

CASE STUDY

Delivering Confidence in Student Loan Assessment Releases Through Independent QA

AT A GLANCE

Industry

Federal Government

Capability

Software Quality Engineering (API testing, UI testing, regression testing, and UAT support)

Solution

Dual-Layer Testing: Automated API & Manual UI

The Challenge

Provide a mechanism through which providers can report and update data in real time and receive near real-time information on the extent to which students have accessed loans they are eligible to.

The Outcome

- Supported multiple successful production releases
- Achieved low defect leakage into UAT and production
- Provided independent quality assurance for critical API and web application functionality



BACKGROUND

This large government department delivers a digital platform that supports Commonwealth student loan management, higher education eligibility including scholarships, and information services for students. The platform provides APIs and web applications used by departmental users, external service providers, and students to exchange data and deliver timely, accurate information across the program.

THE CHALLENGE

The customer needed to ensure ongoing enhancements to a business-critical platform could be released reliably while maintaining the accuracy of loan, eligibility and program data. Frequent releases required confidence that API and web application changes would not adversely impact internal operations or external service delivery.

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WHAT KJR DELIVERED

OUR ROLE:

KJR provided independent software quality engineering services across API and web application testing, supporting the Department through iterative releases. The team delivered automated and manual testing, regression assurance, business UAT support, defect investigation and collaborative quality assurance to help maintain confidence in each production deployment.

KEY CONTRIBUTIONS:

- Independent validation of API functionality, business rules and web application behaviour
- Automated API contract and business rule verification using Tricentis Tosca
- Continuous regression assurance to support frequent production releases
- Business UAT support through specialist testing and test data preparation
- Collaborative defect triage and production issue investigation across delivery teams
- Early validation and clarification of business requirements and acceptance criteria

HOW WE DID IT

01

Discover & Assess

- Reviewed requirements and acceptance criteria
- Clarified expected system behaviour with stakeholders
- Identified test scenarios and data requirements

02

Assure & Validate

- Automated API testing using Tricentis Tosca
- Manual validation of web application functionality
- Daily regression testing and defect triage
- Verification of complex business rules

03

Release with Confidence

- Supported business UAT with specialist testing and test data
- Assisted with production issue reproduction and analysis
- Provided quality assurance across iterative production releases

This reassures buyers without overwhelming them.

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IMPACT & BUSINESS OUTCOMES

- ✓ **Supported** reliable delivery of frequent production releases through structured API and UI assurance
- ✓ **Reduced** risk of defects impacting critical loan assessment and program data services
- ✓ **Improved** confidence in business rule accuracy through automated API validation of complex logic
- ✓ **Contributed** to early detection and resolution of defects through continuous regression and defect triage support
- ✓ **Enhanced** stability of releases through combined automated API testing and manual UI validation
- ✓ **Improved** quality of UAT outcomes through targeted test support and test data preparation



WHY KJR

- Independent quality engineering support across API, UI, regression, and UAT testing within a multi-vendor delivery environment
- Flexible engagement model supporting both automation (Tosca, C# regression suite) and manual exploratory testing
- Embedded testing approach supporting defect triage, production issue reproduction, and ongoing release confidence

TECHNOLOGY VALIDATED

The following technologies were validated as part of the engagement:

Tricentis Tosca | C# regression automation framework | Azure DevOps | REST APIs | Web applications | SQL Server

