

CASE STUDY \ \ IMPROVING APPLICATION COMPATIBILITY

# Assuring Digital Compatibility Through Automated Testing



## BACKGROUND

The Company is a UK-based financial organisation that provides a range of services to its clients, including lending, financing, wealth management, and securities trading. Its annual revenues are in the hundreds of millions of pounds.

The Company needed to evaluate the functionality and ensure the compatibility of its web applications in conjunction with various combinations of operating systems, browsers, and devices. This effort was integral to ensuring the Company's digital experience remain consistent as its user base grew.

## MANAGED TESTING SERVICE

### Engagement

The Company's in-house testing team was expensive and inflexible. It was unable to scale up and down to respond to increases or decreases in customer demand, resulting in missed schedules and an uneven quality of work that ill-suited a major financing organisation.

Our Testing Center of Excellence team engaged the Company in a "shift left" model, undertaking testing alongside development and keeping the Company apprised of changes to applications or architecture that would be required by the development process.

In order to realise success, the Prolifics Testing team would have to ensure that the Company's technologies were highly responsive, creating an enterprise with near-zero latency.

It also had to remain compatible with the Company's existing processes, people, and infrastructure, while still attaining the desired improvements.

## Action

The Prolifics Testing team assembled a five-phase plan for undertaking the Company's testing:

- **Planning:**

The testing team analysed the work package, generated a traceability matrix, and performed the scheduling and preparation for test planning and execution.

- **Test Setup:**

They assembled a test environment, built verification testing to ensure the stability of important functions, and prepared of the test suite.

- **Test Execution:**

The team began the testing process. Test progress was monitored using the traceability matrix. Test statuses were reviewed, any and resulting issues were reported.

- **Report and Review:**

The team prepared peer-reviewed test execution and defect reports. This led to the creation of a consolidated defect report that allowed the identified issues to be rectified.

- **Test Closure:**

Test summaries were reported and reviewed. The team delivered the final work package reports.

The testing team brought several capabilities to the project, including a reusable open source framework and automated test scripts that reduced compatibility testing overheads when used in conjunction with the shift left approach.

An automated testing process allowed the team to create hardware and software configurations that simulated live environments. They could then design and run tests within these environments to ensure applications would be compatible with the various permutations of hardware, operating systems, databases, and browser versions.

It took seven testing personnel more than six months to fully test the Company's application compatibility. The team thoroughly analysed the compatibility issues, determining what alterations or additions were required to render the application compatible with the given computing environment.

## Challenges

We had to face two main challenges in order to complete our mission successfully:

- Ensure compatibility of web applications in conjunction with various combinations of operating systems, browsers, and devices.
- Inflexible in-house testing team that was unable to scale to match demand.

## Results

The efforts and expertise of the Prolifics Testing team helped cut down on the time and resources necessary for testing. This approach, along with the results of the testing process, delivered tangible benefits.

- Automation reduced the length of each testing iteration, resulting in a savings of up to 70% in both people power and associated costs.
- Regression testing coverage was improved within a short time frame.
- Project delivery times, as well as development and maintenance costs, were reduced through testing effectiveness and efficiency.
- The creation and reuse of enterprise assets led to an improved ROI.
- The total cost of technology ownership was lowered by leveraging technology investments across multiple projects.

Overall, the compatibility testing process had significant, far-reaching benefits for the Company. The Prolifics team brought the Company faster time-to-market for its latest mobile platforms. The Company's applications are more accessible and responsive, and can function seamlessly in multiple browsers, operating systems, devices, and networks. Prolifics' compatibility testing resulted in an increased number of overall user hits, helping the Company get in touch with more of its customers.



Established in 1999, we have long-lasting relationships with some of the biggest names in the digital, professional services, higher education, finance, legal and retail sectors.

We have assisted our clients with testing on many different projects, including implementations and upgrades of major COTS applications, including integrations, testing of software developed from scratch, integrated with agile teams, digital transformations, Cloud migrations, and Windows desktop migrations.

Working together, we will bring your customer experience to the next level, with our unique emphasis on usability, reliability, and performance.

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