Customer Experience Testing: The Key to Digital Success

As digital pervades nearly every aspect of our personal and professional lives, businesses must embrace and execute a well-defined customer experience testing strategy that keeps customers loyal and satisfied.

(First of a two-part series)
Executive Summary

Much has been written about the transformational impact of digital on time-tested business and revenue models. As digital products evolve in both the business-to-business and business-to-consumer segments, and the “direct-to-customer” model gains momentum, the quality of the end-user experience will increasingly correlate with improved user adoption, customer loyalty and social conversions.

The focus on customer experience has spawned the need for a robust testing strategy suited to the demands of today’s CIOs and CMOs.

This white paper explores how an effective customer experience testing strategy can bring together the best of design, effective use of digital channels and real-time analytics to not only achieve user adoption goals but also exceed business objectives.

We explore the key tenets of customer experience testing strategy definition and execution, and define the emerging role of customer experience architects. A follow-up installment will focus on the specifics of omnichannel, analytics and A/B testing as customer experience testing solutions.
Beyond Traditional Testing

Today’s digital customers can choose from a wide array of products and applications, transaction channels and influencers of their ultimate decisions. This power shift has accelerated the efforts of consumer-facing companies to ensure end-user delight. Effectively addressing these issues can directly impact a product’s top line, since in a digital world, transactions are closely linked to brand stickiness, loyalty, repeat purchasing and word-of-mouth publicity. For this reason, it has become paramount for businesses to define and execute an effective customer experience testing strategy across both the product development lifecycle and the post-production phase.

This new vista is set to upend traditional test case-based approaches, with techniques that involve automation, persona-based strategies, the overall end-user journey, real-time user analytics and omnichannel interactions across multiple digital touchpoints and connected devices. The product can now be tested by a disparate crowd in demographically specific regions that are most suitable for particular end-user situations. Customer experience testing will also need to be a continuous process because end-user expectations of a product or service are continuously evolving, driven by changes in the larger digital milieu.

With the increased emphasis on customer experience and product performance, the CMO’s role in IT product development has grown, and these executives now command larger budgets for technology and software; in response, Adobe, Oracle and other software vendors are pursuing this market with a renewed vigor. Recently, Oracle acquired cloud-based software provider Maxymiser, famous for its A/B testing, in order to strengthen the Oracle Marketing Cloud’s ability to manage marketing programs across all digital channels and the customer lifecycle.

Digital Narratives and Customer Journey Mapping

Evolving digital business opportunities and consumer expectations make it essential for consumer-facing companies to understand the customer journey, identify customers’ interaction points with digital products, and define and test the experience across channels, devices and platforms (see Figure 1).

Moreover, organizations need to distinguish between the user experience and customer experience; the two terms are often used interchangeably, which confounds strategic planning around customer journey mapping. User experience is typically confined to an individual’s interactions with a product, whereas customer experience encompasses the entire customer lifecycle.

Mapping the Customer Journey

![Figure 1](image-url)
Designing an Effective Customer Experience Test Strategy

To design an effective customer experience testing strategy, organizations must understand customer behavior, which encompasses both intrinsic and latent characteristics, as well as tangible and functional traits (see Figure 2). Both non-functional requirements and aspects such as capability, ease of access, use and navigation are all part of a testing strategy. Additionally, intrinsic human behavioral elements also need to be addressed from an end-customer experience perspective, such as cultural fit, psychology and emotions. (For more on this topic, read “The Quality Implications of Digital Transformation.”)

Five Factors Impacting Customer Experience Testing

- **Organizational maturity:** A customer experience strategy must begin by assessing the organization's overall maturity level for delivering a satisfactory customer experience and the level of interaction between various organizational stakeholders across the business, IT and marketing. The strategy also needs to account for the typical customer persona and journey when defining the right intervention.

- **Emotions:** Disgruntled product users often vent their frustrations and disappointments in social forums, namely Twitter and Facebook. Tapping social channels to capture human emotions through social listening techniques – and overlaying these findings with real-time analytics and sentiment analysis – will help organizations identify defects that were undetected during user acceptance testing (UAT).

Channeling defect findings back to the testing team will increase the robustness of the testing strategy over time. Identifying emotional motivators and using analytics across customer categories will help lay the foundation for a successful
customer experience strategy. The payoffs will be rewarding for companies that invest in connecting with customers’ emotions, as well-captured and understood sentiments will ultimately inform strategic insights into the drivers of customer behavior.

- **Omnichannel and analytics**: With the proliferation of devices and channels, it is critical to ensure a consistent and seamless customer experience for products across channels. Activities such as personalization, tracking cross-channel browsing history and transactions, monitoring likes, dislikes and prior purchases across channels, and enabling single sign-on all play a role in ensuring a seamless customer experience.

An omnichannel approach should also include testing for connected and IoT devices. Real-time user analytics across the Web and mobile devices can provide insight into customer behavior and user preferences, enabling marketing to deliver the right offering to the right customer. Using design thinking approaches during product development also helps build a holistic testing strategy. (For more on design thinking, please read “Human-centric Design: How Design Thinking can Drive Change and Deliver Value.”)

A/B or multi-variate testing — through which two or more variants of the product are tested either by internal testers or an external crowd — is an effective way to judge elements that impact user behavior. Results from A/B testing, in which variants can range from content, to layout, to usability, are often juxtaposed with end-user surveys and historical product data to provide insights to business decision-makers.

- **Performance testing for customer experience**: Performance testing for last-mile experience will help validate the performance of the website or mobile app under varying network conditions and latencies to mimic the end-user experience. Similarly, testing for client-side optimization will help validate front-end performance parameters for websites, mobile apps, RAM usage, battery usage and app launch time, for both mobile and wearable devices. Real user monitoring (RUM) analysis of exact end-user performance must continue in perpetuity because it helps affirm the end-user experience.

- **Wisdom of the crowd**: Businesses can use crowdsourcing to derive concrete pre-launch end-user feedback, by choosing a demographically distributed crowd that is culturally and socioeconomically similar to the end-user. Crowd-testing can be used at multiple points across the product development lifecycle and post-production stages, depending on the test strategy and assessments conducted. Testing should be performed on various parameters, including design, UI, navigation, security features and core functionality, and defects should be recorded in a defect management system. An exit interview or questionnaire can help capture latent emotions and reactions of testers during their interaction with the product.

For effective crowd-testing, businesses need to first understand the end user, her intent behind the product interaction and the end-user ecosystem in order to accurately mimic the end-user scenario (see Figure 3, next page). Crowd-testers are likely to branch out beyond testing for core functionality, to activities that help unravel latent user behavior. These may include testing products and applications from multiple retail POS outlets, signing up for loyalty programs to test effectiveness, making small purchases to gauge security levels, etc.

Tapping social channels to capture human emotions through social listening techniques – and overlaying these findings with real-time analytics and sentiment analysis – will help organizations identify defects that were undetected during user acceptance testing.
Quick Take

Helping a Fast-Food Restaurant Tap Into Crowd-Testing

We recently helped a large U.S. pizza restaurant chain conduct crowd-testing for its mobile app. The business and IT teams were concerned with poor user ratings, a high volume of negative app reviews, and poor user experience and revenue conversion, despite a successful and functional quality assurance process. We provided a demographic-specific crowd with a mix of gender, age and geographical characteristics that mirrored the client’s customer base. The test strategy replicated real-world use cases across iOS, Android and responsive Web design (RWD).

We unearthed over 85 issues across the design, functionality and GUI of the registration/login/ordering modules, as well as 32 RWD defects. User sentiment analysis identified the most important attributes for achieving a 4+ star rating within the quick service restaurant (QSR) industry, as well as competitive analysis across the client’s top-five competitors.
Looking Forward: The Emerging Customer Experience Architect

Customer experience testing will require a deeper understanding of the organization’s underlying business processes, customer needs and intentions, and the entire customer journey across the product lifecycle. Customer experience architects will emerge to focus on customer interactions within and across channels, and across the multiple touchpoints between customers and digital channels. These professionals will also deliver an analysis of these transactions and post-purchase behavior.

Customer Experience Testing: A Step-by-Step Approach

1. Live the customer journey. Customer experience architects can help create the customer journey map and end-user personas, as a step toward defining the customer experience testing strategy. End-user personas will differ within and across segments based on customer intent, which can range from acquiring information, to conducting a financial transaction or making an online purchase. The customer intent and journey map will enable understanding for prioritizing the different testing needs – functional, performance, security, access, etc. – within the overall customer experience test plan.

2. Assess the maturity level. Today’s digital organizations are at varying levels of maturity on customer experience with respect to collecting and utilizing data and analytics across the Web, mobile and social. (For more on this topic, read our white paper “Putting the Experience in Digital Customer Experience.”) A current-state maturity assessment that covers people, process and technology, as well as the desired future state, will help identify gaps and determine the best roadmap to follow. By delving into various stakeholder needs, businesses can understand the desired future state, enabling them to design the right intervention points for customer experience testing, whether at the requirements phase, the wireframe/mock-up/HTML stages or at post-production QA. The resulting comprehensive strategy should include organizational training and change management.

Case in point: We engaged with the world’s largest sports apparel retailer to analyze 1.7 million social media posts, mainly Twitter feeds on customer sentiment, to draw inferences and improve product quality for the company’s wearables product, as well as additional validations from a QA perspective.

3. Execute the strategy. In addition to testing for customer experience during the product development lifecycle, digital organizations need to inculcate post-production QA as part of their test lifecycles. They also need to conduct periodic interventions through an effective mix of user analytics, social sentiment analysis and non-functional requirements. Customer experience architects will help define the customer experience testing roadmap and answer the “which,” “when,” “where,” and “how” of crowd-testing, A/B testing, social analytics, etc.

Customer experience architects will help design an analytics-driven strategy, based on the customer data acquired from end-user interviews, user surveys, reviews in social and feedback forums, and other user interactions, such as call centers, Web chats, etc. For example, effective use of text analytics on the
reviews and other unstructured content will help businesses derive insights on customer sentiment. Input from social listening, overlaid with sentiment analysis, will help achieve a social-led user experience design, as well as social-led requirements management approaches.

Today’s digital organizations need to understand and appreciate that customer experience testing is—and will always be—a continuous journey. As the digital world evolves with the advent of new channels, devices and options, so does customer experience.

---

**Footnotes**


---

**About the Author**

Swami Nathan C is a Director with Cognizant’s QE&A Technology Center of Excellence and leads the unit’s customer experience testing initiative. He has over 22 years of IT, consulting and media experience, with deep understanding of both traditional and digital markets. Earlier at Cognizant, Swami played a lead consulting role within the company’s Information, Media and Entertainment Practice. Prior to Cognizant, Swami played a business role at a large publishing company in India. He holds a post-graduate degree in management from Birla Institute of Technology and Science, Pilani, India. Swami can be reached at Swaminathan.c@cognizant.com | [https://in.linkedin.com/in/swaminathanc](https://in.linkedin.com/in/swaminathanc).
About Cognizant

Cognizant (NASDAQ: CTSH) is a leading provider of information technology, consulting, and business process outsourcing services, dedicated to helping the world's leading companies build stronger businesses. Headquartered in Teaneck, New Jersey (U.S.), Cognizant combines a passion for client satisfaction, technology innovation, deep industry and business process expertise, and a global, collaborative workforce that embodies the future of work. With over 100 development and delivery centers worldwide and approximately 219,300 employees as of September 30, 2015, Cognizant is a member of the NASDAQ-100, the S&P 500, the Forbes Global 2000, and the Fortune 500 and is ranked among the top performing and fastest growing companies in the world. Visit us online at www.cognizant.com or follow us on Twitter: Cognizant.