

CHAOTIC TESTING, VISUAL TESTING AND AUTOMATION ENABLEMENT

Oftentimes, user interface of applications passes in functional tests, while visually defective design elements go under the radar. Testers must therefore look at visual testing. It is all the more important while considering responsive design and the myriad of devices, browsers, and operating systems.

OVERVIEW

Our client owns a leading online and mobile food delivery platform with the largest and most comprehensive network of restaurant partners. They feature over 300,000 restaurants and partner with more than 200,000 of these in over 4,000 U.S. cities and London.

The platform provides a delivery management software solution as part of its restaurant offering. They also offer customization and AI-enabled restaurant technology to address \$250+ billion market.

Diners benefit from the company's accessible and easy-to-use services, a wide selection of restaurants and an easy in-app ordering process. The company also offers 24/7 customer service for claims and queries.

Food delivery services are becoming increasingly important as they create significant value for users and restaurants.

CHALLENGE

The platform faced challenges in establishing efficient balance operations between all the involved parties. This required a solid business process optimization and reliable backend. In spite of their strategic planning, the food delivery app suffered from inconsistent behavior across platforms like iOS and Android.

The biggest strength or drawback for any application is its User Experience. The existing application failed to support various functionality and lacked user friendliness. Due to this issue there were a lot of negative reviews for the application on Play Store and App Store. The User Experience became the primary challenge to resolve.

The third-party testing vendor did not provide good return on investment – there was no sync within the team, and the automation adopted was not robust for the ongoing release plans.

There were significant functionality gaps between the web and mobile applications. While usability testing was an explicit need (look, feel, findability, desirability, and ease of use), the implicit challenge was compatibility testing.

ASSESSMENT

User research was crucial to improve User Experience across the entire application. Responsiveness was another important aspect of the UI/ UX design.

Considering multiple platforms and channels where solution was provided to different users, it required an implementation that was an approach of real devices, cloud farms and emulators. It also required test plans consisting of contextual data from different points of view and target multiple-entry points in the food delivery life cycle.

There was an urgent need to build a collaborative team who are culturally adaptable and skilled across platforms to integrate web, android, and iOS.

SOLUTION

Agile Adoption – Chaotic testing to well defined agile testing process:

The modules were rooted for adaptive planning, early delivery and continuous improvement. We implemented the first step in the shift-left culture by including QA in development sprint cycles. Generally, the QA team were involved at the end of the project, when all coding was complete. The inputs for test plan was an independent task that caused gaps between real scenarios and release experience.

- Speedy release of test cycles (from 1 cycle a week to 2 cycles for Android and iOS, and daily releases for the web platform)
- Increased test coverage
- Performed different testing techniques such as sanity, regression, exploratory and end-to-end testing

Therefore, a structured QA strategy of test design & management with targeted outcomes was necessary.

By adopting the culture of agile development, we were able to involve QA team in design and development sprints, thereby creating collaboration with developers and business analysts.

Expanding Coverage – Transition from iOS-only-QA to QA through Web, iOS and Android: The application included testing on iOS, web and android devices to support the expanding customer base. Testing the application or developed code on various devices minimizes error and enhances user experience across devices

- Increased test coverage through positive, negative and boundary validations through extracting test cases from customer review
- Improved reviews from end-users
- Reduced gap in disconnects between features across platforms by incorporating platform specific coverage
- Increased speed in deploying new features across all platforms

Visual Testing & Automation Enablement – Transition from end to end QA to Automation QA: Once automated tests are developed; they are carried out quickly and repeatedly. This can also be a cost-effective tool for regression testing of software products with a long service life. Even minor patches over the lifetime of the application can cause existing features to break down, which were working at an earlier point in time.

- Functional testing gaps were bridged by addition of visual regression testing
- Feedback mechanisms were created for developers and product teams for additional functionalities and enhancement
- Added corporate white labelled application into the testing scope

Even minor patches over the lifetime of the application can cause existing features to break down, which were working at an earlier point in time.



RESULTS

Our team introduced optimization of operations by re-usability of test process and cross-platform. Captured test patterns and created modular test scripts for reuse eliminating painstaking tasks for QA testers.

- We executed over **900** test cases per week that included Regression, Smoke, Exploratory, Feature & Migration Testing.
- We helped reduce the release time by **50%** and adopt Parallel Execution of test cases across different environments and platforms.
- Initially it was **1** release per week for Android & iOS but now its **2** releases per week.
- The web releases improved drastically from **1** release per week to daily releases.
- Negative customer reviews were reduced by **40%** over a span of **6** months across Play Store, App Store and Google Reviews.

TVS Next also adopted inclusive culture by enabling the product to Visual Testing and Accessibility Guideline Standards.

TVS Next harnessed testing best practices by leveraging the power of test reusability. We ensured test scalability and application stability by reusing tasks. Rather than starting from scratch, TVS Next helped in executing functional UI tests.