, content richness, and personalization are attributes pulling consumers to the mobile interactions. The efficient and usable structural route properties can provide dialogue platform structure and capability to reciprocate with retailers.

The experiential route properties refer to social media/ brand community and positive shopping experiences that provide socio-emotional resources to consumers (Chan & Li, 2010). When consumers receive the personalized shopping information that is suitable in a different context, their satisfaction with the dialogue with retailers will be increased and they are more likely to trust the retailer and the resource provided from retailers. Consumer willingness to share their positive experience and rewards with others will be increased as a positive outcome of the reciprocating behavior.

Mobile marketing tactics to be taken into consideration to increase reciprocity with retailers are permission marketing, location-based marketing, and incentive-based marketing. Permission-based marketing can give retailers greater assurances that consumers read the marketing message due to their interests (Yovanno, 2011). Permission-based marketing has advantages because consumers show greater receptivity to marketing communications once they opt-in (Im & Ha, 2013, p. 496). Incentive-based marketing can encourage consumers to agree to receive marketing messages and rewards (e.g., coupon, store credit) that are given to consumers as a form of incentive. Location-based marketing can support retailers by sending a message to consumers in a pinpointed location. Geofencing marketing is a recent example of location-based marketing, enabling retailers to reach consumers in a more appropriate context and place when consumers are connected via a mobile platform. Location-based marketing that embrace incentive and permission marketing tactics can encourage consumers to initiate this reciprocal relationship with retailers. This consumer reciprocating behavior will ultimately build loyalty and positive eWOM, increase traffic to off/online stores, and increase conversion rates.

### Challenges of continuous dialogues via mobile channel

Although mobile technology enables retailers to reach their consumers in real-time interactions and initiate dialogue, consumer perceptions about security risks linger for cloud computing and mobility. Privacy and security are big obstacles that inhibit consumer engagement and dialogue with retailers via mobile channels. One of



retail's most challenging tasks is convincing customers to be more trusting. This will be achieved through retailer dialogues via the mobile channel with a security-enhanced platform that protects consumer privacy and financial information.



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### References

- Chan, K. W., & Li, S. Y. (2010). Understanding consumer-to-consumer interactions in virtual communities: The salience of reciprocity. *Journal of Business Research*, 63 1033-1040.
- Foa, E. B., & Foa, U. G. (1974). *Societal structures of the mind*. Springfield, IL: Charles C. Thomas.
- Fehr, E, & Gächter, S. (2000). Fairness and retaliation: The economics of reciprocity. *Journal of Economic Perspectives* 14 (3), 159–181.
- Im, H. & Ha, Y. (2012). Who are the users of mobile coupons? A profile of U.S. consumers. *Journal of Research in Interactive Marketing*, 6(3), 215-232
- Statista. (2015). Number of mobile phone users worldwide from 2013 to 2018 (in billions). Retrieved from <http://www.statista.com/statistics/274774/forecast-of-mobile-phone-users-worldwide/>
- Yovanno, D. (2011, February 3). Why Permission Marketing Is the Future of Online Advertising. Retrieved from <http://mashable.com/2011/02/03/permission-marketing-social-data>.



# Retail Analytics Council Event Focuses on Using Analytics to Develop Customer-Driven Retail Solutions

By Sara Romano, Contributing Author

The inaugural Retail Analytics Council Executive Development Program, held at Northwestern University in Evanston, Illinois, focused on an important topic in the retail industry: using analytics to develop customer-driven retail solutions in an omni-channel environment. Attended by approximately 50 executives from a wide range of high-profile companies, the two-day event was organized and led by the Retail Analytics Council, a joint effort of Medill's Integrated Marketing Communications department, Northwestern University and the Platt Retail Institute.



The event brought together retail analytics professionals and industry thought leaders to share the latest academic research and real-world examples in the field, featuring presentations from Medill IMC's Associate Dean and Professor Frank Mulhern, Professor Emeritus-in-Service Don Schultz, Professor Martin Block, Assistant Professor Vijay Viswanathan, and Steven Keith Platt, Director and Research Fellow at the Platt Retail Institute. Attendees of the event included marketing professionals from retail giants including Gap, Kohl's, Macy's, and Walgreens, among many others.

Mulhern opened the conference with introductory remarks about Medill's Integrated Marketing Communications program, which draws on cutting-edge research to prepare the next wave of retail analytics professionals.



Frank Mulhern, Director, Retail Analytics Council

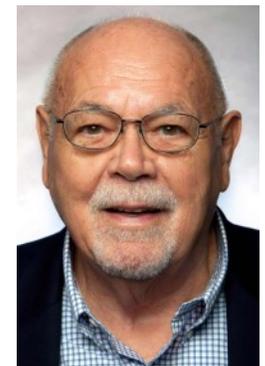
"Technologies themselves don't really do anything unless there are people to harness them," Mulhern said.

Mulhern emphasized the importance of a consumer-first approach, where a deep understanding of the customer's motivations, attitudes and behaviors is the first step in any marketing process. Data and analytics help to quantify the financial value of the consumer to the company. Only after this thorough evaluation should marketing objectives be established.

As Schultz echoed in his presentation on developing a customer-driven marketing communication framework, too often a company searches for customer data to support a pre-determined marketing plan, as opposed to starting with customer data. The five-step integrated marketing communications process turns traditional marketing on its head, beginning with customer identification and valuation before creating messages, estimating the return-on-customer-investment and budgeting/allocation/evaluation. In this model, the consumer becomes an ally to be influenced, instead of an enemy to be persuaded.

## Customer Insights From Data

Over the course of the conference, leading industry experts from a range of companies including comScore, GameStop,



Don E. Schultz, Director, Retail Analytics Council



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Kohl's, and Performics presented their professional insights and discussed best practices concerning the use of technology and analytics to drive successful, customer-focused marketing strategies.

Gian Fulgoni, comScore Co-founder and Chairman Emeritus, introduced his market research company, which captures more than 1.5 trillion digital interactions monthly. The comScore team gathers data from more than 2 million Internet users around the world to gain insights into the retail industry and consumer behavior.



*Gian Fulgoni, Co-founder  
and Chairman Emeritus,  
comScore*

Fulgoni opened his presentation by explaining, "If you want to know how much time and money people spend online, don't ask them." According to comScore behavioral research and National Retail Federation data, online surveys drastically overstate e-commerce spending. Due to poor human recall and a skewed Internet bias, online surveys are extremely limited in their usefulness and should be approached with apprehension, Fulgoni cautioned. Such measurements continue to be widely used, however, because of their relative simplicity and low cost to administer.

From a macroeconomic viewpoint, e-commerce and m-commerce continue to grow. Citing figures from comScore research as well as the U.S. Department of Commerce, desktop e-commerce (retail plus travel) sales dollars were up 9 percent year-over-year in the first quarter of 2015, for a total of \$93 billion. Retail e-commerce accounted for \$61 billion of the total figure, also up 9 percent year-over-year.

While mobile commerce has seen massive growth over the past several years, desktop engagement has not declined. comScore survey results show that almost half of people say there is some friction when making a purchase on a mobile device, most often citing screen size as a limiting factor. For a high-priced product where the value of the shopping cart is high, the desktop still reigns, according to Fulgoni.

"The screen size is going to remain a friction point that will hold down the ultimate potential of m-commerce," Fulgoni said. "We expect it to grow in the near term, but until all of this stuff gets solved, and maybe it won't be, I think it's going to be a factor."

In Q1 2015, apparel overtook computers as the largest online product category. Consumer packaged goods account for 9 percent of all e-commerce dollars, and represent the largest potential opportunity for retailers, Fulgoni said. In a \$1.3 trillion category, only 2 percent of sales come from a digital platform.

In the race for consumers to embrace home delivery of groceries and other packaged goods, the advantage lies with Amazon, Walmart, Target, and other dominant online retailers, as opposed to traditional supermarkets. Fulgoni pointed to Amazon's introduction of the "Dash Button" as evidence of the company's movement toward capitalizing on this huge opportunity.

With the continued growth of digital consumerism, advertising implications for retailers become even more significant. By 2016, comScore projects digital advertisements will surpass television advertising and become the number one media buy. Fulgoni cautioned retailers, however, against succumbing to the ease and inexpensiveness of pay-per-click advertising, as comScore research shows that there is no relationship between click rates and the effectiveness of an online advertising campaign.



"Clicks are at best an incomplete, and at worst a misleading, metric," Fulgoni warned.

A recent comScore study showed that the benefit of digital advertising is in the exposure, not the clicks themselves, that create significant sales lift, both online and in-store. The best online advertising results, Fulgoni explained, still come from a combination of display and search campaigns.

**"With the continued growth of digital consumerism, advertising implications for retailers become even more significant."**

#### "One Retailer's Response"

GameStop Technology Institute Senior Vice President Jeff Donaldson followed Fulgoni's presentation with a real-world example of his company's response to the digital revolution. GameStop operates more than 6,600 video game and technology brand stores worldwide, making it the dominant leader in the global video game category. A \$9 billion retailer across multiple business platforms, GameStop's business model focuses heavily on customer loyalty, with more than 41 million global members in its PowerUp rewards program, accounting for 71 percent of total sales for the company.



*Jeff Donaldson, Senior  
VP, GameStop Technol-  
ogy Institute.*

According to Donaldson, although only 3 percent of GameStop sales actually take place online, 60 percent of customers go online to engage, and 26 percent of non-buyer, online visitors buy in-store within 48 hours – an event referred to as a "motivated visit." The opportunity, Donaldson explained, is to deliver more meaningful, more productive digital engagement solutions to more customers.

The GameStop Technology Institute (GTI), launched earlier this year, focuses on using data research and analytics to achieve that goal through geo-fencing and the creation of "digitized markets" to improve and synthesize the customer experience both online and in stores.

GameStop's innovative geo-fencing technique, which causes the company's mobile app to behave differently within a certain geographical radius, allows the company to test new digital experiences in a controlled environment.

"Geo-fences are used to collect data on how customers traverse the market, and message them as they traverse the market," Donaldson explained. "To this point, we've found it more effective to analyze the data and understand how they traverse the market, than it is to message them."

Through digitally delivered messages, GameStop aims to understand what is most important to customers and what creates a motivated visit to a physical store. As part of the efforts to synthesize in-store and online customer experiences, GameStop is currently testing ways to capitalize on the unique benefits of each platform. For example, how can successful employee-delivered messages be delivered digitally? What "product page" messages online trigger conversion and how can they be implemented in-store? The goal, Donaldson elaborated, is to outfit physical stores and markets to create a platform for engagement and data collection equivalent to the online experience.

With much work still to be done according to Donaldson, specifically addressing privacy concerns with customer data, GameStop's current focus is on improving conversion via digital engagement.



## Merging Online and Offline Experiences: An Omni-Channel Evolution

The conference's second day focused on the latest tactics and research in the field of retail analytics, as Performics CEO Michael Kahn and Kohl's Vice President of Strategic Marketing Chris Duncan presented on the agency/client partnership in the evolution toward an omni-channel experience.

A veteran of the market research industry, Kahn emphasized the journey toward omni-channel is ongoing and evergreen, with the goal of integrating and tracking customer data across all channels and platforms. Across the retail industry as a whole, the major barriers in implementing this approach come from the lack of appropriate technology and insubstantial addressable data sources.

In working with Kohl's, Performics aimed to overcome these obstacles by focusing on the data that matters – namely, the data that uncovers customer intent, accomplished through PlanAlytics and digital maturity mapping.



*Michael Kahn, left, is CEO, Performics. Chris Duncan is VP of Strategic Marketing at Kohl's Department Stores.*

PlanAlytics is the process of identifying intent and applying that insight toward improving brand engagement to drive measurable performance. The PlanAlytics process involves an initial intent hypothesis, a refined initial hypothesis, followed by testing, learning, and scaling with the help of analytics.

Digital Maturity Mapping uses business intelligence, predictive analysis, audience-centric advertising, and fully attributed media to bridge the gap between e-commerce and brick-and-mortar stores. To illustrate the concept, Kahn pointed to Walmart's recent trend of adding digital elements in-store to make shopping a more holistic and cohesive experience. Conversely,

Amazon is shifting into the physical space by opening drop-off/pick-up locations for customers.

In order to demonstrate Kahn's concepts more vividly, Duncan shared Kohl's journey toward omni-channel from the retail giant's perspective. Although Kohl's was a relatively late player to the digital and mobile game, the retailer is now an industry leader in the omni-channel evolution, with an innovative mobile app, the recent "Buy Online Pickup in Store" (BOPUS) campaign, and the integration of Kohl's Charge into Apple Pay and the Apple Watch planned for later this year. The upcoming Apple Pay integration will make Kohl's one of the first department stores to embrace the new technology. These efforts, according to Duncan, bring the company closer to the ultimate goal of bridging that gap between online and offline experiences.

The integration process, however, has not been seamless. Measurement is more complicated than ever, with Kohl's currently in the midst of a more than 18-month-long initiative toward measuring all media touch points and all customer sales. Too, omni-channel development requires significant allocation of time and resources across all facets of a company. But with more than 80 percent of Kohl's online purchases being multi-touch conversions, alignment across all platforms has never been more important.

"A lot of what we're doing today can't be trained, can't be taught in the classroom," Duncan said. "Finding the best people and talent to make omni-channel successful is the biggest challenge."

"It's hard to find the talent because the playbook is being written live," Kahn added.



## Bringing Digital Metrics to Retail Environments

Northwestern Professor Martin Block and Steven Keith Platt, Director and Research Fellow at the Platt Retail Institute, presented their recent research regarding the collection of real-time, in-store customer traffic data and the impacts it can have on increasing sales and lowering operating costs.

Customers, the single most important aspect of running a retail business, are also the one piece that companies have struggled to track while in-store, according to Platt. But by tracking “pings” from Wi-Fi-enabled mobile devices, retailers can trace the location and path of customers as they move about a store, gaining valuable insights into a number of different areas. Mobile devices continually emit the pings in an attempt to identify available wireless networks. By gathering the data from these signal requests, it is possible to generate device IDs, XY coordinates, and time of detection for customers in the store.

The location-based customer data serves a variety of purposes, including real-time insights about consumer behavior in stores, sales conversion, and internal operational performance. Store traffic performance and patterns, signage effectiveness, dwell time, and promotional campaigns can all be assessed to pinpoint weaknesses and inefficiencies across all aspects of a retail operation. By using technology that is already in place, Platt and Block contend, the brick-and-mortar stores can be integrated into an omni-channel campaign relatively inexpensively, as customers bring their own tracking devices with them.

The conference wrapped up with a final presentation by Professor Don Schultz on “The Future of Retailing,” briefly touching on emerging projects such as artificial intelligence, drone use in retail, and the exploration of neuroscience to unlock the consumer’s brain.

Other session topics covered over the course of the two-day event included Educating Customers Online for Stronger Brands and Loyalty Programs: Beyond Expensive Monetary Rewards.

[Learn more](#) about the Retail Analytics Council.



*Sara Romano received her MSJ degree this year from the Medill School at Northwestern University.*



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# The Retail Digital Dilemma and a 'Nearby' Solution

By Colin Pizey, European Regional Director, MoZONE

**T**he first line in George Orwell's final novel, *Nineteen Eighty-Four* is, "It was a bright cold day in April, and the clocks were striking thirteen." It is a story of deception, secret surveillance, and manipulation. Winston Smith, the main character, is watched and monitored everywhere he goes, even at home through his own TV screen.

Sixty-six years after the publication of *Nineteen Eighty-Four*, we can reflect on the impact of today's digital technology on our lives, our behavior, and also our privacy.

- PCs and laptops give us unlimited access to information and knowledge, but our online activities are not always private and secure.
- Webcams and microphones allow us to share our environment with others, but can also be hacked and used to spy.
- Smartphones put the power of a PC in our pockets, but GPS and other tracking technologies mean our journeys can be monitored and recorded.
- Apps allow our smart devices to do a multitude of tasks, but can also collect private information, monitor our activities, and push advertisements at us.
- And now smart TVs contain the processing power of a PC and may even have a camera looking back at us.

We now have technologies that can, and do, track our movements, monitor our interests, record our preferences, and perhaps also invade our privacy. These technologies have the potential to be intrusive, but when used properly can add value to our everyday lives.

*Nearly one-quarter (42 percent) of 1,003 survey respondents say they don't like mobile ads because they have no control over them (i.e. they're "not able to turn them off").*

*Ads were also consistently described as being "annoying" or "intrusive."*

Source: PwC

## Smartphones

The propagation of smartphones and smart devices into our everyday lives has been unprecedented and we engage with them every day, carrying them everywhere. We browse the Web on the move, we send and receive messages, take photos, use task specific apps, and even use them as phones. However, advertisers also can target them with pop-ups and banner ads.

Smartphones are also a double-edged sword for retailers. They enable buyers to bring competitive sellers into their brick-and-mortar stores. Consumers can see an item in-store, engage digitally with the Worldwide Web, and then purchase that item online.



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But what if a brick-and-mortar business could focus that Internet use into a localized in-store experience that is customer relevant, keeps the customer in control, and provides enhanced local value right at the point of decision?

### Digital in Retail

Digital has been an increasingly important part of the in-store retail environment for a number of years. Digital screens in particular have provided retailers and brands with visually exciting ways of delivering in-store messages. Moving images, instead of cardboard or paper, attract the eye and stand out from the surrounding visual clutter. However, commoditization and reducing hardware costs means they are beginning to appear everywhere. They are increasingly common, losing their “wow,” and risking becoming the new visual clutter.

Interactive digital kiosks have also enjoyed success in retail locations, delivering local information, coupons, and offers. However, they cost money and use floor space – and who needs them when that same interactive experience can now be delivered on customers’ own smart mobile devices? I predict that freestanding digital kiosks will become the digital dinosaurs of tomorrow.

Of course, as retailers find new ways to engage with customers digitally, such as through their mobile devices, they must take care. The customer wants to be in control – the customer does not like intrusion.

### Intrusion

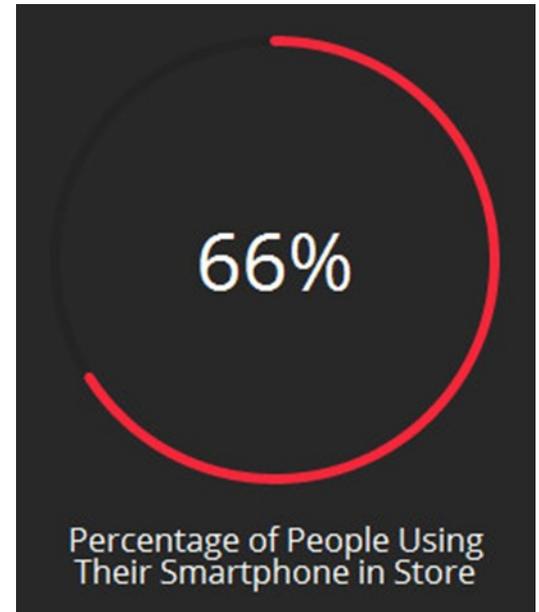
When we reach out to customers’ mobile devices we must ask:

- Does this action add value or intrude?
- Does it engender loyalty or alienate?
- Does it encourage spending or drive customers elsewhere?

Relevance, perceived value, but also ensuring customers stay in control are critical criteria to consider.

A major worldwide brand owner recently conducted a beacon trial in the UK. They considered it a failure. Customers said they did not like being continually pinged via their mobile phones as they walked past different products. It was intrusive and those customers switched off their Bluetooth or stopped using the app that was needed to enable the beacons to interact with their smartphones. There is a fine line between helpfulness and intrusiveness and it is not always easy to judge.

Finding a way of putting the customer in control is key to this and must be considered when deploying in-store digital technology. How can it assist when needed, without intruding when not wanted?



Source: ADOBE



## Apps

Apps bring smart mobile devices to life and add significant value to certain tasks. If well designed, they are task-focused, easy-to-use, and (hopefully) non-intrusive. They can be used to drive value to consumers through rewards, coupons, and vouchers, as well as participation in loyalty programs.



However recent statistics around app usage should be considered before assuming a new app is the best answer to the retailer's or brand's digital dilemma. While different sources and figures vary slightly, they tell a similar story:



Source: [www.go-globe.uk](http://www.go-globe.uk)



While there is evidence to show that apps drive sales for some businesses, the above figures demonstrate that retail barely registers when it comes to people's normal daily app usage.

*A staggering 42 percent of all app time spent on smartphones occurs on the individual's single most used app. Furthermore, nearly three out of every four minutes of app use occur on one of the individual's top four apps.*

Source: comScore

The number one app, in both audience size and share of time spent, is Facebook.

*Facebook, Google, Apple, Yahoo, Amazon, and eBay brands account for nine of the top-10, most-used apps.*

Source: comScore

Apps clearly provide personal value for smartphone users. They also drive business for some brands, but most usage seems highly focused around non-retail applications.

### **Beacons**

Apple's investment and release of iBeacon technology has opened a Pandora's box of new possibilities for in-store customer engagement. An iBeacon is a small, low-cost transmitter device that runs off of an internal battery. It transmits a low-power Bluetooth signal with a unique identifier code, which nearby Bluetooth-enabled smartphones can see.

However, they require an app to work. Therefore, you must download the app and have it running. Beacons can then provide an intimate and localized in-store digital experience via a smartphone. They can trigger the delivery of nearby product information, coupons, and offers. However, where used, beware of overdeployment, or they may become another intrusion that alienates customers.

Their dependence on apps also means not everyone will engage with them, as they may effectively be invisible. Either the app is not downloaded, has been forgotten, or has been deleted.

### **The Worldwide Web**

Major players with big pockets are increasingly dominating our Internet experience, and often without us realizing it. This affects what we find via Google. It affects what ads are pushed at us. It often affects where we purchase, and it usually affects other retailers. But buying decisions are being influenced by big money, even in-store via a smart mobile device.

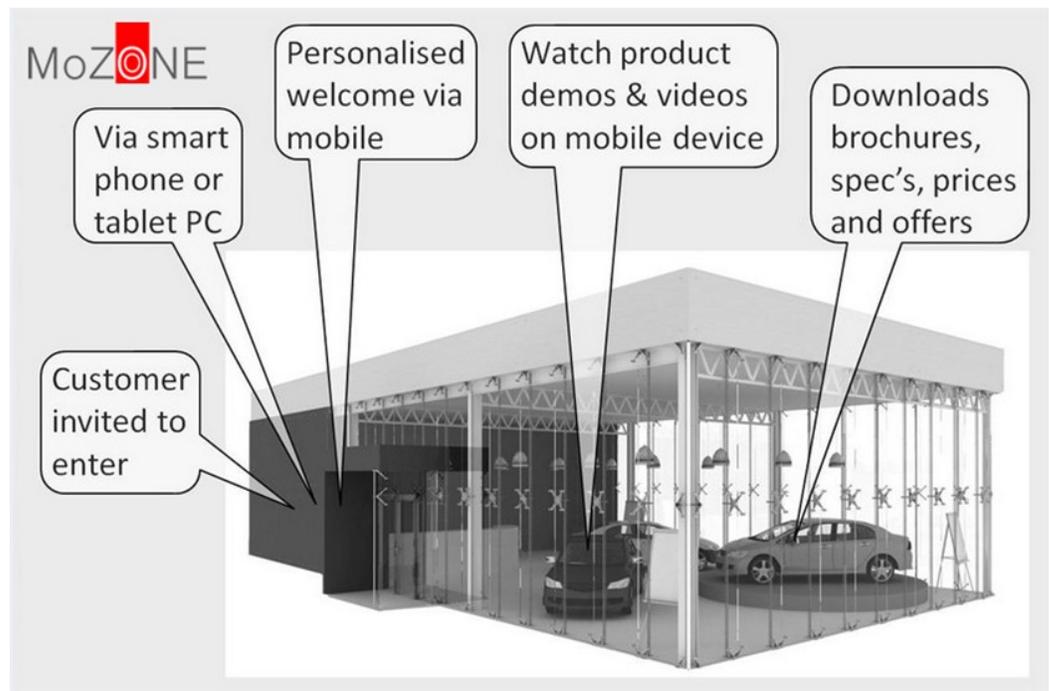
We need another solution. I suggest we need a "nearby Web."

- Imagine retailers, businesses, and ordinary people being able to generate their own "nearby Web" experience, featuring their information, their brands, and their offers.
- Imagine smartphones automatically switching between "nearby Web" zones, store-to-store, place-to-place.



- Imagine retailers, big or small, all providing their own in-store “nearby Web without the intrusion of outside competitors.
- Imagine a retailer being able to build a customer loyalty program around its own “nearby Web.”
- Imagine a customer being automatically welcomed, by name, via their mobile device when entering a store, then being offered only relevant localized information, coupons, and offers.
- Imagine customers not having to download a different app for every retailer (or brand) to do this, but instead being able to access this “nearby Web” from their very own smartphone browser.
- Imagine no pop-ups or banner ads from competitive suppliers, no intrusion, and full customer control over personal privacy.
- Finally, imagine customers being able to summon a sales assistant, through their smartphone browser, just when they need face-to-face help.

Could that work?



MoZONE is a system that does all of this. It does not require an app, does not require Beacons, and will work with any customer’s Wi-Fi-enabled smart device, directly via their mobile browser. It provides an Internet experience, but only localized nearby content, information, and offers. It does not intrude, but does add value to a customer’s in-store experience.

The system can also be connected to in-store digital screens to give them new life. Suddenly customers can interact with the “nearby Web” but a large external screen becomes an interactive extension of their own mobile device. Content is selected, products viewed, and interactive engagement encouraged.



The Retail Digital Dilemma (cont'd.)

In-store digital kiosks also become obsolete. The same information and functions are now accessible via customers' smartphones, which means added retail space, happier customers, and no more queues.

The most important attribute of the system is that it puts the customer in charge. Their retail journey is supported and enhanced, based on *their* objective at that time. The system also provides the retailer with privatized customer statistics, such as dwell times and user engagement, to help drive future planning and campaigns.



*Colin Pizey is European Regional Director for MoZONE.*



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## PRI Research Articles

Platt Retail Institute undertakes a variety of research projects throughout the year. The results of this research are published as Research Articles (available for free download with registration). Some of the available PRI Research Articles include:

The latest PRI Research Article is "[Customer and Inventory Insights Generated by Location-Based Analytics, and the Introduction of an Online – In-Store Behavioral Bonding Model.](#)" Commissioned by Tyco, this research article explains that with the rapid changes in shopping behavior and especially the relationship between online and in-store consumer activities, it is highly important for retailers to make technological investments in an integrated information platform.

PRI released "[Deployment and Test of the Digital Life Experience at an AT&T Retail Store.](#)" This research, sponsored by Lighthouse Logic, describes a test conducted by AT&T in its Arlington Heights, Illinois, retail store. The test was designed to determine if having a more robust user experience in an interactive environment would lead to increased customer adoption and sales of the Digital Life service, an AT&T technology that encompasses a variety of home security and home automation options.

PRI released "[The Future of Retail: A Perspective on Emerging Technology and Store Formats.](#)" in conjunction with the PRI Retail Forum at Digital Signage Expo 2014. This research, sponsored by Two West, examines the history of retail in the U.S., emerging technology that is impacting retail today, and how retail store formats will change in the future and integrate various digital technologies. The goal of this Research Article is to inform the reader about the disruptive changes occurring in the retail industry, and to help retailers prepare for and embrace evolving retail formats and technologies.

PRI's research regarding "[Retail Attitudes and Adoption Trends of Multi-Channel and Omni-Channel Marketing.](#)" was undertaken to gain insights into retailers' attitudes about multi-channel use and the adoption of omni-channel marketing strategies. While most retailers use multiple channels to reach their customers, it was noteworthy that the retailers who participated in this research expect email and mobile marketing to increase in importance while the physical selling location is expected to fall. This research was sponsored by Digital Signage Expo.

In PRI's Research Article, "[Digital Signage's Role as Part of a Multimodal Approach to Deliver Emergency Messaging on Campus.](#)" the rapid adoption of digital signage networks as an important communication tool on university campuses is examined. In 2010, PRI released a Research Report, "Communication Effectiveness in Higher Education," which illustrated that digital communication networks (DCNs) are becoming a viable alternative to older forms of on-campus communication. PRI conducted additional research, sponsored by Digital Signage Expo, Four Winds Interactive, Intel, and NEC Display Solutions, to delve further into the role of digital signage in delivering emergency messages on campus.

PRI's Research Article, "[The Media-Saturn In-Store Digital Experience.](#)" is an extensive case study sponsored by Digital Signage Expo and Intel. It details the technologies, management, and unique software that European retailer Media-Saturn built to create, manage, and distribute content in different languages across its network. Not only is Media-Saturn Europe's largest electronics retailer, it arguably has the most advanced, complex customer-facing technologies of any retailer in the EU.



PRI is the leading publisher of tactical research in the area of digital in-store technologies and retail analytics. Working Papers are available for purchase from PRI, or can be secured from select Working Paper sponsoring firms.

## **PRI Research Publications**

### **Communication Effectiveness in Higher Education**

Steven Keith Platt, Platt Retail Institute; Kevin King, Director of Research, Platt Retail Institute

PRI Working Paper No. 8, Price: \$250

### **A Determination of the Revenue Potential from Digital Screen Advertising at a Major League Baseball Stadium**

PRI Working Paper No. 7, Price: \$250

### **Test Results from a Bank Branch Digital Communications Network**

Steven Keith Platt, Platt Retail Institute; and Dr. Jean-Charles Chebat, Ecole des Hautes Etudes Commerciales, Montreal, Canada

PRI Working Paper No. 6, Price: \$1,000

### **Impacting the Customer Experience at a Bank Branch through a Digital Communications Network**

Steven Keith Platt, Platt Retail Institute; and Peter VanSickle, BMO Bank of Montreal

PRI Working Paper No. 5, Price: \$1,000

### **Deployment and Test of a Retail Digital Communications Network by the United States Postal Service**

Steven Keith Platt, Platt Retail Institute; Dr. Kamel Jedidi, Columbia University Graduate School of Business; and Margot Myers, United States Postal Service

PRI Working Paper No. 4, Price: \$1,000

### **Leveraging the Impact of Retail Digital Signage Advertising through Behavioral Merchandising**

Steven Keith Platt, Platt Retail Institute; John Greening, Northwestern University; and Bill Pennell, Tesco Media Services

PRI Working Paper No. 3, Price: \$1,000

### **Establishing Retail Digital Signage as a New Media and Measuring its Effectiveness**

Steven Keith Platt, Platt Retail Institute; Dr. Francis J. Mulhern, Northwestern University; and Guy Vaughan, Retail Marketing Services

PRI Working Paper No. 2, Price: \$750

### **Implications for Retail Adoption of Digital Signage Systems**

Steven Keith Platt, Platt Retail Institute; Dr. Kingshuk K. Sinha, University of Minnesota and Research Fellow, Platt Retail Institute; Dr. Barton A. Weitz, University of Florida; with Pat Hellberg, Nike, Inc.; G.V. Iyer, Bank of America; and Margot Myers, United States Postal Service.

PRI Working Paper No. 1, Price: \$250



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# PRI Research and Event Sponsorship

In concert with leading universities and researchers, PRI undertakes extensive studies that measure consumer response to in-store marketing technologies. These are published as either Research Articles or Working Papers. In addition, PRI seeks funding for other unique projects.

Sponsorship of PRI research offers a variety of benefits. These include establishing the sponsor as an industry thought leader, creating various promotional opportunities, and enabling the sponsors' association with the leading research and consulting firm in the field.

**Current sponsorship opportunities include:**

## 1) *Journal of Retail Analytics*

## 2) Research Articles

### *An Examination of the Relationship Between Online Behavior and In-Store Purchases*

It is estimated that by the end of 2015, as much as 64 percent of in-store purchases will be influenced by online behavior.<sup>1</sup> This means that some \$200 billion<sup>2</sup> of in-store sales are being affected by Web activity such as recommendations, price comparison shopping, advertising, promotional activity, etc. Understanding this relationship is one of the most significant issues facing retailers today. This groundbreaking study, undertaken in cooperation with a major retailer, will be the first to address this issue, and will garner a great deal of exposure. Supporting this research will establish your firm as a thought leader in the retail industry.

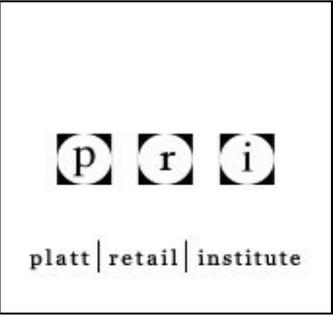
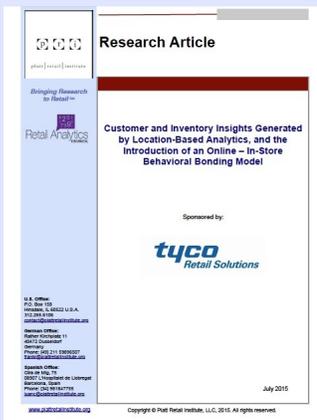
### *Best Practices for Deploying RFID Technology in a Store*

This Research Article will aid retailers in their understanding of how to implement and benefit from RFID. Undertaken in cooperation with a major retailer, the Research Article will present use cases that illustrate both qualitative and quantitative benefits. Supporting this research will help to solidify your firm's positioning in the area of RFID and related retail analytics.

## 3) PRI Retail Forum

Platt Retail Institute, in cooperation with Digital Signage Expo (DSE), is organizing its annual Retail Forum. You have an opportunity to be one of the select Forum Sponsors that will be extensively promoted both before and during the event. Sponsors will be offered time with and exposure to this much sought after group of customers. The Retail Forum takes place on March 15, 2016, from 9 a.m. to 5 p.m. This is the day before DSE opens its trade show, which takes place March 16-17 at the Las Vegas Convention Center. DSE is our Forum partner, and also undertakes an extensive amount of promotion of both the Forum and our Sponsors.

[Contact PRI](#) for information about sponsorship opportunities.



<sup>1</sup> Deloitte Digital, *Navigating the New Digital Divide, Capitalizing on Digital Influence in Retail*, 2015.  
<sup>2</sup> Sixty-four percent of 2014 U.S. Retail Sales net of food service and online sales.

## Save These Dates



### March 15, 2016

The PRI Retail Forum at  
Digital Signage Expo  
2016

Las Vegas, Nevada



### May 2016

Retail Analytics Council  
Executive Development  
Program

Evanston, Illinois

## Industry Events Calendar

### September 3-5, 2015

International Retail Design Conference  
Fontainebleau Hotel  
Miami Beach, Florida

### September 9-11, 2015

ATM & Mobile Innovation Summit  
Capital Hilton  
Washington, DC

### September 9-11, 2015

Engage! 2015  
Ritz Carlton  
Ft. Lauderdale, Florida

### September 9-11, 2015

International Retail Design Conference  
Austin Hilton  
Austin, Texas

### September 10-11, 2015

OVAB Digital Signage Summit Europe  
Hilton Hotel Airport  
Munich, Germany

### September 16, 2015

The Retail Conference UK  
America Square Conference Center  
London

### September 27-29, 2015

American Marketing Association Annual Conference  
JW Marriott  
Austin, Texas

### September 28-30, 2015

RETAILology  
Hard Rock Hotel  
Palm Springs, California

### September 30-October 1, 2015

CorpCOMM Expo  
Georgia World Congress Center  
Atlanta, Georgia

### October 5-7, 2015

Shop.org Digital Summit  
Pennsylvania Convention Center  
Philadelphia, Pennsylvania

### October 27-28, 2015

ICX Fall Symposium  
Westin Atlanta Airport  
Atlanta, Georgia

### November 2-6, 2015

Digital Signage Week  
Various locations  
New York City



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