

Leading aircraft
maintenance company
improves accuracy of
sales quotes and MRO
services with AI solution

CUSTOMER

**Leading aircraft
maintenance company**

LOCATION

Germany

INDUSTRY

**Travel, Transportation
and Hospitality**

This leading airline maintenance provider needed a better understanding of the tools, assets and labor required to resolve defects, as well as the turnaround time required for overhauling aircraft.



Challenge

- Improve the accuracy of sales quotes
- Accurately predict potential defects prior to upcoming aircraft maintenance activities
- Evaluate parts, tools, assets, and labor needed to resolve predicted defects



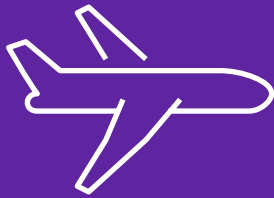
Solution

- DXC Data and Analytics services to create an AI-based power quotation for generating more accurate sales quotes
- AI-supported predictive analytics solution for anticipating defects, as well as resource and time requirements



Results

- Accelerated time to develop sales quotes and improved accuracy
- Increased sales success rates with more transparent and competitive sales proposals for customers
- Improved planning basis for the execution of new contracts



Leading aircraft maintenance company improves accuracy of sales quotes and MRO services with AI solution

Artificial intelligence (AI) is being used in business for everything from improving customer service to driving smarter supply chains. The aircraft maintenance leader did both, when it harnessed AI to improve the accuracy of its sales quotes.

“With DXC, we had a flexible and experienced partner to evaluate if AI technologies really solve our problem.”

— Head of Application Services of Base Maintenance, Leading aircraft maintenance company

Understanding the true costs of aircraft maintenance

Based in Germany, the company provides worldwide aircraft maintenance, repair and overhaul (MRO) services not just for its parent company, but also for numerous other international airlines.

A typical sales quote request might come from an airline seeking an estimate for performing maintenance on a full fleet of aircraft over the course of a year. As part of preparing the quote, the company needs time to gather information and familiarize itself with the characteristics of the aircraft to estimate the time, effort and budget needed to perform the necessary MRO services.

In the MRO field, generating accurate quotes is crucial, because if cost

estimates are too high, business will be lost. Fixed price quotes that are too low could result in major cost overruns.

“Aircraft maintenance services is a highly competitive field, and we needed a sales quote tool that would provide more accurate estimates,” says the company’s head of Application Services of Base Maintenance. “This capability would give us an edge over our competitors when submitting proposals and help us win new business.”

For the company, improving the accuracy of its sales quotations means being able to accurately predict potential defects that would take place as an aircraft is going through an overhaul.

“DXC’s solution is making a big difference in our pursuit of new work and in starting on new contracts. Having more accurate predictions of aircraft defects and turnaround times is very valuable to our business.”

— Head of Application Services of Base Maintenance, Leading aircraft maintenance company

Often, these defects include repairs that extend beyond the standard predefined checks and maintenance activities, making overhaul cycles longer and more costly than originally planned. The sales quote tool also plays a key role in estimating the tools, assets and labor needed to resolve all defects, along with the time required to overhaul the aircraft.

Creating an AI-driven solution

To tackle this challenge, the company approached DXC Technology with the task of determining if AI technology could be applied to its MRO overhaul services. The goal was to see if AI models could be used to predict potential defects for the purposes of preparing sales quotes, in much the same way that AI is used for predictive maintenance.

DXC had previous experience in this kind of difficult business challenge. The Artificial Intelligence and Automation practices at Luxoft, a DXC Technology company, which focus on the study and implementation of AI-powered business applications, worked alongside the customer to determine whether AI could be applied to the company’s business case.

DXC’s AI and Automation practices have served as a launching pad for releasing new applied AI solutions as part of innovative and ambitious projects that aim to help our customers solve real-life business problems through the application of artificial intelligence.

“With DXC, we had a flexible and experienced partner to evaluate if AI technologies really solve our problem,” according to the application services manager.

DXC developed a solution in which AI could be applied to help the company predict defects and resource requirements more effectively. A minimum viable product (MVP) was developed and KPIs were established to see if predictions could be improved to a high enough level for the company to establish a business case.

Other information that could further improve accuracy includes factual data about an airplane’s previous performance, maintenance events and, ideally, historical operating environment. For example, a plane that will be flying heavy duty short haul operations in a desert region might show much different defect parameters than one flying exclusively long-haul between Europe and Asia.

“Preparing sales quotes is driven by data, and there is a lot of information to analyze,” the manager says. “By applying AI, we can generate rich data insights that our staff could never accomplish using their own calculations, simply because the sheer amount of data that would need to be analyzed is too great to be processed by a human being in a reasonable timeframe.”

In the MVP, data from historic MRO events was combined with information from previous proposals and other sources, then mingled into an AI model to come up with a prediction of the most probable real-world defects.

The MVP proved that the prediction algorithms were able to achieve the desired level of quality that could significantly help the customer improve predictions to make more accurate quotes.

“In the second step, we developed a stable solution out of the first MVP. DXC was a reliable partner in this phase too,” the manager says. The defect predictions were embedded into a specifically developed cloud-based sales quote application, which is now being used by the company’s employees in the preparation of proposals and being serviced through its Microsoft Azure-based Aviator platform.

Sales quote tool drives higher win probabilities

The quotation application is delivering two key benefits to the company. First, it provides sales quotes for developing more accurate proposals.

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This has allowed the company to present more competitive proposals to its customers and improve the probabilities of winning contracts. Secondly, when a new contract is initiated, the tool improves the planning basis for executing the work.

“DXC’s solution is making a big difference in our pursuit of new work and in starting on new contracts,” the manager says. “Having more accurate predictions of aircraft defects and turnaround times is very valuable to our business.”

Knowledge gained from developing AI models for the company can be leveraged by other MRO organizations and applied in other heavy maintenance areas, such as the repair and overhaul functions in the railway and manufacturing industries.

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About DXC Technology

DXC Technology (NYSE: DXC) helps global companies run their mission critical systems and operations while modernizing IT, optimizing data architectures, and ensuring security and scalability across public, private and hybrid clouds. The world’s largest companies and public sector organizations trust DXC to deploy services across the Enterprise Technology Stack to drive new levels of performance, competitiveness, and customer experience. Learn more about how we deliver excellence for our customers and colleagues at [DXC.com](https://dxc.com).