THE INTERNET OF THINGS (IoT) AND THE APPAREL INDUSTRY: THE INTERSECTION OF RETAIL AND TECH

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- The balance of power has shifted from the seller of the goods to the buyer. Consumers now dictate how, when and where they want to shop. This power shift is presenting the single greatest threat to traditional brick-and-mortar retail.

- Yet it also presents a tremendous opportunity for those forward-thinking merchants that understand its unavoidable consequences and are looking to implement technologies—such as IoT solutions—to not only reduce costs and protect margins, but also grow their businesses by offering new services and experiences to customers.

- Yet, there are practical concerns to widespread IoT adoption. Perceived risks to privacy and security, even if not realized, could undermine the consumer confidence necessary for the technologies to meet their full potential.
THE INTERNET OF THINGS (IoT) AND THE APPAREL INDUSTRY: THE INTERSECTION OF RETAIL AND TECH

Dial into just about any earnings conference call hosted by a publicly traded apparel retailer these days and you are likely to hear management using one phrase over and over: omni-channel strategy. Specifically, these managers are likely to discuss how they are investing in technology to address rapidly changing supply chain demands and consumer preferences. The omni-channel business model is easy to understand, yet difficult to implement and optimize. It needs to be agnostic as to where a final sale comes from, but offer consumers greater choice, without compromise, across the in-store, online and mobile channels.

One thing is clear: the balance of power has shifted from the purveyor of the goods to the buyer. Consumers now dictate how, when and where they want to shop. This power shift is presenting the single greatest threat to traditional brick-and-mortar retail. Yet it also presents a tremendous opportunity for those forward-thinking merchants that understand its unavoidable consequences and are looking to implement technologies—such as IoT solutions—to not only reduce costs and protect margins, but also grow their businesses by offering new services and experiences to customers.

In this report, we focus our analysis on three key questions:

1. What is the IoT and why should apparel retailers care about it?
2. How can retailers take advantage of the IoT as part of an overall omni-channel strategy?
3. What are some practical concerns as the IoT gains traction across the retail industry?
WHAT IS THE IoT?

Imagine an interaction between a chair, a person and some mobile or wearable device. Now, imagine that chair is tagged with a unique identity code. Give it the ability to communicate with other animate and inanimate objects (via wi-fi or Bluetooth), and give it senses (such as a trigger pressure gauge that can sense when a person is sitting on it). Finally, tag the person sitting on the chair with a similar unique identity code. Using a smartphone or similar device, you can find out the location of that chair, the name of the person sitting in it and other aspects of that chair/human interaction from anywhere in the world. Welcome to the IoT—a network of devices and objects that are connected to internet and therefore able to communicate with each other and with other Internet-enabled systems and things.

In a recent TED talk, Dr. John Barrett of the Cork Institute of Technology said, “We are now about to embark upon the next step between the Internet and the web...all of the forecasts are that it will make the current Internet and its impact on our society seem trivial.” It is possible that the IoT will eventually connect the physical world and the Internet to such an extent that our planet and everything on it will become “things” in the IoT system.

WHY SHOULD APPAREL RETAILERS CARE ABOUT IT?

An August 2015 survey by Retail Systems Research found that 72% of 138 global retailers surveyed already had IoT projects of some type under way. And Frost & Sullivan estimates that global retail IoT revenue will reach $1.7 trillion by 2019, almost tripling from its 2014 level.

According to research and advisory firm Gartner, the retail industry is poised to spend $193 billion on IT capex in 2017, yielding a five-year CAGR of 3.2%. However, as a percentage of total revenues, the level of IT spending in the retail industry still lags that of other discretionary sectors, such as travel and media and entertainment.
Retailers such as Target are already well on their way in terms of their overall omni-channel strategy and using the IoT to optimize their business. In 2015, Target implemented an item-level RFID program and also opened an IoT concept store showcasing a home that incorporates 35 Internet-connected devices, including door locks, thermostats and music players.

While the IoT can improve business processes across many industries (including healthcare, agriculture and security), retail represents one of the largest opportunities for process improvement through connected devices.
The smartphone will no longer be seen as something to fear—the enabler of the “showroom” phenomenon of browsing in-store and purchasing online, possibly from a competitor—but rather as a conduit to enhance the in-store experience.

HOW CAN RETAILERS TAKE ADVANTAGE OF THE IoT AS PART OF AN OVERALL OMNI-CHANNEL STRATEGY?

The emergence of IoT technology offers apparel retailers opportunities in three key areas: enhancing the customer experience, optimizing supply chain operations, and enabling new selling channels and revenue streams.

Enhancing the Customer Experience

The IoT presents an opportunity for retailers to connect the physical and digital worlds for consumers. The smartphone will no longer be seen as something to fear—the enabler of the “showroom” phenomenon of browsing in-store and purchasing online, possibly from a competitor—but rather as a conduit to enhance the in-store experience. The connected store will interact directly with customers as they enter. By using sensors (like the ones from our chair example earlier) throughout the store, merchants will be able to understand who is walking in—who the customer is, and what his or her buying patterns are—and thereby promote certain products via pop-ups on the customer’s mobile device. The promotions will be relevant because they will be based upon the customer’s prior purchase behavior. Accenture notes that department stores Lord & Taylor and Hudson’s Bay are already using Apple’s iBeacon technology to deliver personalized promotions to customers who have downloaded the application on their smartphone. Using the tremendous amounts of data captured by these interactions, retailers can improve store layout and merchandise placement. They can even use heat sensors to track customer movements in the store, so they can be sure to place premium-priced goods in high-traffic areas.

Optimizing Supply Chain Operations

IoT technology also allows apparel retailers to better coordinate between connected devices and products. This, in turn, offers them the ability to capture incremental margin in the face of the increasingly complex supply chain demands wrought by the proliferation of digital channels and an ever-more discerning and demanding customer. The channel integration already offered by item-level RFID should be considered an IoT prerequisite. Omni-channel improvements that are currently being implemented will be further leveraged through even more powerful communication and information transfer across the supply chain. The biggest difference will be that the customer experience will be prioritized even more highly in an IoT world, so communication between things as well as between supply chain partners will be critical to retailer and brand success. According to Accenture, Spanish retail chain Zara is improving processes by deploying such technology. By tracking inventory from factory to point of sale with a microprocessor-based tagging system, Zara hopes to speed its supply chain, improve customer service and increase security.

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Enabling New Selling Channels and Revenue Streams

While cost savings and margin capture are evident and measurable, the true power of the IoT resides in the opportunities it presents to create new selling channels and drive new revenues. Unlike with the home improvement and consumer electronics verticals, however, it is not entirely clear how the apparel industry will develop new channels. Incremental revenue opportunities are more likely to come in the form of more pleasurable and differentiated overall experiences for the customer, prompting them to want to walk around the store and/or browse online for longer.

WHAT ARE SOME PRACTICAL CONCERNS AS THE IoT GAINS TRACTION ACROSS THE INDUSTRY?

Six years ago, for the first time, the number of things connected to the Internet surpassed the number of people connected to it. Yet we are still at the beginning of this technology trend. The US Federal Trade Commission estimates that there will be 25 billion connected devices by the end of 2016, and 50 billion by the end of 2020. The risks of this are obvious: collection and analysis of personal information, purchasing habits, locations, and physical conditions present real concerns regarding privacy. In addition, some companies may resell this information to unrelated companies, which may use these data to make credit, insurance and employment decisions. Perceived risks to privacy and security, even if not realized, could undermine the consumer confidence necessary for the technologies to meet their full potential, and may result in less widespread adoption.

It is also important to mention that RFID tags were once seen as a technology that was going to revolutionize supply chain management. Just about every retailer of any consequence was doing something with RFID, but with the exception of Walmart’s infamous supply chain mandate to its vendors, most projects amounted to little more than pilots and capex carve-outs. It is always dangerous to say that “this time, things will different.” But this time, they just may be. Given retailers’ relative optimism about the IoT and the increasing capex being allocated to such initiatives, versus the general grumbling about RFID when Walmart issued its proclamation, there is a key difference this time around.