LTIMindtree

Transformation from **Quality Assurance to Quality Engineering** for a leading US Life, Annuity & Retirement Carrier leading to predictable outcomes while achieving Quality @ Speed

Client

A Fortune 500 company offering a diverse range of financial services and solutions across Life insurance, Annuities, Retirement plan services, Group protection and Employee Benefits. Their core business area focuses on supporting, preserving, and enhancing people's lifestyles and retirement outcomes

LTIMindtree supports end to end validation services for 140+ applications as part of Digital Transformation and Application Maintenance & Support across business areas/ products catering to Individual and Group businesses

Business Context

Client was implementing a huge Digital Program in which involved Design and development of digital Solutions for sale and service, application modernization and application maintenance. As an industry leader, the client had frequent product releases and process enhancements to meet the competitive market conditions and regulatory changes

Engagement Highlights

Peak Team Size: 140
Duration of engagement: 5 Years
Client Location: USA Headquarters (Radnor, PA)
On: Off Ratio: 22: 78
Onshore location: USA (Greensboro, Rolling Meadows, Radnor, Hartford, Omaha)
Offshore location: Bangalore (West and East Campus), Chennai
No. Of Apps: Around 140+ Applications under 5 FBA segments – Digital, Distribution & Marketing, Enterprise Finance, Group Protection and RPS
Tech Stack/ Applications: Angular 6, Java REST based services
Tools: Version 1, Check style/SONAR, Lint, Fortify, Perfecto, BrowserStack, Quantum framework, WAVE, NVDA and Color Contrast, ALM

Business Challenges/Requirements

Quality and Efficiency:

- As part of the Digital transformation, enhance customer experience and intermediary transformation driven changes to business operations
- The Client was undergoing a Technology migration for 25 out of 34 applications for which they needed testing support.
- Management of multi-vendor environment for testing services
- Regression suite not periodically updated, and insufficient test coverage was
- Ensure Quality releases for BAU and frequent product releases & process enhancements to meet the competitive market conditions and regulatory changes
- Creation/ identification of test data required for covering various test scenarios a challenge especially maintaining integrity of test data for time travel scenarios

Faster time to market:

- Minimal testing automation across applications
- Testing consumed significant time in your product release life cycle
- Test Coverage optimization while reducing cost & time to market

LTIMindtree Solution

Quality and Efficiency:
- Adopted phased transition approach where 140+ applications were clustered and prioritized by inflight releases, complexity & business priority.
- Leveraged BA-QA model for knowledge management during and post transition
- Built a repository of Product X Process matrix – process flows, E2E test cases for each event / transaction
- Optimized the test coverage by leveraging Risk based Testing framework to optimize the regression suite
- Leveraged LTIMindtree's **Product x Process (P2) model,** a repository of various products and associated coverage at a feature level along with business processes mapped to these features
- Ensured involvement of the QA teams along with the dev and Business in **creating the user stories using Gherkin**
- Created **custom templates with functional traceability matrix** for testing tasks starting from test planning till UAT for micro level visibility on project progress

Faster time to market:
- **Ramped up 300+ members in 9 months**
- Automated regression suite across application clusters, ensuring that releases, test cases, test labs are set-up in Microfocus ALM and VersionOne.
- Adopted Acceptance Test Driven Development (ATDD) model and implemented on-demand Test Data Management using GenRocket integration and Service Virtualization using CA Dev Test
- Carried out **Functional testing** including automation of identified **regression test cases, performance testing, security, usability and data migration activities**

Business Benefits

Quality and Efficiency:

- Completed risk free transition of 140+ applications including 50+ core applications catering to customers & prospects) while creating a comprehensive knowledge repository of video recorded sessions and QA understanding documents
- LTIMindtree's Product x Process (P2) model helped the Product analyst create new Life/ Annuity product and attach relevant coverage features based on the product specs document received from the customer. **MiTest Test Scenario framework,** an extension of the above repository helped testers jumpstart test design by selecting relevant scenarios based on the features/ coverages and processes for the product created
- Significant improvement and optimization in Test Coverage ensuring **zero Defect Slippages** across functional business areas while supporting bi-weekly, monthly & quarterly releases
- For Digital transformation, ensured **website consistency** (mobile responsive, look and feel) and improved **content management and user experience.**
- Jasmine UI framework for UI code coverage - **60% to 80%**
- **Optimization of regression** suite helped reduce the test cases by **65%** and increase overall regression automation coverage increased from 35% to >90%

Faster Time to Market:

- Improved test automation maturity from 25% to 70%
- Reduced product development time from 12 weeks to 6 weeks through Test lifecycle optimization
  - Automated, on-demand provisioning of test data reduced test data generation effort by ~80% while reducing dependency on Copy down data from Production
  - Adoption of Acceptance Test Driven Development (ATDD) model enabled test automation from Day 1 of sprint cycle and helped achieve ~80% in-sprint automation
  - Service virtualization ensured test continuity by reducing dependency on availability of services during initial sprints
- Regression cycle time was reduced by over 60% (from 4.5 days to 2 days)
- Critical application performance improved by 50% with respect to throughput, error rate and response time