

The journey to cognitive retail operations with the Internet of Things and the Connected Store

A better experience for customers and new possibilities for retailers



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Summary

The expansion of the Internet of Things and the advent of omnichannel shopping have changed the way consumers interact with retailers. With the addition of the cognitive powers of IBM Watson, the retail landscape and consumer expectations are undergoing tumultuous change. In this new, ferociously competitive world of bricks and clicks, the leaders will differentiate themselves with personalized services never before possible. This White Paper identifies the new opportunities, and helps set you on your own journey to cognitive retail success.

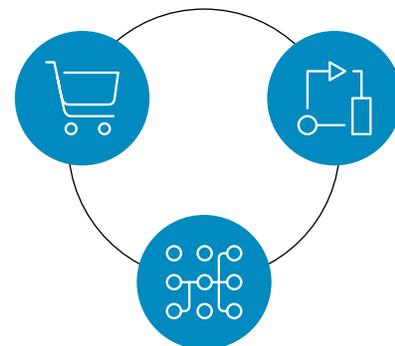
As the Internet of Things becomes ubiquitous, the cost of embedding connectivity and intelligence becomes cheaper. This increasingly affordable connectivity is now having an impact on the retail industry: retailers are able to reinvent their operational business models to reduce costs, and can access and interpret customer demands to provide services that deliver increased revenue. The new shopping experience, created through cognitive solutions, will differentiate retailers from their competition, help them gain market share, and enable them to capture customer attention using hyper personalization delivered by the Connected Store.

The evolving Connected Store is revealing three key lessons:

- Omnichannel retailing is a must for the retailers to stay in the game
- IoT is the key differentiator in gaining critical and timely customer and business insights
- Cloud based mobile and cognitive solutions are the future of retail operations.

Deliver a smarter shopping experience
360° view of customer
Connected marketing
Omnichannel commerce

Build smarter merchandising and supply networks
Omnichannel merchandising
Omnichannel supply networks



Drive smarter operations
Back-office transformation
Retail infrastructure optimization
Performance insights and management

Figure 1: Cognitive retail affects every aspect of the retail process.

The journey to the Connected Store

Customers think of shopping as one experience, whether experienced online, in store, via their TV, or on a mobile device. This single experience is made possible through an omnichannel model that provides the consumer with multiple access points for point of sale.

The most traditional access point—the brick and mortar facility—continues to be the most expensive one available. The cost of operations in setting up, maintaining, and running an in store high street presence continues to rise, while trends indicate that brick and mortar assets are having less impact on new or increased revenue generation. Meanwhile, Amazon is establishing more pop-up outlets with the ability to connect and deliver a convenient purchasing experience to the customer.



Figure 2: The Connected Store integrates data gathered through IoT devices with customer trends to learn behaviours, personalizing the shopping experience and improve retail operations.

To make the bricks and mortar marketplace more impactful and purposeful, shop displays are becoming dynamic and interactive. Stores are being located in iconic locations and landmark buildings that, in some instances, are relocations or strategically merged premises that provide better value for real estate and facilities overhead. Within these environments, the buying experience is being modified to make it as easy as possible for the customer, and improving conversion rates with automated pay points and fast collection, and pre-paid pickup services. Improvements such as these are becoming a competitive differentiator: providing a complete product, services and customer experience based offering.

With so much emphasis on the collection of personal data, through Internet of Things (IoT), mobile and omnichannel loyalty schemes, customers are expecting retailers to cater to their personal needs. By applying analytics, retailers learn behaviors and shopping trends, and personalize offerings that provide specific recommendations linked to availability, health requirements, budget and convenience. Customer profiles ensure that preferences, allergies, diet or nutrition can be prioritized and accommodated.

What is the Internet of Things (IoT)?

IoT is the practice of deploying networks of uniquely identifiable endpoints, including devices, sensors and other elements that are unified by a centralized platform, to capture data in new and innovative ways. Enterprises are developing business practices that utilize IoT data to enhance existing businesses and deploy new business models.

Getting ready for the Connected Store

Without a strategy for the IoT, retailers risk competition from new entrants, and threats created by the diversification of existing competitors. Examples from IBM show that retailers with a strategy for deploying IoT are able to deliver improvements in inventory management and supply chain through near real time stock tracking and order management; enhanced asset maintenance through health monitoring; and next best action recommendations and predictive maintenance. Furthermore, retailers using beacon technology linked to sensors can personalize offerings to be pushed through to customers via their mobile handsets when in or near to the store. This boosts customer loyalty, offering personalized discounts based on preferences, browsing insights, their specific micro segment, and historical purchases.

In order to unleash and benefit from the possibilities of the Connected Store and the IoT, IBM suggests that retailers:

- Understand the possibilities and also the limitations of cognitive technologies through an innovation workshop
- Put in place a list of prioritized prerequisites to form a plan
- Create a roadmap for how and when to leverage new capabilities
- Develop new business models, processes, and skills to exploit the new information, insights, and cognitive capabilities
- Explore opportunities for partnerships with the consumer goods industry ecosystem
- Enable customers and employees to engage and collaborate through the omnichannel marketplace using new cognitive tools

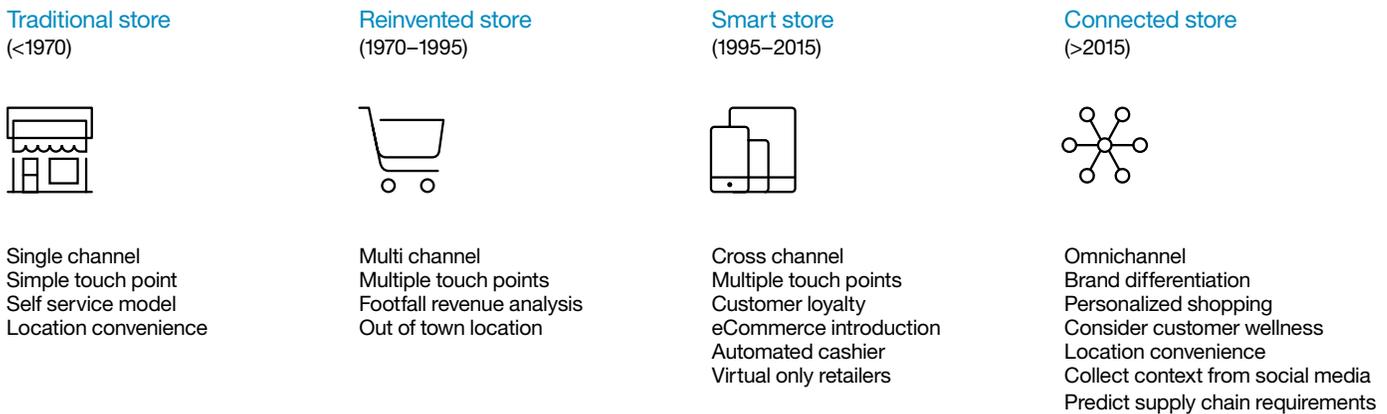


Figure 3: IBM's Connected Store Maturity Framework can help you perform a market landscape and competitor dynamics analysis

Enabling retailers to create a Connected Store

In the Connected Store, the IoT and cognitive solutions capture data from day to day retail operations across all channels to enable new levels of interaction with the store employees and customers. This effectively allows retailer employers to think differently. The most common examples include:

Store wellness

Physical asset performance (for example, refrigeration, HVAC) data is captured from devices to identify proactive actions needed by store staff, or via automated responses delivered through asset management systems processes, for reduced operating costs and improved health and safety compliance. Sensors trigger alerts if food reaches an unsafe temperature preventing spoilage.

Customer engagement

Customer service levels are raised by utilizing data from beacons and sensors to analyze customer demographics, sentiment, mobile application interaction with cognitive shopping assistant, personalized point of sale, and heat mapping against transaction log data to understand product demand by time of day. The engagement is enhanced and service is tailored to the individual customer through the omnichannel.

Cognitive building

Real estate and facilities management solutions enable advanced management of sustainability strategies, supplier contracts management, next best maintenance action, Building Information Modeling (BIM), and space optimization and utilization planning that differentiates the brand.

Next generation supply chain

Insights are improved, operational efficiency delivered, and working capital is optimized through agile operations. RFID and NFC improve availability and product security. Insights are enhanced with near real time inventory predictions incorporating analytics from weather and social media platforms.

Emerging technologies

This includes exploration of the potential use of drones, blockchain, process automation, robotics and wearables for interconnected, intelligent and insightful adoption methods for new ways to be efficient.

Smart home

New convenience driven by demand for rapid replenishment in perishable and non-perishable goods through reactive and cognitive self-learning shopping list and home delivery services. Retailers are able to integrate their customer loyalty.

Weather

Weather influences what people wear, and how they feel, eat and buy. In a Connected Store, the retailer can combine local weather data with cognitive computing.

Seasonal offerings can be designed based on weather insights, where customer engagement can be mapped to personalized requirements to maximize results and customer satisfaction. Weather is also used to predict behavior, enabling optimized revenue forecasting and supply chain management as part of cognitive operations.

IBM client example: Macy's partners with IBM for in store On Call shopping assistance

Macy's On Call unites intelligent engagement with IBM's cognitive technology to create an in store mobile companion that uses natural language to assist in servicing customer needs. *Macy's On Call* allows customers to input questions about each participating store's unique product assortment, services and facilities and then receive a customized response to the inquiry.

How can IBM help?

Today, IBM is helping many retailers develop the best strategy for embracing IoT in the cognitive era—supporting them in harnessing the insights and business needs to achieve their goals and realize the Connected Store vision. IBM helps clients put the prerequisites in place, while also deploying a phased plan in line with business goals, priorities and capabilities. IBM's Watson Internet of Things global headquarters in Munich, Germany is just one of our major centers that will support you in exploring the most appropriate point to start our cognitive retail journey together.

IBM can:

- Demonstrate the technologies mentioned in this paper during your visit to one of its centers
- Perform a Connected Store value assessment to identify the unique possibilities, as well as the potential impact on your organization and customers
- Facilitate IBM Design Thinking workshops to help you ideate potential solutions and benefits cases for cognitive and IoT solutions
- Design a target operating model for the retail innovation function to align business processes, data and people considerations to take advantage of the new technology
- Provide business change management and communications support
- Deliver cloud technology as a service or on premises delivery to help accelerate your journey to the end state.

When will your IoT enabled Connected Store journey begin?

For more information

Please visit the following IBM websites:

ibm.com/internet-of-things/iot-zones/iot-retail-stores

ibm.com/industries/retail

ibm.com/services/us/business-consulting/digital-operationsinternetofthings

A series of IBM press releases showcasing news about solutions in IoT and Connected Store

ibm.com/press/us/en/pressrelease/48479.wss

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Videos

In the Connected Store, the IoT and cognitive solutions capture data from day to day retail operations across all channels to enable new levels of interaction with the store employees and customers. This effectively allows retailer employers to think differently. The most common examples include store-monitoring to predict customer preferences, proactive inventory control, and personalized customer experience.

www.youtube.com/watch?v=PXZc2lu2hrE
qlnk.io/ql/58797c5ae4b065e371df4efc

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