A leading online retailer automates the testing of its facilities management application with Luminate

84% reduction in regression testing time
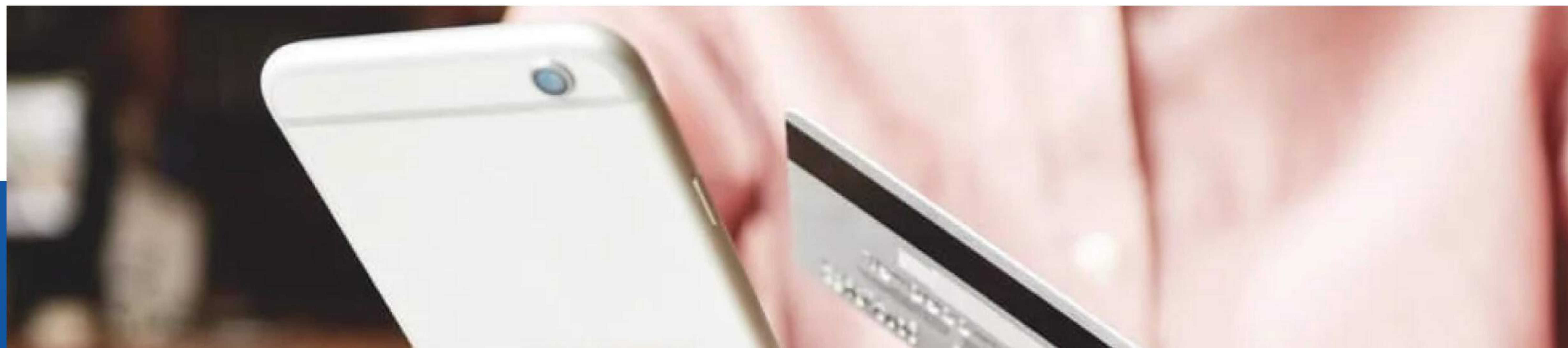
68% reduction in test cases

RETAIL

Company overview

As one of the world's largest online retailers, the company is a Fortune 100 mainstay and in the top five of the largest and most dominant technology companies in the United States. Besides e-commerce, its business interests include cloud computing, digital streaming, and artificial intelligence, plus over 40 subsidiaries including a supermarket and a home automation system.

During the pandemic, the online retailer saw its profits more than triple as consumers shifted their spending from physical stores to online shopping and at-home delivery. To meet this demand, the online retailer rapidly expanded its real estate footprint, including fulfillment centers, warehouses, office spaces, and transportation centers. Luminate Data was instrumental in this crucial expansion.

The online retailer's accounting division oversees the hundreds of corporate leases for all its properties. To manage its extensive facilities operations, the accounting team uses IBM TRIRIGA, a web-based application designed for integrated workplace management systems (IWMS). The application uses data and AI to help organizations with space planning, service requests, room bookings, and other property needs.

» **Industry:** Online retail

» **Company size:** 1.6 million employees

» **Location:** Global

» **Products:**
   › Tricentis Tosca

Manual testing is inefficient and time consuming

The usage of IBM TRIRIGA – along with the number of customizations that needed to be developed – had increased due to the growing number of properties, and the online retailer needed a more efficient way to ensure the application's reliability as it scaled. But even though the online retailer had been using IBM TRIRIGA for over ten years, minimal testing was conducted on the application during that time. If testing was done, it was manual, which led to bottlenecks and slower release cycles.

It is critical to test IBM TRIRIGA because the application is heavily customized and integrated with other core business systems, and there is a high possibility that each release may contain bugs that could severely impact the business. For example, every corporate lease contains Payment Line Items (PLIs). These are the fine details of the payments that must be made towards a lease for the lease's lifetime. Suppose any of the calculations that generate these PLIs are off by a single decimal place. Missing this error could result in a significant over/under payment – like a $3 million payment on a $300,000 lease.

A new head of IT realized there had to be a better way to test IBM TRIRIGA and did an online search for test automation tools. The executive looked at other tools, such as UFT and PeopleSoft, before discovering Tricentis Tosca. Through the added value of preferred partner Luminate's experience and insights, Tosca was selected because of its codeless, AI-powered approach to end-to-end testing.

Tosca eases the transition to automation

The IBM TRIRIGA application immediately presented challenges for automation because of the way it is built, and because the online retailer had heavily customized it.

IBM TRIRIGA does not allow multiple users to access the application simultaneously. This rule severely impacts testing time since it makes it impossible for manual testers to run several test cases in parallel. Tricentis Tosca resolved this problem by automating the user creation process with no limits on the number of users. With Luminate's additional expertise in customer support, the team was onboarded in record time and enabled to derive the full value of Tricentis Tosca at rapid scale.

The online retailer leveraged these Tricentis Tosca features to automate testing:

» **Distributed test execution (DEX):** The online retailer could not previously run multiple test cases in parallel. But with Tosca's DEX functionality, the team can test faster and at scale by running multiple tests in parallel across distributed infrastructures and virtual DEX machines. It used to take the testing team approximately 16 hours to run a regression testing suite for a given release. Now the team runs test cases in parallel on 15 DEX machines, which has taken total execution time of their regression tests down to 2.5 hours.

» **Test data management (TDM):** The online retailer needed a straightforward way to create, manage, and store IBM TRIRIGA user data for testing. Tricentis used Tosca's TDM capability to provision on-demand test data automatically.

» **Vision AI:** Vision AI for Tosca is a next-generation technology that "sees" like a human does, enabling it to easily automate testing for applications like IBM TRIRIGA that were previously difficult or impossible to automate. Vision AI also eliminates the need for the expensive custom controls once considered by the online retailer for its customized version of IBM TRIRIGA.

Test cycle time reduces from months to hours

The online retailer now has a comprehensive automated testing process in place for IBM TRIRIGA. It is able to release higher quality customizations, smoothly run its facilities operations, and significantly reduce the risks to the business. By automating testing of IBM TRIRIGA, the online retailer has now:

» Released to production faster

» Increased the quality of the application by running more tests more frequently

» Reduced the time needed to fix issues

» Freed up resources to do more meaningful work

» Saved time and money

Manual testing of IBM TRIRIGA used to take a team of four people six months to complete. Using Tricentis Tosca, total test cycle time has been dramatically reduced to only 3.5 hours. By leveraging Tricentis' risk-based testing approach, which focuses on maximizing test coverage while reducing the number of test cases, the online retailer reduced its total number of test cases from ~300 to 96.

A Test Manager of the online retailer's FinTech team said, "The TRIRIGA automation that we have achieved with Tosca is invaluable. We are now able to fix bugs, run full regression, and release the fix all in a day. A process that would previously take us months."