THE ART OF THE INTELLIGEN FUPSELL

With foot traffic declining, retailers need state-of-the-art technology to wow in-store shoppers.

Technology is the change agent for the ever-shifting retail industry, as brick-and-mortar stores evolve to keep pace with stiff online competition.

Though today's stores face a harsh reality of declining foot traffic and harderto-please shoppers, there is at least one kernel of good news: people who do visit stores go with a strong intention to buy something.

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Retailers should keep this fact top of mind: 73 percent of shoppers say they prefer to browse online and make purchases in a physical store¹.

To turn those browsers into buyers and stay relevant, experts say retailers will need to accelerate their use of artificial intelligence, digital signage, and next-generation point-of-sale technologies to craft the ideal mix of digital and physical selling. Taken together, these technologies are the anchors of a highly responsive and personalized retail experience; one that meets customers on their own terms while delivering real time business insights that drive sales and increase efficiency.

"[This] could be the year when many of these technologies that have been in startup mode will begin to become reality. Artificial intelligence and virtual reality might not be taking over completely, but they are starting to emerge, said Matthew Shay, the CEO of the National Retail Federation wrote back in January². "And we are at the point where consumer expectations are rising and influencing how retailers who want to stay on top must interact with their customers."

The key is bringing together different technologies and systems to improve efficiency and deliver a vastly improved, more personalized experience for customers.

"Artificial intelligence is going to be a foundational technology for the future of retail," said Shailesh Chaudhry, Director of Business Strategy for Retail at Intel. Knowing what customers are interested in, getting those products in front of them at the right time, and removing all friction from the sale requires a powerful mix of connected devices and analytics software.

¹ TimeTrade Shopper Survey, 2014

 $^{2}\ http://www.future of business and tech.com/business-solutions/technology-helps-retailers-shake-up-status-quointervalue of the status and the status$

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Connecting islands of technology

"In any retail environment, we see a lot of islands of technology," said Chaudhry. Beacons, RFID, sensors, cameras, point-of-sale systems—all are being used by plenty of retailers, he said. "They're all generating data, but today, they all exist in silos."

The more difficult—but critical—step is fusing the data from these different sources to generate powerful insights that stores can't get from using isolated pieces.

"And that's really the power of Internet of Things [IoT] and advanced analytics," added Chaudhry. "Enabling us to fuse data from all the different sources, and then create new insights that improve the operational efficiencies and deliver a better experience for shoppers."

Take RFID and video data, for instance. With RFID alone, stores get insights about products: where they are, where they've moved to, or if they're in the wrong place. By combining that with video, stores can see if customers are picking up a particular product, and thus what they are more likely to buy.

"I can share that insight with an associate so that when they approach [a customer], they'll make a recommendation about a product that they're more likely to purchase that is consistent with their preference and style," said Chaudhry. "That's an insight we couldn't have generated by using just one source of data, either video or RFID."

Those insights can mean the difference between success and failure. Intel expects that by 2018, retailers engaged in IoT partnerships with major manufacturers will take significant market share from competitors.

Jose Avalos, Vice President of Visual Retail at Intel, cites grocery stores—where 90 percent of new products fail—as an example of how the right technology can change the game.

"What if we can integrate digital signage directly into the shelves, so a consumer can come in and learn about the new product, understand what the benefits are, and see new recipes that they can create?" said Avalos.

Some home improvement stores offer customers the chance to test out a paint color before buying. Clothing stores are starting to roll out smart mirrors that allow customers to virtually try on clothing and see 360-degree comparisons of several outfits. Avalos has also seen a trend, especially in Japan, in which stores are combining intelligent robotics with digital signage to help consumers select products at the point of sale.

So-called augmented reality can also give sales staff robot-like data capabilities. For instance, a sales associate could wear a pair of glasses that gives them a

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continuous stream of real-time, relevant information without even having to look at a device.

Gartner predicts that by 2020, 25 percent of customer service and support operations will integrate virtual assistant technologies such as these—up from less than 2 percent in 2015.

"There's so much information that [sales associates] have to learn, about products, product features, and shoppers who walk into the store," said Chaudhry. "It's not humanly possible for them to remember all of that information, no matter how much training we provide." Technology can turn the average hourly sales associate into the best retailer with the right data and tools.

Purchasing power

Once a customer has decided to buy, retailers will need major improvements over today's typical in-store purchasing experience. With most people accustomed to near-instant online purchasing, a line to check out can mean a lost sale.

Sarah Johnson, a 32-year-old marketing professional in San Mateo, California, said she usually shops online but goes into stores when she wants to buy something and needs to see it or try it on first. "If they have what I want, in the right color and size, and they give me a great experience, I'll buy it there instead of going online and having to wait for it to be delivered," she said. "But it has to be easy—if I have to chase someone down to find what I need or wait in line, I'll just get impatient and leave."

The payment side of the industry is just starting to merge with the Internet of Things, according to Michelle Tinsley, Intel's Director of Mobility and Secure Payments in the Retail Solutions Division:

"Imagine waiting for a bus or a train, and you see on the digital signage a gorgeous outfit you want to buy. In the future, you could just tap with your smartphone and buy that item right there. You don't have to worry about opening your phone, looking at an app, browsing, trying to find the brand. You can just make that easy quick decision. This is just another example of how Internet of Things is merging with payments and making commerce happen anywhere."

Regulating comfort levels

Creating these personalized, frictionless will require retailers to address potential concerns related to data collection and use.

When deciding what kinds of data to collect, and how to use it, Tinsley cautioned that it's not a one-size-fits-all approach. It's critical for businesses to figure out

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the right technology for their specific needs. "What customer problems are you trying to solve? Is there a particular user experience your customers are looking for?"

Once they determine exactly what problems they're trying to solve and what kind of user experience they want for their customers, then it's time to determine the right technologies to translate them into business value.

"There's a sense of urgency in the industry right now that you just can't wait," said Tinsley. "It's time to get started."

