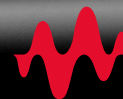


Multiexperience.

The next evolution
in our connected
world.

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Today, U.S. households own an average of 11 connected devices — and this number is expected to accelerate with the rollout of 5G.” ^[1]

The computing sea change.

Do you remember when the first consumer computers became widely available? It was just a few decades ago, but it may as well have occurred during the Industrial Revolution.

The computing landscape has changed significantly since then, and it's changing all over again with recent innovations in connected devices. With the ubiquitous nature of connected devices comes new customer experience expectations. Delivering on these poses a number of challenges for companies but also brings numerous rewards — if you can get it right.



Multiexperience reigns in a connected world.

It used to be that companies viewed their digital experience largely in two buckets: web vs. mobile. While still important, these two channels have been joined by numerous others, including:

- Chatbots
- Voice assistants
- Wearables
- Smart hubs
- Augmented reality (AR) and virtual reality (VR) applications

In light of these factors Gartner predicts that, through 2028, the user experience will undergo a significant shift in how users perceive the digital world and how they interact with it. Ensuring consistent and contextually relevant

experiences across all connected touch points — also known as multiexperience — will be critical to success as these trends accelerate.

According to Brian Burke, research vice president at Gartner, ***“The model will shift from one of technology literate people to one of people-literate technology.”*** [2]

So while the term multiexperience might conjure up an immersive video game this is anything but simply a consumer trend; companies across industries must view multiexperience as the next evolution of omnichannel and ensure they are prepared accordingly.

Personalization 2.0.

Coupled with widespread adoption of 5G, technologies such as AR and VR will allow brands to take personalization to an entirely new level. Potential industry applications include:

Retail: For example, evaluating how a couch would fit in with existing furniture prior to purchase.

Technical support: Providing virtual real-time assistance in even the most remote of locations.

Entertainment: Perhaps facilitating an interactive experience with celebrities or brand spokespeople.

As the above underscores, next-generation connected technologies will all but dissolve traditional barriers between brands and customers.



Experience can't be standardized.

However, if you want to reap the rewards then you need to be willing to put in the work. There are no shortcuts in the multiexperience model. It caters to the unique experience of each device or channel, rather than simply porting over account information or other data with no regard for the nuances of the respective touchpoint. As multiexperience accelerates, companies must:

- Give customers access to their data wherever they wish
- Understand their location and situation
- Anticipate their needs
- Act autonomously to make decisions in some cases

Hand in hand with this expectation is the importance of enabling customers to shift seamlessly throughout connected touchpoints without introducing any latency or friction.

For example, imagine a brick-and-mortar customer who initiated a purchase via her mobile app only to take a call at the last moment instead. If her credit card company failed to facilitate an option to finish the transaction via her smartwatch or caused her to repeat numerous steps in order to effectively do so, the illusion of seamlessness would be shattered.

It's easy to see how this would tarnish brand loyalty and leave the door open for a more digitally-savvy competitor.



Businesses stand to reap rewards.

Consumers aren't the only group to benefit from connected innovations—companies get a share of the pie too. For example:

- An insurance company could significantly speed claims processing by dispatching drones to the scene of an accident or natural disaster.
- Equipping connected devices with self-service capabilities for maintenance, diagnostics and integration with other IoT products will also enable organizations to reduce the resources associated with these activities.

At a macro level, the infrastructure changes inherent in the multiexperience model bring a number of additional improvements, among them:

Operational efficiency gains: When every process is present in one system it makes it significantly easier for companies to streamline those processes and identify areas for increased efficiency.

Faster time to market: Streamlined design processes and reusable code can help organizations improve development time and release much faster.

Reduced security risk: With all applications feeding into a single platform companies have a more comprehensive view of their technology environment and can eliminate potential security vulnerabilities like Shadow IT.

Identifying weaknesses in the customer journey: Analyzing customer data across touchpoints can help companies identify weak points along the customer journey, and take steps to address them before they impact brand perception.

“Consumers aren’t the only group to benefit from connected innovations – companies get a share of the pie too.”

Abandoning the channel-based mindset.

Are you ready to do multiexperience? Then it's time to bid the channel-based approach adieu. All modes of interaction demand equal attention and, as Gartner noted, "people-literate" technology is the future. Companies must focus on how users are consuming the digital service or interacting with the respective touchpoint.

As part of this, it follows that companies should extend this user-centric approach into their testing environment. Only upon doing so will they experience the business benefits outlined above.





The Case for AI-driven testing.

AI is essential for bringing multiexperience to the market, and it plays an equally important role in testing this technology. With AI-driven testing, companies can test, refine and optimize the people-literate technology upon which the multiexperience model is so reliant.

But when experiences vary by user and across technologies, platforms and channels, how can you truly test the quality of these interactions?

This is perhaps the most important use case for a modern testing strategy. Next-generation testing platforms enable companies to experience every touchpoint and channel through the eyes of their users. As a result, it's easy to test and monitor for variables that often introduce friction and ensure companies account for these factors in development. For example:

Usability Issues: Convenience is a driving factor in users' perception of usability. User-centric testing allows companies to ensure continuity across multiexperience touchpoints that also caters to device and/or channel specific requirements.

Technology Factors: Technology factors can often hinder the user experience and, in turn, impact business outcomes. For example, performance may differ by device, channel, ISP, or location. Testing for these and other technological variables is critical if companies want to take advantage of the opportunities inherent in the connected world.

Accessibility Testing: Channels like VR can lead to headaches, dizziness or other issues, so accessibility testing is important to ensure that the technology does not produce an adverse effect in users.

Emotional Outcomes: Whether it's a distracted shopper attempting to complete a transaction via a wearable, a frazzled traveler navigating an airport kiosk, or a warehouse supervisor analyzing robotics data, users' emotional state affects how they interact with technology. You need the ability to test for these elements and, most critically, automate it on an ongoing basis.

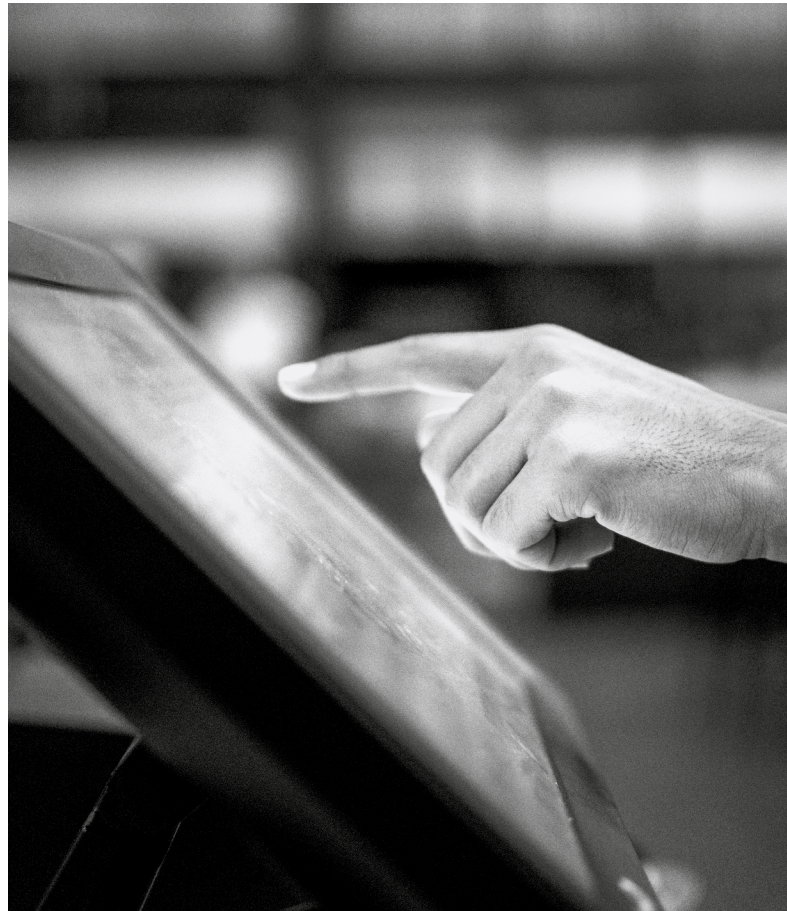
Case study

Quick service restaurants.

Overview.

Consistency and quality streamline in-store processes, improve front-of-house and back-of-house communication, and increase customer satisfaction. Consumers will spend over **\$300bn at quick-service restaurants** in 2019. It is a crowded market segment that sees established brands needing to innovate if they are to stay in business.

Consumers across all market segments expect great food and fast service. They want it all with speed, and in some cases, without waiting in line. Quick service restaurants need to cater to different consumer buying habits. Regardless of the order method, the food needs to be easily ordered, paid for, prepared and delivered, and the user experience must be flawless.



Facing these challenges with eggplant.

Eggplant was selected by a company with over 15,000 locations worldwide. The goal was ambitious: automate the multi-experience point of sale system used at each restaurant and ensure that the customer has a delightful experience, the menu and ordering in the front-of-house is correct, and the orders are displayed correctly in the back-of-house.

The restaurant chain wanted to expand its mobile and self-serve kiosk capability while maintaining the quality of its drive-thru and cashier ordering systems. They had a pository of 2,500 manual test cases that didn't cover all the high-risk paths and took too long to execute with the rate of updates put into production. None of the test cases included enhanced mobile ordering capabilities or any of the self-serve kiosks.

To solve this problem, the company used Eggplant's Digital Automation Intelligence (DAI) product to create a digital twin of the point of sale process.

The fusion engine in Eggplant DAI used one set of automated scripts to test the cashier, mobile, and self-serve kiosk interface. An integrated device farm used Eggplant's cloud capabilities that allowed testing against physical mobile devices, self-serve kiosks, and POS systems. Robotics were used to interface with the self-serve kiosks and simulated credit card payments.

Eggplant's Customer Experience Insights product (CXI) completed the customer feedback loop. Information monitored by Eggplant CXI was used to create new automated tests within Eggplant DAI that replicated customer actions on the mobile and self-serve kiosks down to the last detail.

Amazing results.

The digital twin covering the order to cash process took about 16 hours to map. The total automation time of new scripts took about one week. Eggplant's software was completely set up and executing automated test cases within three weeks from the initial Eggplant installation.

The quick-service restaurant was able to benchmark their test and performance results, test previously untrodden test cases such as partial payments and gift cards, and were able to see how the customer was interfacing with them and adjust testing priorities accordingly.

The difference in man-hours required to complete a block of work for each regression period decreased from **160 manual testing hours** to just **30 automated hours**.

Automated test case maintenance has decreased to about **20%** of the total effort. New POS, mobile devices, and self-serve kiosk models can now be tested without any new automation.



Anticipating tomorrow's testing needs.

We're in the early stages of multiexperience but, as the last few years have demonstrated, it doesn't take long for nascent trends to become industry mainstays. As the technology matures, it will offer organizations new opportunities to remove traditional customer barriers, obtain vital insights to improve performance across touchpoints and, most importantly, compete on the digital experience.

That's why now is the time to ensure that the testing environment is prepared for the acceleration of multiexperience. As a pioneer in AI-driven test automation, Eggplant is the right partner to optimize testing today and in the ever more connected world of tomorrow.

Buyers guide:

Evaluating test automation solutions.

This guide comes loaded with key considerations, common pitfalls to avoid and practical questions every business should ask when choosing a test automation solution.

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Keysight Technologies Inc. (NYSE: KEYS) is the world's leading electronic measurement company, transforming today's measurement experience through innovations in wireless, modular, and software solutions. With its Hewlett-Packard and Agilent legacy, Keysight delivers solutions in wireless communications, aerospace and defense and semiconductor markets with world-class platforms, software and consistent measurement science. The company's nearly 12,600 employees serve customers in more than 100 countries.

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