



CYGNET.ONE

# Optimizing Testing with Intelligent Automation, Robust Processes, and Scalable Solutions

## Revolutionizing Credit Solution Architecture and Quality Assurance

The customer is the United Kingdom's market-leading credit solution provider who works with businesses to gain a deep understanding of their operations, including long and short-term goals. They focus on challenged customer profiles and more to ensure everyone gets the best credit solution as per their needs. However, transitioning from a monolithic architecture to microservices while maintaining system stability presented significant challenges.

Recognizing the need for comprehensive quality assurance, customer collaborated with CygnetOne to modernize its testing strategy and infrastructure.

CASE STUDY



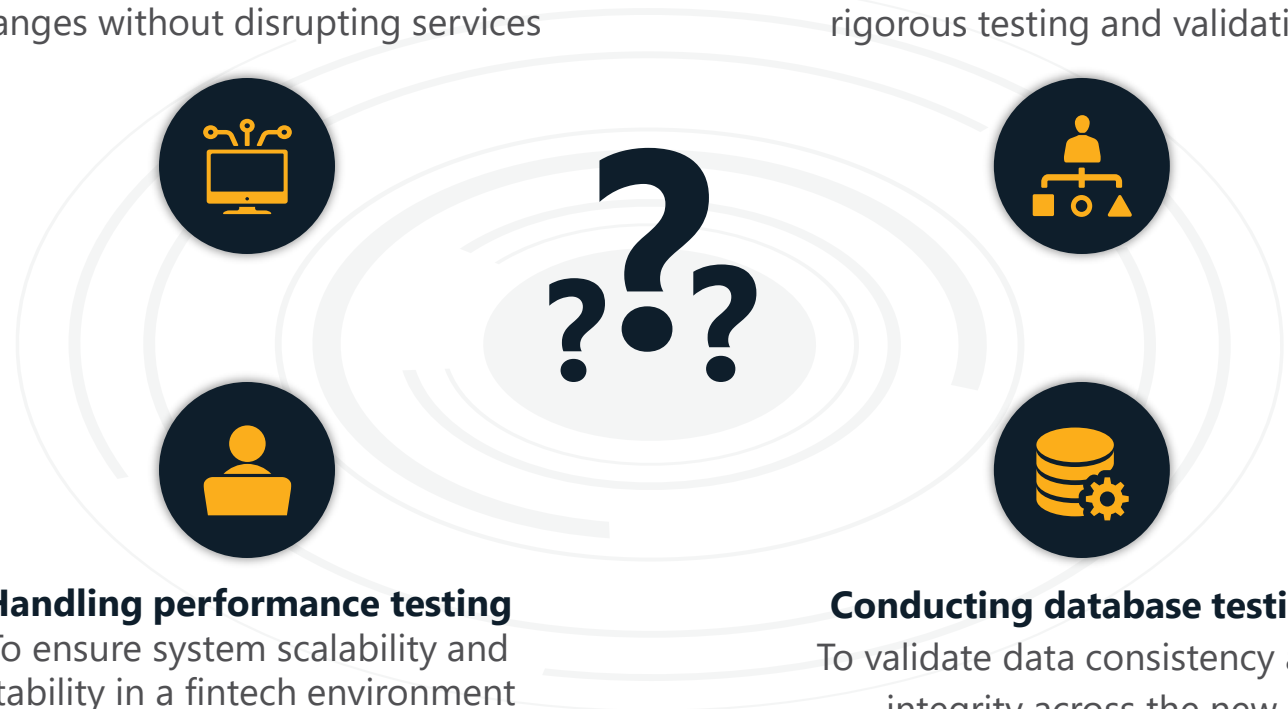
# The Turning Point: Challenges that Sparked Change

The organization's transition from monolithic to microservices architecture and the need to ensure robust performance presented several critical roadblocks.

## Technical and Integration Challenges

**Transitioning Non-FCC Regulated Interest-Free Credit Services from Monolithic to Microservices**  
Required comprehensive architectural changes without disrupting services

**Multiple third-party integrations**  
Including Acquired, Sage Pay, TransUnion, and Forter needed rigorous testing and validation



**Handling performance testing**  
To ensure system scalability and stability in a fintech environment where reliability is paramount

**Conducting database testing**  
To validate data consistency and integrity across the new microservices architecture

## The Need for Transformation



Recognizing these challenges were impacting their ability to maintain quality while transitioning to a more scalable architecture, customer sought a partner who could implement comprehensive testing methodologies. They needed solutions that would ensure the **reliability of their credit services while managing the complexity of multiple integrations.**

## Comprehensive Testing Toolkit Development



Created a complete **toolkit comprised of test harnesses, test cases, mocks, and stubs.** Established standardized testing methodologies across the organization. Implemented structured testing processes for consistency and coverage.

## Risk-Based Testing Approach



Implemented risk-based test automation covering **UI, Database (MySQL), and API layers.** Prioritized testing efforts based on business impact and technical risk. Ensured critical functionality received appropriate test coverage.

## Advanced Testing Technologies



Created 50+ scripts using **GenAI**-based solutions as proof of concept. Conducted performance testing with **JMeter** to validate system scalability. Implemented **Selenium, Postman and Browser stack** for comprehensive testing. Utilized **TestLink** for test case management and Jira for defect tracking

## Building the Foundation for QA Transformation



CygnnetOne developed a comprehensive testing strategy that addressed customer's specific challenges in **transitioning to microservices while maintaining third-party integrations.**

## Root Cause Analysis Implementation



Set up **RCA (Root Cause Analysis)** processes in Jira. Established corrective action workflows to address identified issues. Increased frequency and effectiveness of RCA discussions by 50%.

## Delivering Remarkable Results



Enhanced issue investigation and resolution processes. Improved team collaboration on quality-related challenges. Established proactive quality management practices

## 40% Reduction in Test Execution Time



Automated critical test scenarios to reduce manual testing effort. Implemented parallel test execution for faster feedback. Optimized test suites to focus on high-value scenarios

## AI Driven Self Healing



Implemented **AI-driven self-healing** capabilities for **Selenium** tests, allowing scripts to automatically adapt to changes. This reduced maintenance overhead by detecting and fixing locator issues in real-time, improving test reliability and reducing false negatives without manual intervention, leading to more stable test execution.

## Successful Microservices Transition



Ensured smooth transition from monolithic to microservices architecture. Maintained system stability throughout the architectural transformation. Validated performance and scalability of the new architecture

## Enhanced Integration Reliability



Verified functionality of multiple third-party integrations. Reduced integration-related defects in production. Improved customer experience with more reliable payment processing.

# Turning Obstacles into Opportunities: The QA Advantage

With this transformation, our client has turned its quality assurance operations into a strategic advantage. The implementation of comprehensive testing methodologies has enabled faster releases, improved system stability, and seamless third-party integrations, all while reducing test execution time by 40%.

**Now equipped with a mature, scalable, and efficient QA framework, customer is well-positioned to:**



Continue evolving their microservices architecture with confidence



Maintain high quality standards across all integrations and services



Accelerate development cycles with more efficient testing processes



Ensure consistent quality across their credit solution offerings

By collaborating with CygnetOne, customer not only overcame its QA challenges but also unlocked new opportunities for growth, efficiency, and service quality excellence in the highly regulated credit solutions industry.



# CYGNET.ONE

**Cygnnet.One** is your dedicated digital transformation partner. At Cygnet, through our proprietary framework, Cygnet COSMOS, we empower organizations across the spectrum of business intelligence, and customer experience. Our comprehensive suite of services encompasses Domain Consulting, Digital Engineering, and Enterprise Applications, with a keen emphasis on Digital Commerce and Experience. We harness the potential of Data, Analytics, AI, IoT, and Automation, coupled with AI-powered Testing as a Service, to drive your transformation agenda. With flagship products like Tax Transformation, Cygnet IRP, and Finance Transformation, we are dedicated to a digitally enabled future for your enterprise. What sets us apart is our unwavering commitment to a "**Business First**" approach. We're not just developing applications; we're co-innovating with you to forge the future.



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Co-Ideate for new product development & new market GTM



**CO-CREATE**

Co-Create technology enabled connected business solutions



**CO-INNOVATE**

Co-Innovate intelligent solutions with Cygnet launchpad.



**CO-EVOLVE**

Co-Evolve with a strong continuum of Cygnetians, clients, & partners.