

## CASE STUDY

# Global e-tailer uses AIQ's machine-vision to performance-test their mobile app

Lightning-fast performance corresponds to higher sales from an ecommerce app. Indeed, the difference between sale and no-sale often turns on the immediacy of a product appearing on the consumer's phone. Research from Google and others bears this out.

Testing such product display performance has long been labor-intensive and inaccurate, yet major e-tailers undertake those manual efforts because of the direct effect that app performance has on sales results. The reason it has been manual is because vision is required to determine when a product or widget appears on screen.

Load testing doesn't address this issue, as it typically occurs at the API level, not the UI level, especially with native apps. Hence, holistic testing of ecommerce apps requires performance testing *and* load testing. While the latter has long been automated, the former has remained stubbornly manual.

AIQ's machine vision capabilities transform visual performance testing from manual to automated, simultaneously reducing its cost while increasing its frequency and reliability. This has made a major difference for a leading global e-tailer.

## Objectives

A leading global e-tailer needed to improve the performance-testing of its consumer app to remain competitive. Further, it needed to do this across the three continents.

This included automation of a manual process performed with hand-held stopwatches. The twin goals of this automation were improved efficiency and more accurate results. The company also needed a dashboard of results suitable for monthly sharing with the leadership team. Clearly, the team views app performance as a critical success factor, as evidenced by his desire to monitor his company's performance against the performance of key competitors.

In short, the objectives were to automate for more reliable results, greater efficiency and scalability, and better visibility.

## Quick Facts

### Industry

Consumer ecommerce / e-tailing

### Size

Fortune 100

### Employees

> 25,000

### Geographies

North America, Europe, Asia

### Applications Under Test

iOS and Android shopping apps

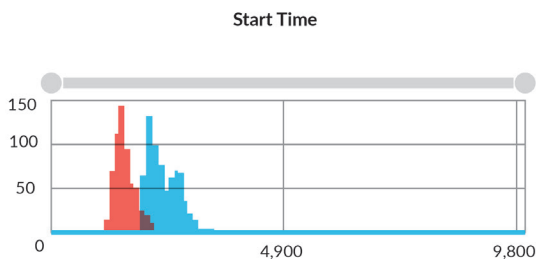
## The AIQ Solution

AIQ's AI-powered machine-vision automates the performance-testing of native mobile apps for this global e-tailer. It does it so effortlessly that the e-tailer employs it on their own consumer apps in order to assess relative competitive standing. Further, it performs this visual performance testing on the three continents that comprise the bulk of their global market: North America, Europe and Asia.

The result is a streamlined, global, accurate and continuous test operation that requires near-zero labor, provides competitive insights, and that creates a monthly dashboard for the leadership team. This is truly an all-around win, as it allows the testing organization to focus their scarce resources elsewhere, even as it provides trustworthy results and automatic visibility to all stakeholders, right up to the CEO.

Technically, AIQ uses AI-powered machine vision to recognize screen elements in iOS and Android apps as a human would. It can operate any application and accurately time actions, such as the speed with which product images appear.

### UK - iPhone testing



### Key Results



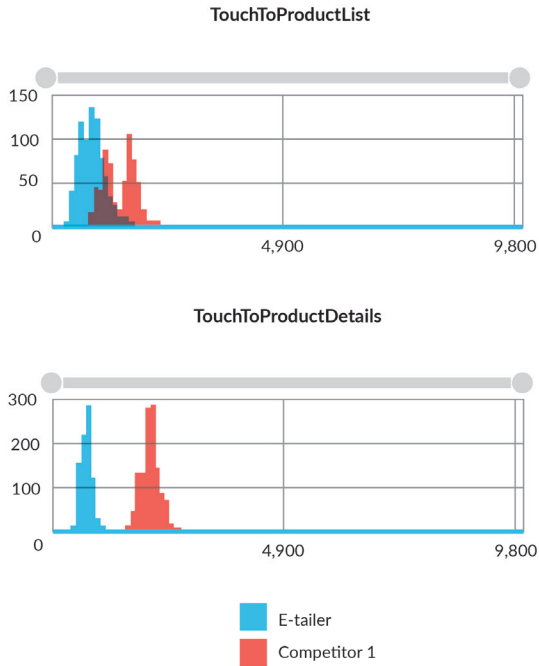
100% reduction in manual labor for visual performance testing



97% improvement in accuracy and statistical significance



27x increase in the number of apps and locales tested



Product images tend to come on screen with slightly different timing. That's why AIQ tests across 500 runs, allowing it to produce a performance bellcurve. This shows the outliers and the mean, say perhaps 2.3 seconds to bring up the product that a consumer wants to see. Further, a competitor perhaps displayed their shoe in 0.8 seconds, suggesting that they pre-cached it on the phone.

With thousands of performance tests run across multiple geographies, at every time-of-day, on every day of the week and on high days and holidays, this e-tailer has precise understanding of the response of each individual UI/UX element to the millisecond. This enables them to tune with pinpoint accuracy each aspect of their customers' buying experience. The result is no more abandoned carts and a powerful competitive advantage.