Frictionless shopping

Leverage digital technology for a responsive, customer-centric retail experience

In the highly competitive retail industry, with high market saturation and low consumer switching costs, digital transformation is a must to survive. Customers are in control. They demand more for every penny they spend, and they expect a near-continuous experience between their in-store purchases, digital surfing and even voice-based devices.

Deployed strategically, technology can provide them with frictionless shopping — a seamless, customer-centric experience that starts with a deep understanding of individual consumers' needs, expectations and preferences and applies this knowledge to every interaction.

Even though this goal is achievable, shopping nirvana has not quite arrived. Basic elements of a positive in-store experience are often missing — long lines at checkout, clerks who are nowhere to be found or products that aren't quite what we're looking for.

A study reported by Plexure supports this feeling: "While many retailers are investing heavily in improving the in-store experience, they're not quite there yet. In fact, a recent study by Qmatic found 40% of UK retailers received complaints about items being unavailable, 37% about queue wait times and 32% about store congestion."[1]

Retailers that can most quickly and effectively leverage real-time analytics and omnichannel interactions to keep customers happy and loyal will be the most successful in the near and long term — and perhaps even save their brick-and-mortar stores in the process.

Are brick-and-mortar stores doomed?

In recent years, brick-and-mortar stores have started to look like an endangered species as big-name retailers have closed stores after years of declining sales and customer flow. According to reports by *Business Insider*,[2] more than 6,400 stores rolled down their shutters in 2017, and more than 3,600 stores are expected to close in 2018.

But just when it looked as if the days were likely over for brick-and-mortar stores, the industry was stunned by the news of Amazon's acquisition of Whole Foods Market for $13.7 billion in mid-2017. Since then, we have seen Amazon enhance the overall customer experience and merge online and brick-and-mortar approaches by adding physical device sales in stores and self-pickup collection points for online shopping and returns.

A *Wall Street Journal*[3] report on toy retailers supports this trend, further suggesting that brick-and-mortar stores are not done yet.
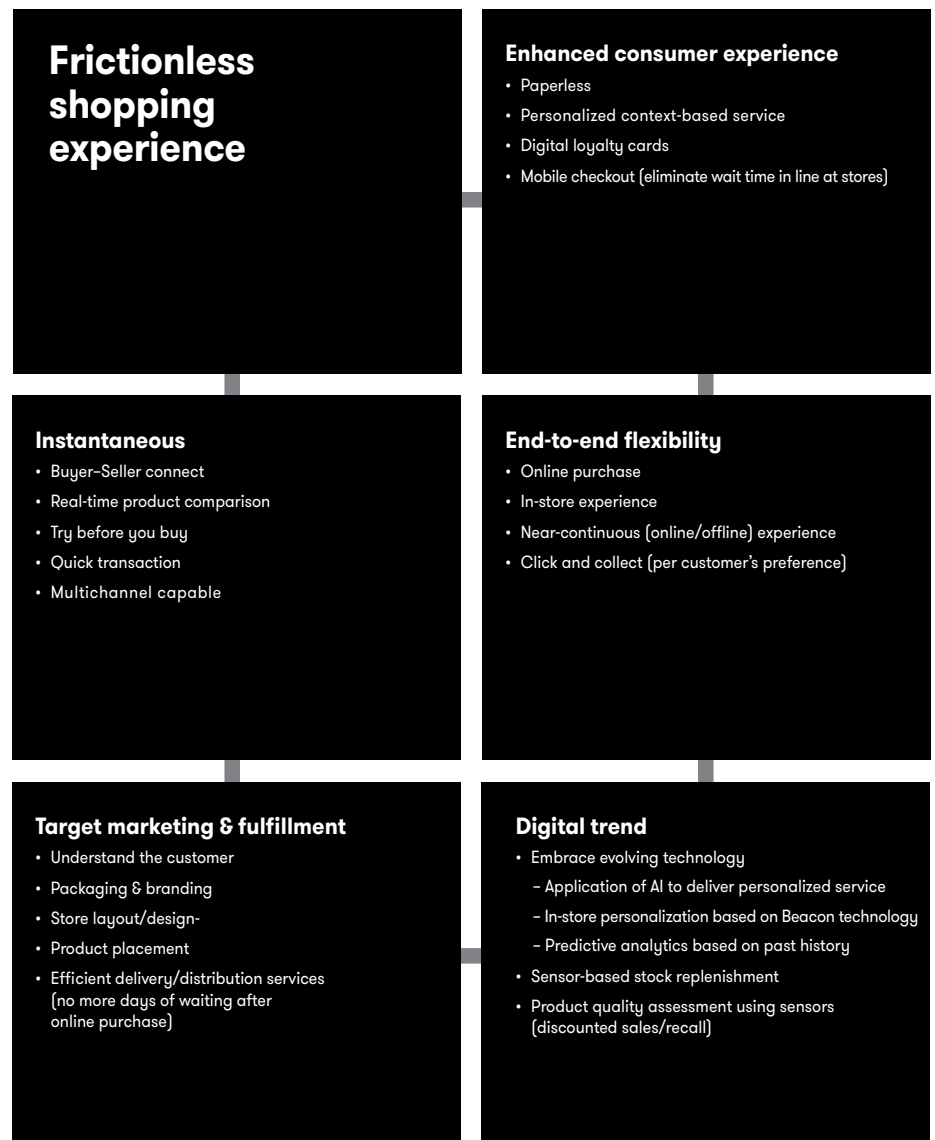
How to deliver a frictionless shopping experience

Although an online presence is unquestionably critical, the example of Amazon and other primarily online businesses[4] shows that a retailer can be more successful by offering omnichannel approaches that complement each other to provide the seamless experience the customer seeks. Digital disruption to achieve this experience can be used in all phases of the customer life cycle: exploration, shopping, buying, purchasing and consumption.

A frictionless shopping experience includes key characteristics: instantaneous interactions, an enhanced and personalized experience, use of digital technology for back-end and customer-facing functions, end-to-end flexibility from online purchasing to click and collect, and effective target marketing and fulfillment (**Figure 1**).

Figure 1. Key components of the frictionless shopping experience

Frictionless shopping experience

Enhanced consumer experience
- Paperless
- Personalized context-based service
- Digital loyalty cards
- Mobile checkout (eliminate wait time in line at stores)

Instantaneous
- Buyer–Seller connect
- Real-time product comparison
- Try before you buy
- Quick transaction
- Multichannel capable

End-to-end flexibility
- Online purchase
- In-store experience
- Near-continuous (online/offline) experience
- Click and collect (per customer's preference)

Target marketing & fulfillment
- Understand the customer
- Packaging & branding
- Store layout/design-
- Product placement
- Efficient delivery/distribution services (no more days of waiting after online purchase)

Digital trend
- Embrace evolving technology
  - Application of AI to deliver personalized service
  - In-store personalization based on Beacon technology
  - Predictive analytics based on past history
- Sensor-based stock replenishment
- Product quality assessment using sensors (discounted sales/recall)

Retailers can provide a near-continuous, seamless, smart and integrated omnichannel experience by leveraging a combination of technologies:

- Wi-Fi detection to recognize presence at home

- In-store GPS systems

- Beacon technology for target- and context-based marketing

- In-store tracking and analytics to identify aisles where a customer spends more time, track how the customer typically traverses within the store and then offer dynamic recommendations

The first thing retailers need to do to offer a frictionless shopping experience is to *understand their customers well* so they can deliver targeted, personalized service that helps the shopper. Anything that works against a positive experience is a friction that needs to be eliminated.

The next factor is to *take a holistic view* of the customer, recognizing that customers are neither online nor offline all the time. You can design a delightful and seamless experience by looking at a customer across the spectrum of physical, digital, mobile and even voice channels — Amazon's Alexa, Apple's Siri and Google's Assistant — that make it easy for customers to shop by conversing naturally with their favorite devices.

Leveraging customer data — collected across various channels and stored across multiple systems — plays a critical role in offering a rich and frictionless experience. According to *Forbes*[5], one of Amazon's key interests in Whole Foods was its considerable consumer data on grocery buying habits, patterns and preferences.

Other ways retailers can bring a frictionless experience to customers include:

Contextual in-store experience. Don't just sell products off the shelf. Engage with the customer throughout the store experience. Offer nonintrusive, context-based service using beacon technology to improve customer interactions with products and the store.

Integrated omnichannel experience. Establish a multichannel approach and look for ways to make the brick-and-mortar and online channels complement rather than compete with each other to satisfy customer needs.

For instance, if a customer is interested in a makeup kit, a satisfying experience is not just about buying cosmetics from the store and getting some advice from the sales consultant. It's about using digital tools to understand the customer's preferences and provide a targeted, seamless experience — aftercare, virtual makeup, diagnostics, online consultations and personalized product recommendations.

L'Oréal, for instance, has developed sophisticated and integrated omnichannel programs to entice and maintain customer relationships by tracking purchases and web surfing history. The data then helps tailor personalized campaigns that maximize and maintain individual customer relationships and expand wallet share and loyalty.

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Hop on the real-time analytics bandwagon

Real-time analytics let retailers continually analyze customer data and behavior patterns to generate context-sensitive, actionable insights. You can digitize data from a variety of sources and sensors and put this to use through a feedback loop to refine product offerings, respond nimbly to customer needs and become more customer-centric.

When you combine the digital data collected with machine learning (ML) and artificial intelligence (AI) behind the scenes, you can create compelling dashboards highlighting insights that drive recommendations for actions. You can, for example:

- Continue to learn and optimize recommendations to customers

- Relay a personalized product promotion based on the customer's prior purchasing patterns

- Identify customer purchasing signals to use with future prospective customers

- Arrive at a competitive pricing model based on the time of the year, weather conditions, geographic location, customer demographics, purchasing patterns, etc.

Here are some other possibilities:

Capitalize on evolving ML and AI techniques and leverage the collected data to enrich the end-to-end customer experience, all the way from sales and marketing through customer service and support.

Existing cosmetics products, for instance, already use AI and 3D printing to give users a unique and improved experience: A cleansing brush by Foreo called LUNA analyzes an individual's skin and builds a beauty routine around it.

The company's revolutionary digital makeup artist, MODA, provides flawless makeup in seconds. The customer simply picks a makeup look, connects through Bluetooth and positions herself for MODA's 3D facial scanning and application of a customized triple-layer 3D printing of primer, foundation and high-impact color.

Use technologies based on computer vision, sensors and deep learning (DL) to replenish stock on time and, more importantly, elevate the customer experience by minimizing or eliminating wait times at checkout counters.

Deep learning is one of many approaches to machine learning. Modern deep learning models are based on artificial neural networks, the algorithms that mimic the biological structure and function of a human brain.

One example of this technology combination is Amazon Go. Amazon has woven the most advanced ML, computer vision, DL algorithms and sensor fusion into the very fabric of the store to help customers pick what they want and leave, without waiting in line to check out.

Implement ML-based recommendation systems as part of what Google calls the Zero Moment of Truth (ZMOT), the moment when consumers research a product before buying it online. Since the shoppers can't touch and feel the product, recommendation systems help them decide whether to buy it or not.

Tap into evolving immersive technology to help customers try products online before buying.

Make conversational AI part of the equation to help serve customers through omnipresent chatbots and self-service voice-based assistants.

Leverage sensor-based internet of things (IoT) technology for real-time stock replenishment. This can be used to: (1) proactively determine the remaining shelf life of perishable products and take real-time action to remove a product (if it is not safe for consumption) or offer coupons/in-store promotion to clear it quickly, and (2) identify depleting stock and notify store agents to stock adequately.

Notify customers proactively on recalled products through **blockchain-based product provenance implementation**. Then tie in recalls through the IoT-based solution to pull the contaminated products off the shelf.

Implement beacon technology as a nonintrusive mechanism to deliver value through personalization and context-based service — for instance, through personalized coupons.

Leverage partner ecosystems. In many cases, a solution or product developed by a partner might fit the requirement at hand. For instance, a retailer looking for a solution that leverages the power of gestures, augmented reality (AR) or virtual reality (VR) for a virtual dressing room could leverage a partner of choice that has agility capabilities, specialized content, niche market expertise and so forth.

Offer loyalty points through rewards programs to keep customers attached and coming back.

In addition, to be successful, a retailer needs to stay focused on **key production and logistics**[6] areas:

• Agility and interconnectedness within enterprise resource planning (ERP) systems

• A demand-driven supply chain designed to produce what, when and where the customer demands

• Analytics, AI and ML for actionable insights in time to react to demand

• Rapid-delivery freight and logistics extending to the consumer's front door

Optimize logistics to maximize the value of goods that reach the warehouse or retail shelves by using data to plan and route efficient shipment. Leverage online features for quick, accurate order fulfillment and delivery as part of an integrated experience: dynamic product selection; try before buying; a dedicated product experience center; priority delivery based on customer preferences, such as click-to-purchase and in-store pickup.

Bell and Howell, for instance, has introduced PackRobot by Cleveron, an innovative smart locker technology that is even smarter than existing smart lockers. Customers order products online, are notified automatically when the shipment is ready and pick it up at their convenience from a self-service pickup tower in the store or parking lot in as few as 10 seconds.
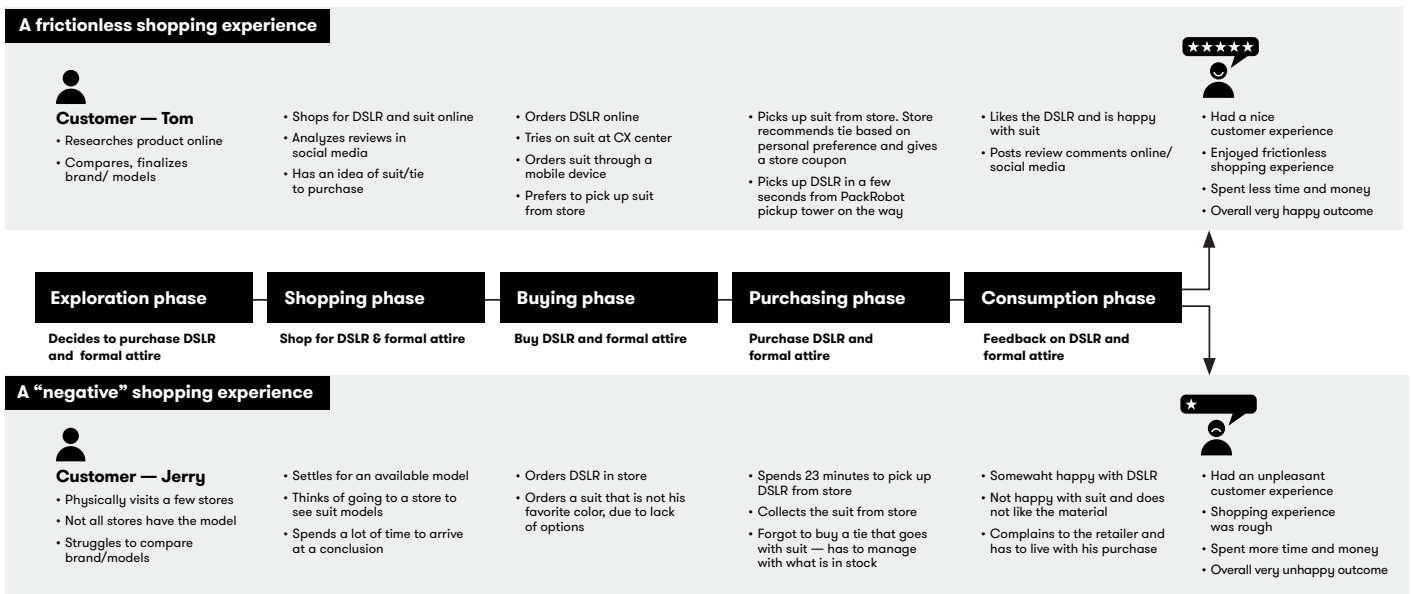
Ensure customer loyalty with a satisfying experience

A retailer that embraces evolving technology wisely can provide a best-in-class experience to ensure customer loyalty.

In the hypothetical example in **Figure 2**, Tom deals with a retailer that understands the precise pulse of the customer. Jerry, on the other hand, encounters a retailer that is a bit too laid back and doesn't seem to care about the customer experience.

Tom and Jerry are university classmates who need a digital single-lens reflex (DSLR) camera for a photography class. They also need specific clothing for a science conference they are attending in a few days. It's no surprise that Tom enjoyed a pleasant shopping experience and Jerry emerged a bit frustrated.

Figure 2. A frictionless shopping experience vs. a "negative" one

A frictionless shopping experience

Customer — Tom
- Researches product online
- Compares, finalizes brand/ models

- Shops for DSLR and suit online
- Analyzes reviews in social media
- Has an idea of suit/tie to purchase

- Orders DSLR online
- Tries on suit at CX center
- Orders suit through a mobile device
- Prefers to pick up suit from store

- Picks up suit from store. Store recommends tie based on personal preference and gives a store coupon
- Picks up DSLR in a few seconds from PackRobot pickup tower on the way

- Likes the DSLR and is happy with suit
- Posts review comments online/ social media

- Had a nice customer experience
- Enjoyed frictionless shopping experience
- Spent less time and money
- Overall very happy outcome

Exploration phase	Shopping phase	Buying phase	Purchasing phase	Consumption phase
Decides to purchase DSLR and formal attire	Shop for DSLR & formal attire	Buy DSLR and formal attire	Purchase DSLR and formal attire	Feedback on DSLR and formal attire

A "negative" shopping experience

Customer — Jerry
- Physically visits a few stores
- Not all stores have the model
- Struggles to compare brand/models

- Settles for an available model
- Thinks of going to a store to see suit models
- Spends a lot of time to arrive at a conclusion

- Orders DSLR in store
- Orders a suit that is not his favorite color, due to lack of options

- Spends 23 minutes to pick up DSLR from store
- Collects the suit from store
- Forgot to buy a tie that goes with suit — has to manage with what is in stock

- Somewaht happy with DSLR
- Not happy with suit and does not like the material
- Complains to the retailer and has to live with his purchase

- Had an unpleasant customer experience
- Shopping experience was rough
- Spent more time and money
- Overall very unhappy outcome

What's "in store" in the coming years?

The retail industry is not going away, and customers have more options than ever before. Their changing behavior and expectations have given traditional retailers a huge wake-up call, compelling businesses to reinvent their thinking and look for digital solutions for branding, personalization, speed and, most importantly, a frictionless customer experience. Only the retailer stands to lose in the overall game if it ignores customer needs.

McKinsey predicts: "The concept of a physical store … is not going away any time soon. … The retailers who thrive in the next decade will be those that reimagine and redefine their stores for the digital age. Tomorrow's winners will be those who are able to transport the digital world into their stores in a manner that delights customers, builds loyalty and generates brand value."[7]

To do this, retail companies are expected to embrace automation, deep customer understanding and virtual experiences. Retailers that understand their customers and create a fresh and technologically savvy business model will be in a better position to respond swiftly to evolving demands through integrated, customer-centric digital solutions.

About the Author

Devarayan Subbu is a principal technologist at DXC Labs India, currently focused on emerging technology trends in digital transformation for DXC clients across various industries. Based in Chennai, Subbu has extensive experience working with some of the flagship accounts. Prior to joining DXC, he served as a key technology consultant for a leading auto racing team, working closely with their crew chiefs and race engineers for their multiple NASCAR and IRL entries and enabling them to win series championships. His current technology areas of interest include IOTA, blockchain, machine learning and data analytics. He is an EMC-certified Data Science Associate and PMI-certified Project Management Professional.

**Learn more at
dxc.technology/retail**

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