I D C   A N A L Y S T   C O N N E C T I O N

Robert Eastman
Research Manager

The Digital Transformation Imperative for Retail

June 2018

Digital technology has forever changed the way consumers engage with all businesses, and in response, the retail industry is undergoing a monumental shift toward offering customer-centric, personalized, digitally/physically converged experiences in the stream of life. The shift requires much more than slight alterations to engagement strategies or incremental investments in new process and technology. To remain competitive, retailers must respond to the shift in consumer shopping and buying patterns by taking advantage of the opportunities digital technology offers to reinvent the customer relationship.

The following questions were posed by CenturyLink to Robert Eastman, research manager of IDC Retail Insights, on behalf of CenturyLink's customers.

Q. **As the distance widens between digital leaders and laggards, how can retailers embrace digital transformation (DX) to help close the gap?**

A.   Embracing DX is imperative for retailers. But accepting DX, understanding what DX means for any organization, and applying the appropriate DX use cases with an optimal strategy depend, first, on understanding the customer journey(s) and the unique and differentiating customer experience that the retail organization wants its customers to have at every digital and physical touch point along the journey. Once the retailer understands how it must blend and distinguish the store, web, mobile device, and phone channels at every step of the customer journey to establish trust with the customer and deliver a more immersive shopping experience, then the retailer can make better sense of what the digital transformation means for the organization.

Digital transformation also obviously entails aligning and executing on investment in the solutions and retail infrastructure that will enable the converged digital-physical experience. Retailers that make the most effective and optimal allocation of IT budget spend across the five elements or domains of digital transformation (information, operating model, organization, omni-experience, and leadership) are in the best position to leverage DX to achieve competitive differentiation. With retailers spending an average of nearly 30% of their IT budget on digital transformation initiatives, retail infrastructure (enterprise network infrastructure, store infrastructure, cloud infrastructure, mobile infrastructure, and security software and hardware) becomes increasingly important to the realization of the benefits of digital transformation.

Q. **With the digital and physical worlds continuing to collide, what are the IT implications for retailers to ensure an optimized employee and customer experience?**

A. Consumers are reaping the rewards of the convergence of retail channels and the increasing amounts of technology available to take advantage of these channels. With the rapid evolution of the amount of information in consumers' hands, retailers are challenged to arm in-store associates with the same richness of information that customers can quickly access on their own through digital channels. The proverbial issue of the customer knowing more about in-store offerings than store associates has been wreaking havoc, with retailers trying to deliver an optimized customer experience.

In 2017, organizations across all industries allocated 23% of their DX investments to omni-experience transformation and 3% of their DX investments to organizational transformation. Anecdotal evidence is that retail DX investments are in line with these numbers. In the retail industry, the store associate plays an integral part in the customer experience. Even as investments in retail infrastructure are becoming increasingly critical to supporting all the other technology investments that retailers are making, investing in customer-facing technology that directly enables the retail workforce to better enhance customer experience is increasingly differentiating retail leaders from the rest of the pack.

Q. **How can retailers apply advanced analytics technologies to create contextual customer experiences and influence the path to purchase?**

A. To provide ever more context-specific and personalized customer experiences, retailers are trying to capture and mine increasing amounts of customer data — behavior, likes/dislikes, preferences, and purchase history. By mining and analyzing this data, retailers are in a better position to be able to deliver a more personalized experience for the customer and create even more digital touch points.

The challenge for retailers has been that this data has been spread across the retail enterprise, often in silos that hinder the formation of a 360-degree view of the customer. And as more sensor-enabled technology is deployed, retailers need more advanced technologies to manage, capture, mine, and analyze the data well enough to generate business insights that can be acted on in real time. The business intelligence and analytics technologies of just a couple of years ago are giving way to much more sophisticated and advanced analytics, machine learning, and artificial (cognitive) intelligence. Advanced analytics has moved from an add-on application to a foundational capability that will increasingly be platform based and capable of real-time data gathering and analysis from capabilities embedded in every retail function gathering data from an increasing array of sensors across the retail environment.

The real-time dimension of these advanced analytics capabilities will mean that leading retailers will be able to intelligently engage and influence the customer at multiple points along the customer journey. Advanced analytics and artificial intelligence enable autonomic micro-personalization in real time.

Q. **What role will cloud and hybrid IT strategies play in accelerating the ability of retail organizations to harness digital transformation technologies to achieve greater "commerce now" success?**

A. Digital transformation needs to be viewed as much more than the adoption of digital technologies. While DX entails the adoption of 3rd Platform technologies (big data and analytics, cloud, mobility, social) and innovation accelerators (3D printing, cognitive systems, Internet of Things, natural interfaces, next-generation security, robotics), digital transformation

is about embedding a digital culture deep inside an organization. With such a digital culture and mastery, the enterprise can operate, scale, and innovate much more quickly and efficiently.

Embracing this digital transformation has moved from strategic initiative to strategic imperative. The cloud is foundational to digital transformation. Digital-native enterprises that are operating from digital, cloud-based platforms and architectures are presenting disruptive competitive challenges in their industries and often defining a new competitive baseline that other enterprises need to respond to in order to survive and be competitive.

Thus cloud has become far more than a cost play to turn capital assets into operational expenses; cloud is now a foundation for digital transformation. Retailers that continue to think of cloud strictly in terms of ease of deployment and cost savings will fail to realize the strategic potential of cloud to enable enterprise-level DX initiatives.

Leading enterprises realize the critical importance of establishing an architecture that is platform based, cloud first, and innovation focused. Hybrid IT environments consisting of traditional IT, private cloud, and public cloud resources will prevail, giving enterprises the agility to shift applications and workloads to different resources. Retailers will also adopt cloud-first strategies not only to take advantage of the agility and scalability of the cloud but also to innovate faster and to explore new cloud-based service and revenue opportunities.

Q. **With retailers deploying more innovative technologies in-store and conducting more commerce online, what cybersecurity strategies should retailers deploy to protect their digital transformation investments?**

A. Security and loss prevention have long been big focus areas for retailers. Retailers have been making significant investments in web and data security as well as payments (EMV and PCI DSS compliance) and are conducting pilots in such areas as security vulnerability management, encryption, identity access management, and endpoint security. Now, cyberattacks are increasing in variety and sophistication, often coming in planned attack sequences combining multiple digital techniques with social engineering. Even in the broader security area, retail crime actors are becoming much more organized, with defined organizational structures that operate much like a formal company.

Retailers are particularly susceptible to security breaches due to the volume of confidential and sensitive information sitting in retail databases, as well as the frequency of transactions, presenting a rich and tempting attack surface ripe for compromise.

To respond to these advancing threats, security and cybersecurity vendors are adapting new technologies and capabilities. Security solutions are incorporating artificial intelligence and machine learning capabilities that can perform (continually self-improving) pattern recognition to identify attacks more quickly and reliably.

The evolving nature of today's cybersecurity threats calls for a more comprehensive and holistic view of security across an entire enterprise as opposed to management of various point applications. Increasingly, enterprises will need to adopt integrated security platforms with deep artificial intelligence and machine learning capabilities that reduce complexity by replacing the silos of security point solutions that prevail today and provide better cross-enterprise visibility and control. Leading retailers will integrate digital and physical security tactics and mine actionable data from both approaches.

A B O U T   T H I S   P U B L I C A T I O N

This publication was produced by IDC Custom Solutions. The opinion, analysis, and research results presented herein are drawn from more detailed research and analysis independently conducted and published by IDC, unless specific vendor sponsorship is noted. IDC Custom Solutions makes IDC content available in a wide range of formats for distribution by various companies. A license to distribute IDC content does not imply endorsement of or opinion about the licensee.