

Case Study

INDUSTRY > Transportation

FUNCTIONAL AREA > Operations

The Arnold Group is a management consulting firm that helps leading organizations excel. Our consultants are exceptional, senior-level professionals with a passion for achievement and a proven track record in helping business leaders achieve success in the world's largest organizations. With a depth of industry-specific knowledge and expertise, Arnold Group consultants partner with our clients to fully understand their challenges and deliver actionable results that drive true organizational impact. When you work with the Arnold Group, you are partnering with a team of experts who are committed to your success.

Helping a Major Airline Achieve Operational Excellence

Summary

A major global airline sought to improve its U.S. maintenance programs with the goal of optimizing processes and improving the predictability of aircraft availability. The organization restructured its operations to increase the predictability of the maintenance, maximize asset utilization, and lower overall airframe maintenance cost.

Customer Profile

A major global airline with several hundred aircraft, fourteen fleet types, and multiple hub operations and maintenance bases.

Challenge

The VP of Heavy Maintenance at the airline sought to improve its U.S. maintenance programs with the goal of optimizing processes and improving the predictability of aircraft availability. With fourteen fleet types, several hundred aircraft, and multiple maintenance bases, the airline made use of highly complex line maintenance processes, including the packaging of thousands of inspections and repair tasks into a series of scheduled maintenance checks. The company followed the manufacturer's standard maintenance program, which treated all fleets as if they were an average age. The result was often a discrepancy between scheduled maintenance down-times and the actual down-times required for maintaining the aircraft. For example, an older aircraft

that was scheduled to return to the fleet on a given day might take an extra five, ten, or even twenty days to fix. Alternately, with newer fleets, aircraft might be taken out of service unnecessarily, even if it had nothing wrong with it. The client wanted to improve these operations to reduce costs and to improve maintenance predictability.

Solution

The consulting team started by building a deep analytical understanding of the airline's maintenance requirements, with a specific focus on how maintenance requirements change as fleets age. Based on this research and analysis, they delivered a new set of maintenance programs that could be used to perform tasks appropriate to the given aircraft. They were able to group maintenance tasks not just by duration and skill set, as they had been, but by the risk of discovering something wrong—and the potential severity of the problem. Using this information, they could craft maintenance windows that were optimized for each fleet age and type, scheduling longer windows for fleets with a higher likelihood of problems and shorter windows for those likely to have positive inspections.

Results

Using a new maintenance strategy and tactical plan, the client was able to optimize maintenance operations for each fleet, and the VP of Heavy Maintenance was able to restructure his operation to increase the predictability of the maintenance. Ultimately, this enabled the organization to maximize in-air time and asset utilization, and to lower overall airframe maintenance cost. In addition, the team delivered a cost-to-operate analysis that recommended retirement or sale of specific aircraft types. Following the recommendations on fleet consolidation and retirement and optimizing fleet availability enabled the organization to ground more than 150 aircraft and resulted also in a cost-effective plan to keep hundreds of 20-plus-year-old aircraft well-maintained and flying.

