

## Large Retail Group Implements Leading Digital Lending Platform to Deliver Best Ever Customer Propositions



### Challenge

A large retail group sought to implement Financier to offer best-in-class digital lending experiences with more personalized lending products.

Platform needed to be integrated with legacy systems to the highest quality and minimum risk to delivery timescales and budget.



### Solution

A five-phase API-driven solution was devised and implemented with parallel systems availability and agile and iterative delivery.

This included API testing, API automation, customer migration, integration testing and performance testing.



### Results

Full, smooth and successful implementation of the Financier digital lending application.

All stated goals and key performance metrics were met or exceeded within the allotted timeframe and regulator's permissible framework.



## Client overview

The Client is a large multi-channel retail business which has been operating for over 50 years. It provides a personal shopping service to around 1.8 million customers each year through a combination of direct marketing and online via two websites. One of the Client's main selling points is that it offers its shoppers flexible repayments where they may choose to pay for purchases either within 28 days or via monthly credit.

## Unblocking the pathway to next-gen innovation

Limitations within the Client's existing lending platform were inhibiting the scope for innovation around customer payment options. A new and more advanced off-the shelf replacement payment handling platform, Financier, was proposed to:

- Increase the number of financial products available to customers.
- Support digital underwriting to ensure customers were offered affordable payment options only.
- Improve fraud prevention.
- Allow more UX flexibility and enhancements to the customer journey.
- Drive efficiency within the business through improved processes.

Further complexity was added where they needed to migrate customer records over to the new platform while, in parallel, continuing to service new and existing customers as normal. It all meant this integration of legacy systems and databases to a new application would be complex, and the Client did not feel confident to undertake it alone. The Client engaged Qualitest to ensure all aspects of the transition were seamless and continued working before, during and after transition to Financier.

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## A juggling act: running legacy and transitioning to new systems in parallel

To enable the business to continue working as usual, all existing applications were first integrated through APIs to allow instant communication with the new Financier application. Testing was also performed around existing systems, integrating with Financier to ensure everything still functioned as required at any given time. Next, we implemented an iterative process model, with five defined phases:

### 1. API Testing

Qualitest engineers worked closely with Financier to identify all APIs that would be utilized by the Client. Qualitest recommended the use of SOAPUI as the API testing software.

### 2. API Automation

Qualitest automation engineers identified Postman as the best software tool to build a robust automation pack of all APIs under test. Automation tests were used throughout the project and beyond to ensure code deployments had no impact on existing working functionality.



### 3. Customer Migration to Financier

We performed the Extract, Transform and Load (ETL) process of customer data as well as volumetric reconciliations using specific “test” data and this testing also involved performing testing of this process. A ‘dress rehearsal’ was executed using live data to assure the process, facilitate data cleansing and mitigate the risk of poor data in the originating system impacting the behavior of the new system and business process.

### 4. Integration testing of Financier and Client Infrastructure

We provided proof of concept for the integration’s end to end process with test approach:

- **Test Planning:** Defining what will be tested.
- **Test Preparation:** Establishing test techniques, defining and implementing scripts, provisioning scripts and release management.
- **Accept:** Reviewing entry criteria.
- **Execute:** Applying testing techniques.
- **Re-executions:** Applying additional test techniques.
- **Evidence:** Documenting all results, completing closure report and reviewing exit criteria.
- **Handover:** Progressing to next level of testing or implementing to production.
- **Automate:** Evaluating and implementing automation.

### 5. Performance Testing

The Qualitest team gained a detailed understanding of frequently used business processes, volumetric information, system usage, SLA, and more. We then performed enterprise-wide deep dives to identify suitable performance testing based on detailed user persona groups and their anticipated behavioral needs. After several proof of concepts, Qualitest identified the right solution to run these performance tests as LoadRunner and JMeter for the performance testing platform.

Three types of performance testing were then completed:

#### A. LOAD TEST

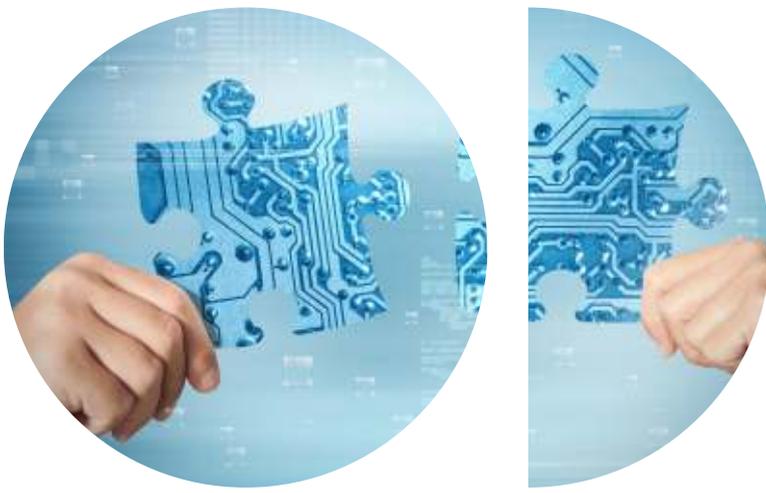
A stepped load ensures there’s time to evaluate the load at each step before continuing to the next level. This can also help identify possible stress points of the server.

#### B. SPIKE TEST

Another form of stress testing that helps to determine how a system performs under a rapid increase of workload. Helps to see if a system responds well and maintains stability during bursts of concurrent user activity over varying periods of time. Verifies whether application can recover between periods of sudden peak activity.

#### C. SOAK TEST

Ensures that expected loads can be held for an extended period and stability is maintained.



## Key benefits

After we had performed thousands of API tests and built a robust automated pack, the Client successfully implemented the Financier application.

- The Client saves three days' manual effort every time the full API automation pack is executed.
- Costs significantly lowered from catching bugs earlier with a Shift Left testing approach.
- Client's existing critical data vulnerability identified in time to prevent regulator penalties.
- Poor customer experience and downtime eradicated with the implementation of all types of performance testing established to be executing and successfully identifying key bottlenecks in the Client's existing infrastructure.
- All testing established to meet all the Client's requirements including FCA compliance.

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