



Keeping Half a Million Travelers Safe in the Skies

BUSINESS CHALLENGE

The number of components per plane is staggering. A single Boeing 747 aircraft consists of more than six million individual parts; each wing alone has 40,000 rivulets¹. Everything on an aircraft - from the smallest bolts to the windowpanes - has a unique identifying number, a maintenance schedule, and a manufacturing origin that must be tracked.

The merger of two major airlines required massive systems integrations to shift aircraft maintenance from a manual, paper and green screen-based process to one that provided real-time interaction with mainframe computers. Enabling their mainframes for mobile real-time access was an extremely complicated task.

Along with systems unification, the company sought to:

1. Eliminate green screen interfaces
2. Enable aviation mechanics to use hand-held tablets connected to real-time data
3. Automate several manual processes

OVERVIEW

CLIENT

A global airline responsible for more than 6,000 flights per day to 350 destinations in 60 countries, serving half a million passengers daily.

CHALLENGE

Merging two major airlines required massive systems integrations to shift aircraft maintenance from a manual paper and green screen process to one that provided real-time interaction with mainframe computers.

SOLUTION

Adaptive Integration Fabric

RESULTS

The airline met its regulatory obligations ahead of expectations and achieved significant efficiency gains for a successful merger.

| SOLUTION

After evaluating their options, the airline discovered Adaptive Integration Fabric from Adaptigent™ (Fabric). Fabric is an API integration solution for mainframes and other systems. It would enable real-time mainframe connections across multiple systems that the teams needed. Additionally, as a no-code, drag-and-drop interface, Fabric would save time and reduce risk, as zero coding was required.

The team generated a unified set of APIs and connected maintenance and parts inventory mainframe-based systems. Fabric provided the connectivity for interactions across the mainframe and surface applications. This created a united front end for all users to access. Adaptigent's software allowed the airline to create a relatively complex architecture behind the scenes but a user-friendly experience on the surface.

“All our teams now have access to the same datasets, giving us the ability to make quick decisions on the spot to drive operational improvements.”

- Director, Merger Operations

Fabric enabled the airlines to integrate maintenance and service records and track in real-time. Instead of lugging around 700-page service manuals, aviation mechanics accessed data directly on their tablets. Automated workflows not only located specific parts, but Fabric enabled automated searches for where the part was held, compare costs per unit, and locate the best location to ship it to the airplane's next scheduled maintenance.

USER-CENTERED DESIGN

Technology is useless if no one uses it. The company recognized that transitioning 8,000 aviation mechanics from paper documentation to typing on hand-held tablets was a significant shift.

To ensure usability and uptake of the new tablet interfaces, the development and testing of the new mobile interface included users. Product designers pulled aviation technicians in from the field, and product owners went on site to see processes in action. The new system equips technicians with tablets, provides better visibility into team productivity, and facilitates faster gate turnaround to improve on-time performance.

As the project leader explained, “When we went through the merger, we wanted to make sure that more than the business and technology departments made all the decisions.”



| RESULTS

Modernizing the environment with the Adaptive Integration Fabric not only improved the technical performance of the systems, but it also enhanced the functional performance of the teams.

The software supported a user-centric process for maintenance and repair, and it allowed teams to integrate maintenance systems and functions with other airline operations, including supply chain, finance and flight forecasting.

The airline uses about 300 APIs across the organization, handling around one million mainframe transactions per day.

The result is a widespread, coordinated, and nimble system that saves time and increases efficiency. The technology portion of merger was declared a success with the granting of a single air operating certificate from the Federal Aviation Administration (FAA), indicating compliance of systems and safety.

Years after the merger, the airline credits improved IT upgrades and changing processes and procedures as key contributors to their \$1 billion USD gain in cost efficiencies. Using Fabric unified the maintenance processes, people and technology.

FABRIC SOLUTION:

- Improved technical system performance
- Enhanced functionality of teams
- Integrated planning with financial and flight forecasting divisions
- Eliminated green screen interfaces
- Trained more than 8,000 aviation maintenance professionals to use hand-held tablets
- Decreased unplanned aircraft downtime
- Avoided service disruptions during the complex technology fusion, unlike other mergers
- Eliminated silos between mobile data and mainframe teams
- Received regulatory approval to fly as one airline ahead of expectations
- Realized \$1 billion USD in post-merger cost efficiencies

Adaptigent is a software technology company offering business solutions to harness the power of APIs for innovation and growth. A global distributor of the Fujitsu NetCOBOL compiler, Adaptigent seamlessly integrates core systems. More than 2,500 organizations globally trust Adaptigent solutions. Visit www.adaptigent.com.

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