



The Ultimate eCommerce Testing Playbook

Adapting to the new normal

eBook

 **KEYSIGHT**

INTRODUCTION

No industry is arguably more aware of the critical importance of delivering a consistent, high-quality customer experience than the retail sector.

Whether it's a self-checkout point-of-sale system in a brick-and-mortar location, a mobile scanner on the storeroom floor or an eCommerce presence across multiple digital channels, customers expect retail technology to provide the right experience at every interaction. Should companies fail to deliver on these expectations, the average customer won't hesitate to cast their vote with their feet — 61% of consumers in the US and UK admit that they have ceased doing business with brands that failed to provide an engaging customer experience [1].

What's more, with disruptive technologies like AI, 5G and IoT continuing to bring new opportunities for connected commerce, brands face constant pressure to innovate. What might have been perceived as a high-quality experience just a few short months ago can quickly be rendered ineffective as new innovations come to market. For example, a recent survey found that 73% of respondents were in favor of self-service technologies to improve the retail shopping experience and reduce staff interactions — up 11% from last year [2].



The Performance Imperative

A quick web search for “performance glitches” will return numerous stories about brands who suffered negative consequences as a result of downtime or other technology issues.

Whether it's the debut of an entirely new offering or service, a promotional campaign or a seasonal event like holiday shopping or back-to-school, you can bet that a handful of retailers have been caught unprepared from a technology perspective. The ramifications vary based on the retailer, the nature and severity of the glitch and a variety of other factors. However, it's estimated that Amazon's one-hour of downtime during its 2018 Prime Day cost the company up to \$99 million in lost sales.

It's critical that retailers ensure their infrastructure can add capacity dynamically and scale to react to traffic surges. Eggplant equips companies with this capability through our unique combination of automated exploratory and fixed regression packtesting. Our platform expands automation beyond execution to the full testing process, from test-case generation and test optimization to results analytics. This not only drives the automation of tests, but also ensures that it dynamically changes in response to new releases, updates, changes in user behavior or other factors that can impact the customer experience.

As grocery, retail, and delivery apps see triple digit increases in download rates, it's time to ask if your eCommerce app is ready for the mobile revolution?

Deliver Smarter Through Customer-Driven Testing

As critical as technology performance is to retailers' bottom-line, the determining factor driving success in the digital age is really the customers' perception of that performance. This means that companies must evolve from simply confirming that technology works to testing the quality of the experience it is providing — for every customer, on every platform, operating system or device, every time. Drawing on the power of AI and analytics, Eggplant enables retailers to view their technology through the eyes of their customers.

We analyze real user data to allow companies to continuously optimize the customer experience based upon how people are actually interacting with the technology. Our platform non-intrusively tracks user movements through the website or application, and uses AI and machine learning to define the most important journeys as they relate to key business outcomes. From there, we automate the creation and execution of tests tailored to these most valuable journeys, ensuring that companies are continuously testing for the factors most critical to the customer experience and the bottom-line. By feeding this data back to DevOps, Eggplant also helps organizations lay the framework for releasing better quality technology aligned with customer experience expectations.

A Shift from Reactive to Proactive Action

In addition, this unparalleled insight into how customers are using retail technology can alert companies to take action and address issues before they become larger problems with a negative impact on revenue. For example, non-linear user journeys, increased time between visits, and increased traffic with fewer conversions can all suggest an underlying technology variable that, if left unaddressed, could lead to a revenue decrease over time.

Retailers can also use Eggplant to run predictive “what if” scenarios and explore the revenue and customer experience impact of changes to various technology factors. Our platform also allows companies to predict the qualified impact of new product versions prior to release and ensure decisions are timed to optimize the customer experience.

Better Quality Technology, Faster

In the race to get new retail technology out the door and keep pace with disruptive technology innovations, retailers cannot afford to sacrifice quality.

Implementing an intelligent, AI-driven approach to testing is critical for ensuring that software will delight customers; and in today's complex retail environment every system ultimately has an impact on the customer experience. Issues with payment processing, fulfillment systems or third-party technology can be just as damaging as a poor performing application or a website with frequent downtime.

As such, companies need the ability to extend test automation throughout their technology environment without ever losing focus on the customer experience. Eggplant's platform-agnostic approach provides retailers with this critical capability across all the devices and systems in which they operate.

Retailers today are faced with myriad technology challenges and opportunities. Key to overcoming the former and maximizing the latter is availing of a modern, AI-driven approach to testing that evaluates technology investments through the eyes of retail's most critical stakeholder: the customer.





Keysight enables innovators to push the boundaries of engineering by quickly solving design, emulation, and test challenges to create the best product experiences. Start your innovation journey at www.keysight.com.

This information is subject to change without notice. © Keysight Technologies, 2021 – 2023, Published in USA, February 2, 2023, 7121-1162.EN