

2019 / CASE STUDY
#AIRLINES

End-to-end Test Automation Helps World's Largest Low Cost Airline Increase Operational Efficiency by 95%

About the Client

The Client is a major U.S. airline and the world's largest low-cost carrier, headquartered in Dallas, Texas. The airline operates more than 3,400 flights per day and carries the most domestic passengers of any U.S. airline.

The Challenge

The U.S. airline required end-to-end Test Automation of the Web and Mobile Applications following Quality Engineering Approach and implementation of Continuous Integration framework for continuous testing and delivery.

Being in the travel and hospitality sector, the airlines needed to provide the best possible customer experience. To achieve the same, it needed to perform extensive and multiple types of testing such as functional, non-functional, and regression, and also implement Continuous Integration for ongoing testing and delivery. It also required testing its mobile apps for multiple OSs and Platforms. The existing testing environment also required betterment in terms of simulation testing, more test scenarios, and a dashboard-based reporting system.

After thorough research, the company approached Cigniti for its pure-play expertise in test automation and quality engineering to overcome its challenges.

E2E app validation & automated build verifications ensured complete code coverage & improved build quality.

We followed a dual shift approach – shift left (early automation, test less) with a vision on the right. The engineering driven approach ensured a collective QA organization to automate more, test less while reducing costs and enhancing the overall Customer Experience. Testing Early and testing Less led to an early Defect Detection (20-30% in Requirement and Test Design Phases).

We conducted a thorough, in-depth assessment of the existing automation framework and suggested implementation of best practices. We implemented an integrated framework for end-to-end automation (Unit, Integration, Functional, Business, GUI, and Non-GUI) with continuous integration for the ongoing test execution. We provided jumpstart kits for automation – Automate Early, Automate More for end-to-end validation of the application and automated build verifications that ensured complete code coverage and improved build quality.

We additionally provided an effective and efficient regression testing suite (techniques and best practices) and enhanced the usability of the consumer applications with strategic business process testing.

Key Benefits the Client Received

- ✓ 100% business process testing through techniques and best practices.
- ✓ Improved the overall reliability of end-to-end internal system with hybrid monitoring model that increased the operational efficiency to 95%.
- ✓ Improved the usability of the mobile app which increased the traffic by 45%.
- ✓ Improved time-to-market with help of efficient test automation that decreased the execution cycle by 3 weeks to 1 week.
- ✓ Reduced human intervention by over 30% using Continuous Integration.
- ✓ Achieved 30% increase in Traceability and Test Coverage (Trace-ability Matrix, Functional Decomposition).
- ✓ Improved the overall performance of the key flows by 55% that increased the revenue by 8%.



About Cigniti

Cigniti is World's largest Independent Quality Engineering Services company, bringing the power of AI into AI and DevOps, to accelerate enterprise digital transformation journey. We help world's leading enterprises build quality software and accelerate speed to market while lowering the overall cost of quality, and driving a huge positive impact to ROI from their QA, QE & Digital initiatives. Know how we play a pivotal role in the digital transformation journey of our clients. Visit www.cigniti.com and follow us @cigniti.

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