CASE STUDY

KJRs role in transforming a state-wide digital learning environment

Project: Digital Learning Platform (DLP) Transformation

KEY OUTCOME 1

Implementation of a high-performing digital learning platform that aligns with the Department's long-term digital maturity goals

KEY OUTCOME 2

Integration of the digital learning platform with the Department's comprehensive software suite and multiple learning tools

KEY OUTCOME 3

Enhancing the learning experience for students and teachers by providing a unified learning environment, and simplifying access to educational resources

BACKGROUND

This State Education Department customer selected KJR to manage all testing requirements in the transformation of its digital learning environment by replacing an outdated system which had been in service for over 20 years. This system was due for a modernisation to meet the demands of contemporary digital education, especially as it was meant to cater for approximately 600,000 students and 100,000 teachers across over 1,200 state schools, including the Schools of Distance Education. The Department required a more robust, scalable, and modern platform to support both student learning and departmental training.

KJR was also part of the Eco-System Enhancement Project which was the successor to the digital learning platform project. This project delivered the new DLP with Canvas Learning Management System (LMS) at its core and integration with key learning tools. The Eco-System Enhancement Project introduced additional learning tools and enhanced existing integrations.

CHALLENGE

With the ambition to integrate a state-wide digital learning solution, the project faced significant challenges. The new platform had to support thousands of concurrent users without compromising performance. It needed to handle high volumes of audio, video, and interactive content while maintaining a consistent user experience for students, teachers, and department staff.

Additionally, the department had experienced difficulties in recruiting specialised testing resources for a project of this scale and complexity.

SOLUTION

KJR was brought in to deliver comprehensive testing solutions, including test management, system integration testing, user acceptance test coordination, performance testing, and automated regression testing. To address performance and scalability needs, KJR's team built a performance testing framework using K6. A Playwright-based test automation framework was built to ensure the iterative delivery approach to integrating new learning tools to the platform did not cause regression impact on already delivered features.

KJR executed rigorous load testing to verify the new digital learning management system can handle 25,000 concurrent users, ensuring the new Canvas-based learning management system (LMS) would reliably serve users across all state schools. KJR also developed a complete suite of test plans, strategies, and documentation to guide project testing efforts and future maintenance.

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DELIVERABLES

- Test Management and Execution: Comprehensive test artifacts, including test strategies, test plans, test cases, and test summary reports.

- Automated Testing Framework: A Playwright-based automation suite, facilitating robust and repeatable testing.

- Performance Testing: K6-based Load testing to confirm the system's ability to handle large volumes of users simultaneously, ensuring scalability and reliability.

- Training and Onboarding: Support and training for internal testers, enhancing the department's in-house testing capacity.

KEY OUTCOMES

- The successful replacement of the outdated system with the digital learning platform, a modern, feature-rich digital learning environment powered by Canvas LMS and integrated with the department's comprehensive software suite and multiple learning tools.

- Implementation of a scalable system, verified to support over 1,200 schools and significant daily use, even during peak usage times.

- Development of a high-performing digital learning platform that aligns with the Education Department's long-term digital maturity goals.

VALUE TO CLIENT

By deploying a scalable and well-tested platform, this Education Department customer gained a reliable, future-ready digital learning solution that supports its Equity and Excellence Strategy. The new digital learning platform has allowed the department to consolidate multiple learning tools such as Microsoft Teams, Microsoft OneNote, openEQUELLA, Collaborate Ultra and integrate additional components, such as Canvas Commons, Canvas Studio, Atomic Search, iSee, Zoom and Cerego. These integrations provide a unified learning experience, simplifying access to educational resources and fostering student engagement and information retention across the state.

The platform's enhanced capabilities now better serve the diverse educational needs of the state's students and teachers, while reducing the department's operational risks and paving the way for continued improvements through the Eco-System Enhancement Project.

TOOLS & TECHNOLOGIES

K6, Playwright, Azure DevOps