

White Paper:

# A Guide to Retail IoT: Creating the Shopping Experience of the Future





## IoT Tools to Create the Retail Experience of the Future

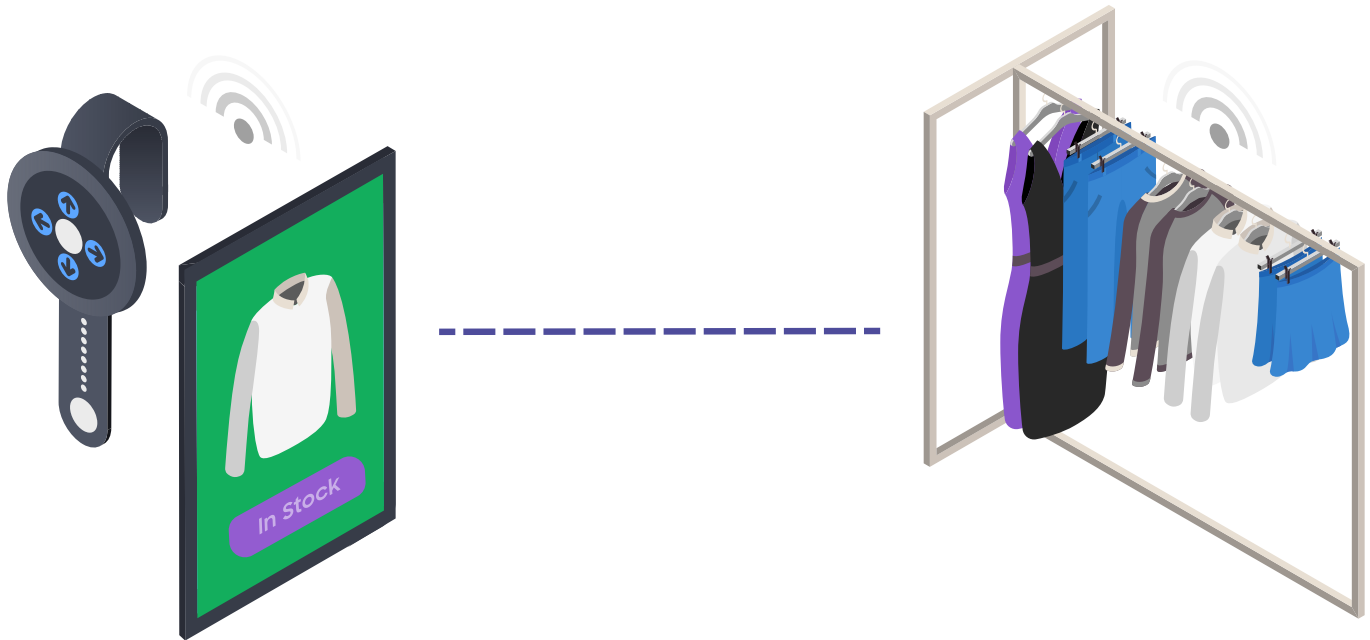
As millennials take the reins as the largest generation and demand an omnichannel experience, many retailers continue to face friction and fail to meet the challenge. From the supply chain and order fulfillment to the in-store experience, it's becoming increasingly difficult to meet the expectations of consumers who blur the lines between the physical and digital space. While innovative organizations have been leveraging technology like mobile and smart devices to improve the customer experience, many fall short and are still searching for an efficient way to accurately capture consumer data and measure ROI.

Rapid advancement of the Internet of Things (IoT) will soon dramatically change the future of retail. Falling costs of the physical technology, advancement of the cloud and new SaaS solutions will make it easier and more efficient for retailers to deploy smart devices of all types throughout their stores. These tools deliver real-time, cross-platform dashboard visibility of data, helping to close the gaps in omnichannel retail, improve the customer experience and create the store of the future.





# IoT: The Portal Between the Digital and Physical Worlds



While most retailers are already tinkering with IoT through smart lighting, smart thermostats, tablets and equipment sensors, experts say it's barely scratching the surface of the potential this technology can offer. Nearly three-quarters of retailers have some sort of IoT project underway, and a 2015 report found that retailers will spend an estimated \$2.5 billion on hardware and installation by 2020.<sup>15</sup>

As much as retailers couldn't imagine the power of mobile apps in 2005, it's currently hard to fully envision the role IoT will play in retail's future. Retailers will soon use IoT devices to supplement the experience for in-store and online shoppers. Meanwhile, as consumers increasingly adopt IoT in their homes and on their bodies with wearables, they will force change in the retail industry.

Gartner predicts an explosion in IoT devices, from 6.4 billion today to nearly 21 billion devices connected to the internet by 2020.<sup>16</sup> Rapid adoption of IoT wearables means a growing number of consumers will be walking around retail stores with internet-connected watches, devices and sensors on their clothing and bodies.

Nayaki Nayyar, president of digital services management at BMC Software, says IoT in the hands of consumers and retailers will offer endless capabilities to transform retail — from dynamic pricing on electronic shelf labels and self-checking with smartphones to interactive digital signs. "We expect this to grow very fast in the next few years and completely change the customer experience," Nayyar says.<sup>17</sup>

**2.5 Billion**  
spent by retailers  
on IoT hardware and  
installation by 2020<sup>18</sup>

**6.4 Billion**  
devices connected  
to the internet today<sup>19</sup>

**21 Billion**  
devices connected  
to the internet by 2020<sup>20</sup>

# Optimizing Retail In-store

IoT devices can be used to improve the omnichannel experience by breaking down barriers and reducing the silos that still exist in many retail organizations. Sensors can connect digital customer profiles to people walking in the store. Smartwatches in a distribution center that offer hands-free communication can improve efficiency and offer visibility of products as they move through the supply chain. Interactive apps and mobile payment solutions can help consumers navigate a physical store with digital interactions. Kiosks can offer shoppers instant access to inventories across the system. And for the fashion retailer, digital mirrors can enable customers to virtually try on any clothing in any color or style, and to mix and match looks that fit their tastes.<sup>21</sup>

In recent years, retailers have been slow to adopt IoT due to the expense and low profit margins. Today, retailers are implementing pilot programs and proof of concept efforts to test the impacts and measure the return on investment of IoT, and they are already seeing business value. 2017 will be the year that these technologies are adopted at a faster pace and will affect systems and processes across the entire retail enterprise. Retail industry experts envision digitally integrated checkouts appearing at all levels of retail, and in the supply chain, digitally enhanced inventory transparency and searches for out-of-stock replacements.<sup>22</sup>

When joined with technology like cloud computing, analytics and mobile devices, IoT is finally making the idea of truly “frictionless” retail within reach. In this perfectly optimized environment, customers can perform any activity across any channel without engaging in non-value added activities. Shaun Kirby, CTO of Cisco Consulting Services, says IoT finally allows retailers to connect the physical world with the systems, technologies and processes used throughout the industry. “This enables retailers to streamline operations, increase sales, improve the customer experience and ensure loyalty,” said Kirby.<sup>23</sup>

IoT will ultimately be applied throughout the entire retail system, from the manufacturing floor to the distribution chain, to front-line associates and the mobile devices of consumers. Robust analytics and data will inspire retailers to start in the beginning and allow them to optimize and rapidly change product design, packaging and merchandising. IoT will reduce friction in the retail experience by blending the digital and physical retail experiences in ways we’ve never imagined, allowing for bottom-line benefits including reduced costs, new revenue streams and increased customer loyalty.



















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