



Taking flight with application excellence



This aviation leader wanted to improve application development efficiency. By reducing defect rates, it would quicken time to market for new features and upgrades. By engaging the Fujitsu Application Development and Testing team, the client has achieved a reduction in the defect rate by 60%, reduced the testing cycle by 50%, and increased the test automation coverage from 30% to 80%.

Challenge

Improve application development efficiency to reduce defect rates, and quicken time to market for new features and upgrades.

Solution

Fujitsu Application Development and testing team was deployed alongside the client in North America.

Outcomes

- Reduced defect rate from 30% to 10%, with a goal of zero.
- Reduced integration testing cycle by 50%, from 10 days to 5
- Increased test automation coverage from 30% to 80%.

Aviation manufacturer takes flight with application excellence, reduces defect rates, and quickens time to market for new features.



60%

reduction in the
defect rate

Software development to drive new revenues

Commercial airplane technology has been completely transformed since the first transatlantic flight nearly 100 years ago. Cockpit applications integrate flight information into one central location and can help with fuel efficiency, route planning, and pilot fatigue. Every aspect of the flight, from crew to passengers to engineering, can be monitored and optimized.

This has required airplane manufacturers to transform themselves to become software companies as well as manufacturers, that not only sell airplanes, but also provide ongoing services, with regular updates, support and revenue.

The Fujitsu client is one of the world's largest aerospace companies. The client is expanding its presence in the mobile application space, and it sees software applications as an opportunity to improve its customers' experience, profitability and growth. The market expects more frequent, defect-free deliveries of updates and new applications. Specifically, a 60% defect rate was crippling productivity. In quality terms, it wanted to eliminate inconsistent code.

Embracing Agile and DevOps

Fujitsu has worked with the client for 30 years and is now one of a much smaller set of specialized approved suppliers.

Fujitsu provided a high performing and cross-functional team with expertise in Agile, DevOps and mobile application development. The Fujitsu team worked alongside the client at the client's facility. This enabled the benefit of face-to-face engagement along with effective collaboration and communication between the client and Fujitsu team.

The Fujitsu team was responsible for the development of mobile applications, architecture, and test automation.

The client's application applied the Scaled Agile Framework® (SAFe®) and full lifecycle testing process. The technologies were implemented on mobile, desktop and web platforms, and included software such as Jenkins, Maven, Java, Appium, Selenium, TestNG, iOS, Objective-C and Swift. Fujitsu's LEAN approach enables the client to test early, consistently, and efficiently.

Industry:
Aviation

Location:
Global

People:
**>150,000
employees**

About the customer

As one of the world's largest aerospace companies, it is an aviation manufacturer with operations worldwide. It is expanding its presence in the mobile application space, and it sees software applications as an opportunity to improve its customers' experience, profitability and growth.



80%

increase in test automation coverage

Releasing applications at high velocity with first time quality

The engagement is helping the client to improve its ability to develop mobile applications and deliver releases at high velocity with high confidence. The result is that application development is cleaner, and the release of new features can be brought to market more quickly. The defect rate has reduced by 60%, and the integration testing cycle has fallen from ten days to five days, a 50% reduction.

The Application Development and Testing service from Fujitsu has transformed numerous mobile applications into a single easy-to-use EFB suite. The client can now manage the quality of a large mobile codebase with over 200,000 lines, and has increased test coverage from 11% to 40%. It has completed automation test suites for more than 600 integration test cases; test automation has increased from 30% to 80% in 18 months.

This means the business is better able to win new business and drive new revenues from its applications division. It is able to offer an integrated aviation solution, from hardware to software. It keeps its customers ahead of emerging competitors, energizes the development culture, and helps attract talent.

Fujitsu

askfujitsu.us@fujitsu.com
Tel: 1-800-831-3183

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