Testing Services Provided Through Dedicated TCoE Led to Improved Go-to-Market Time & Reduced Operational Cost

ITC INFOTECH
Business-friendly Solutions

SITUATION

Being an online based banking organization, IT forms the key backbone supporting the client's business deliverables. To meet its business expansion plans, the client wanted to revamp its product portfolio as well as introduce new services for all its existing and new product lines. The customer also wanted to enhance its website's look and feel as well as user interface, and make it more appealing and user friendly

IMPACT

It was important to test applications supporting new offerings before being launched, and ensure uninterrupted and secured services for the banking customers. However, the client was facing certain challenges to perform the testing requirements. To address the issues, the client was looking for an IT service provider who has the required technical knowhow, domain expertise and resource capabilities, and ability to deliver the required testing services within scheduled timeframe and budget for its new applications

RESOLUTION

ITC Infotech implemented a collaborative testing model to address the client need. Preplay testing was performed on the developed environment as well as, optimized the defect management process. ITC Infotech also created an Offshore Development Centre (ODC) and Testing Centre of Excellence (TCoE) dedicated to provide various types of testing, aimed at enhancing business value while reducing the cost of operation

The Customer

The client is a leading UK based Internet Bank and part of a Fortune 500 global financial company. The parent organization is a major global financial services provider engaged in personal banking, credit cards, corporate and investment banking and wealth and investment management.

It has an extensive international presence across Europe, America, Africa and Asia. With over 300 years of history and expertise in banking, it operates in over 50 countries and employs over 140,000 people.

The Need

As part of its business expansion plan, the customer wanted to provide improved and high quality products and services to the end users. Additionally, the client had plans to revamp its product portfolio as well as introduce new services for all its existing and new product lines.

Being a portal based banking organization, with online being the primary medium for delivering its services/products, technology forms the key support backbone for the client's business. To meet its objective it was therefore, important for the client to strengthen its IT infrastructure by implementing relevant applications, as well as hardware to support the new system enabling successful delivery of the new product offerings to its banking customers. It was also important to test the applications supporting new offerings before being launched, in order to ensure uninterrupted, error-free and secured services for the banking customers. However, the client was facing certain challenges in executing such checks prior to application roll-out.

Further, the customer wanted to enhance its website's look and feel as well as user interface, and make it more appealing and user friendly. To attain this, the customer wanted to move on to a superior and advanced technology platform (J2EE).

To meet its business requirements, the client was looking for an IT service provider who has the required technical knowhow, domain expertise and resource capabilities, and ability to deliver the required testing services within scheduled timeframe and budget. The client wanted to partner with a service provider who could apply Test Driven Development and Independent Verification & Validation (IV&V) testing methodology for the new product offerings to be launched through its online banking portal. The client also wanted the service provider to build a dedicated Testing Centre of Excellence (TCoE) to test its upcoming product launches.

Key Testing challenges faced by the client

- Large testing needs, but no central organization dedicated to testing business critical applications
- No common understanding of testing processes and methodologies, leading to sub-optimal resource usage
- Test Management overheads in executing multiple projects in parallel due to the limitations in IV & V model
- Limited budget
- Consultants were not optimally utilized
- Desire for a faster time to market

The Solution

ITC Infotech first understood the specific requirements of the client, based on which the required test metrics and test cases were created to address the client requirements.

ITC Infotech adopted a collaborative testing model to address the client need. This model helped the client to achieve its business objectives and also accelerated the development process, while providing the client with more flexibility in project execution.

ITC Infotech consultants conducted the initial onsite Proof of Concept (PoC) during which, ITC Infotech provided automation services, developing a reusable and easily maintainable customized test automation framework. After the successful PoC, ITC Infotech commenced the automation of the 522 test cases. The delivery was planned in three phases with test cases grouped application wise. This phase of the project was executed onsite at client location.

Post successful completion of the automation project, the client adopted ITC Infotech's Testing Centre of Excellence approach to improve the effectiveness of its testing services. ITC Infotech created an Offshore Development Centre (ODC) dedicated to provide various types of testing, aimed at enhancing business value while reducing cost of operation. All the projects were executed from offshore. ITC Infotech implemented a collaborative model with the help of cross-skill consultants based on the gaps. Preplay testing was performed on the development environment and optimized the defect management process.

Tools used: The following HP functional testing and test management tools were used:

- HP – Quick Test Professional (QTP) - tool was used to perform regression testing
- Terminal Emulator Add-in was used to identify and automate the objects of Attachmate application which used to access Profile application
- HP – Quality Center (QC) – tool was used for test management; to store and manage QTP test scripts and Manual test cases. ITC Infotech provided services in major areas to the client
- Selenium Web Driver 2.25 & 2.33 for Windows 32 bit & 64 bit Operating Systems

ITC Infotech currently provides both manual and automation testing, browser compatibility testing, IVR (Interactive Voice Response) testing, and mobile web application testing. ITC Infotech also performs testing for the client's mobile applications from the offshore TCoE using emulators as well as physical devices, by installation and configuration of Blackberry and Android mobile emulators on VMware from offshore TCoE. Further, real time mobile devices testing is being done from onshore using 'Family to office' approach. Other testing areas for mobile application includes - updating of Operating system version on mobile emulators, trouble shooting on set-up activities from offshore TCoE, testing activity execution using Agile testing model, test matrix and test case scenario preparation, system integration testing on web applications and SMS functionality on mobile emulators from offshore TCoE. The entire test management is done from the offshore TCoE. This helps to conduct on time testing and also saves the client from additional investment.

IVR testing services offered by ITC Infotech include

- IVR Program Flow Test
- IVR Voice Recordings Verification
- IVR Error Condition Tests
- Database Access Test
- Disabled Communications Test
- Text To Speech Test
- Database Update Test
- Voice Recording Test

Mobile testing services offered by ITC Infotech include

- BlackBerry and Android Emulators installation and configuration on VDI's
- Functional testing on Mobile SMS for Customer alerts on Blackberry and Android emulators

- Functional testing on Mobile Web App using HTTPS protocol
- Testing scopes:
  - SMS Registration
  - Balance Transactions
  - Customer details
  - Fund transfer (intra & inter)
  - Open new account
  - View customer transactions

Automation Framework using Open Source Tool

ITC Infotech also performed Automation Testing for the customer's Savings and Mortgage products using Selenium Web Driver. Key features of the Test Designer Framework are:

- Automation suite has a test designer layer (comprised of worksheets similar to functional scenarios), which accommodates test data based on functional scenarios and ability to run multiple iterations
- Ample number of reusable functions for setting up environment, test data processing, validation, error handling and reporting
- Script layer for Savings and Mortgage application, which is designed to use reusable functions as plug and play technique
- Report layer consisting of Test Results, Logs, Screen shots for individual screen flow with data and dashboard for management review

Business Benefits

- The Testing Centre of Excellence enabled the client to scale up existing testing and offer new business products and services with higher quality, in a shorter delivery time and at a reduced cost
- The TCoE led to improvement in quality of service - less than 2% defects found in production. Improved quality of software led to higher customer satisfaction
- On time and on budget delivery in spite of aggressive schedule with multiple dynamic dependencies
- Reduction of testing costs with the help of TCoE. Further, economies of scale led to lower incremental unit costs
- Reusable artefacts, knowledge assets and processes helped to improve team productivity
- TCoE helped to reduce time-to-market of these applications
- Greater test coverage in shorter time frames due to automation and flexible framework
- Earlier identification of gaps and defects leading to lower overall cost

ITC Infotech's IT Solutions Practice For BFSI Industry

ITC Infotech has substantial experience and exposure in the BFSI industry and provides IT services and solutions to various financial institutions worldwide. With more than 50% of BFSI technical consultants certified in the Banking domain, ITC Infotech has a comprehensive client list including, Fortune 500 banking clients, lending companies, insurance companies, securities firms and trading houses across the globe.

Driven by a strong leadership team and a large pool of experienced technology consultants, the BFSI practice offers a wide range of IT services, differentiated through proven industry knowledge and robust delivery management. Powered with the domain expertise of consultants in the areas of retail banking, risk management, capital markets, equity trading and Insurance, we offer domain specific solutions catering to current and emerging business needs of BFSI customers.

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