Quality Engineering to accelerate product release and elevate QA maturity

Client
A US-based Fortune 500 company, offering a diverse range of financial services and solutions across life insurance, annuities, retirement plan services, group protection and employee benefits.
As an industry leader, the client had frequent product releases and process enhancements to meet the competitive market conditions and regulatory changes. In addition, the client embarked on digital transformation initiatives across business operations, aimed at enhancing customer and intermediary experience.

The client had to manage a multi-vendor environment for testing services. Some of the challenges faced included incomplete test coverages, the regression suite not being periodically updated and minimal testing automation capability across all applications. The task at hand involved ensuring quality releases for enhancements, new product rollouts, and BAU. There was a need for test coverage optimization to ensure reduction of total cost of testing and time to market.

**Solution**

Mindtree handled the testing of 120+ applications, catering to individual and group businesses across Life, Annuities, retirement plans, and Voluntary/Group benefits products.

- New business and policy admin applications including third party applications such as ALIP, Foresight and Fidelity’s UAO
- Intermediary applications for advisors, broker dealers and wholesalers supporting onboarding, licensing, performance management, reporting, commissions and incentives management
- CRM applications enabling campaign management, sales & service, and customer management
- Data warehouse & reporting tools supporting the needs of sales, marketing, finance, and accounting units.

Mindtree adopted a phased transition approach where applications were clustered and prioritized by inflight releases and business priority. We leveraged a BA-QA model for knowledge management during and post transition. We optimized the test coverage by having BAs create and review the test scenarios with traceability. The regression suite was optimized by leveraging a risk-based testing framework. We built a repository of Product x Process matrix which contained process flows and E2E test cases for each event/transaction.

Mindtree established a tiered team structure with

- An Agile QA team focusing on in-sprint automation and feature testing.
- A Portfolio QA team focusing on cross functional testing and business process consistency, and
- A Center for Enablement (C4E) focusing on elevating Enterprise QA maturity with process standardization and adoption of other quality engineering aspects around automation, test data management, etc.

Mindtree leveraged open source frameworks and Mindtree IPs for automation, ETL, and data testing. We implemented on-demand Test Data Management using GenRocket integration and piloted service virtualization to reduce dependency on test data for regression testing and performance testing.

**Benefits**

- Contributed to ~50% reduction in IT implementation activities related to Insurance product launch through quality engineering
- 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 the sprint cycle
- Service virtualization ensured test continuity by reducing dependency on the availability of services during initial sprints
- Automated regression coverage increased from 35% to >90% while the regression cycle time was reduced by over 60% (from 4.5 days to 2 days)

**Challenges**

ABOUT MINDTREE

Mindtree [NSE: MINDTREE] is a global technology consulting and services company, helping enterprises marry scale with agility to achieve competitive advantage. “Born digital,” in 1999 and now a Larsen & Toubro Group Company, Mindtree applies its deep domain knowledge to 300+ enterprise client engagements to break down silos, make sense of digital complexity and bring new initiatives to market faster. We enable IT to move at the speed of business, leveraging emerging technologies and the efficiencies of Continuous Delivery to spur business innovation. Operating in more than 15 countries across the world, we’re consistently regarded as one of the best places to work, embodied every day by our winning culture made up of 21,000 entrepreneurial, collaborative and dedicated “Mindtree Minds.”