

CASE STUDY | ANALYTICS



Data analytics takes flight at Fortune 50 aerospace and defense part manufacturer

Candor. Insight. Results.

The business challenge

As one of the largest part and system suppliers for a major international aircraft manufacturer, the performance of the company's parts was a critical driver of overall fleet reliability. Manually consolidating relevant data from several different systems was time consuming and limited how well they could monitor and understand the performance of their parts across the fleet. They wanted to develop a data-driven narrative for each aircraft as the fleet of new aircraft entered into service.

The Baker Tilly solution

The "Story of the Plane" would use onboard system data, weather information and other previously siloed data to expedite the understanding of the root cause issue of faulty parts and those in need of maintenance, better directing their engineering and maintenance activities.

Developing the "Story of the Plane" required the Baker Tilly Analytics team to enable fleet data analytics on aggregated data, sourced from both internal enterprise repositories, as well as external data available in the public domain. Key data sources were both structured and unstructured in nature and included:

- > Diagnostic information from aircraft computers transmitted during flight
- > Fleet schedule and historical route information from airports and fleet routing
- > Comprehensive weather data at multiple points in time from a third-party vendor
- > Internal quality and reliability data, including technician and airline representative unstructured notes

Value to the customer

Leveraging their previous investment in Data Discovery and Search-Based Business Intelligence, the Baker Tilly Analytics team:

- > **Automated** time-consuming manual data curation and aggregation processes
- > **Provided business users with visibility** across previously siloed data sources, within a single, interactive User Interface, reducing dependency on IT staff
- > **Accelerated time-to-insight** by streamlining the data sourcing, curation and transformation processes and decreasing the dependency on multiple IT resources
- > **Provided critical data** needed to better communicate the current status of outstanding issues with their customers

"Before, I was watching 52 planes manually, which took me all day. After implementing the solution, I'm able to actively monitor the health of more than 400 planes using only 50% of my day. That extra time frees me up to tackle other critical issues that need my attention."

–Fleet Analytics Manager

BUSINESS IMPACT

25%

Improvement in **service** and design engineering resource allocation.

**\$1.8M
TO 3.8M**

Expected single program **annual savings** driven by faster time to issue resolution.

16x

Improvement in **fleet visibility** and coverage. Management can actively watch 400 planes in half the time it took to monitor 50 planes before the data analytics solution was implemented.

75%

Manual data consolidation and reporting processes **automated**, resulting in \$740K annual expected cost savings.

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