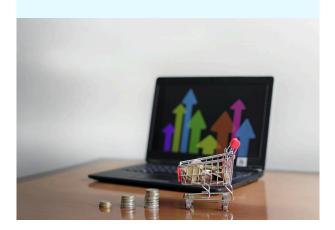# CASE STUDY

How a Global eCommerce Brand Achieved 80% Faster Releases and a 25% Boost in Mobile Conversions with Qualiron

Client Overview

A mobile-first eCommerce company with over **12 million monthly active users** operates across **Southeast Asia, the Middle East, and Europe**. The business relies heavily on digital performance, with **70% of revenue coming from mobile apps**. Rapid product launches, influencer-driven campaigns, and weekly flash sales pushed platform stability and release velocity to their limits.

Their stack includes a **React-based web platform, native Android (Kotlin)** and **iOS (Swift)** apps, and **microservices architecture** powered by **Node.js** with **REST and GraphQL APIs.** QA was siloed, with minimal automation, resulting in slow testing cycles and increasing customer experience issues during peak loads.

Client Challenges:

Slow Regression Cycles
- 12–15 days for full regression
- Inhibited weekly releases and fast iterations

Limited Test Automation
- Only 24% coverage, mostly API-level
- No automation for frontend journeys (login, cart, checkout)

Mobile Checkout Instability
- 14% drop in mobile conversion during high-traffic campaigns
- Frequent app crashes on low-end Android devices

Siloed QA Teams and Tools
- Disconnected testing across web, Android, iOS, and backend
- No centralized test strategy or reporting

Poor Performance Under Load
- Flash sales brought up to 150K+ concurrent users
- Cart sync delays, session timeouts, and failed transactions

To address these challenges, they partnered with Qualiron to build a unified test automation framework across web, mobile, and API platforms.

Engagement Scope & Delivery Timeline \\\\\\\\\\\\\\\

Qualiron was engaged to implement a unified automation and release framework addressing the client's challenges in regression, mobile checkout, load, and platform QA alignment.

Qualiron Solution:

1. Cross-Platform Test Automation:

Qualiron implemented a unified automation framework covering web, mobile, and API journeys. We used Playwright for automating key frontend flows (search, cart, checkout), Appium for mobile test coverage across devices, and Postman for validating REST and GraphQL APIs. The engagement began with just 24% automation coverage.

2. AI-Powered Test Prioritization:

We leveraged historical defect trends and code-change impact to prioritize regression suites using AI, allowing faster, smarter test execution and improved coverage over time.

3. CI/CD and DevOps Integration:

Automation was embedded into CI/CD pipelines via GitHub Actions, Jenkins, and Docker. Slack and Allure dashboards provided real-time reporting. Tests were triggered at every commit, with traceability mapped to user stories for early feedback and fast defect triage.

4. Load and Chaos Testing for Scale Resilience:

To validate performance under campaign loads, we simulated 200K+ concurrent users using k6. Chaos engineering via Gremlin exposed service-level weak points and improved backend reliability.

5. Visual & Accessibility Assurance:

Percy was used for visual validation across browsers. Accessibility compliance was ensured using axe-core, aligning with WCAG 2.1 standards.

6. Daily Sanity and Centralized Reporting:

The framework enabled daily sanity runs, release certification, and multi-environment regression. With QA aligned across platforms, the client achieved 80% faster regression, 88% automation coverage, and a 25% increase in mobile conversions —sustained across 12+ stable releases.

Key Project Objectives

- Automate web, mobile, and API flows across platforms
- Improve regression with CI/CD-driven execution
- Prioritize test cases using AI-based impact mapping
- Simulate 200K+ user loads during flash-sale campaigns
- Validate stability via chaos engineering (Gremlin)
- Ensure daily certification and centralized reporting

Team Composition

A dedicated team from Qualiron was assembled to support this project:

1 Automation Lead

2 Senior Test Automation Engineers

2 Software Development Engineers in Test (SDETs)

Benefits / Results

The implementation of Qualiron's cross–platform automation and performance framework delivered measurable business and technical outcomes for the client:

- **Regression time reduced by 80% (from 15 to 3 days)**

- **Automation coverage increased from 24% to 88%**

- **Mobile conversion rate improved by 25%**

- **Zero critical production defects across 12+ release cycles**

- **93% drop in QA-related hotfixes**

- **Zero downtime during flash sales with up to 200K users**

Conclusion

Qualiron enabled the client to move from reactive testing to proactive quality engineering. By unifying their QA ecosystem, accelerating automation, and embedding performance assurance into every release, we delivered measurable improvements in speed, stability, and customer experience. The transformation empowered the business to scale confidently, release faster, and convert more users—without compromising quality at any point.

Ready to scale your QA like never before?

Let's discuss how Qualiron can help you create smarter, faster, and more resilient digital experiences.
Contact us at info@qualiron.com or visit www.qualiron.com to get started.