



# Cessna Aircraft

## saves more than \$1.4 million & improves maintenance operations with reporting automation

Innovation is in the DNA at Cessna Aircraft, the largest builder of light and midsize business jets in the United States. The Wichita, Kansas-based company got its start in 1927, when founder Clyde Cessna was the first to build a monoplane without supporting struts or braces. Since then, the company has taken off. Today, Cessna has sold and delivered more than 190,000 aircraft – more than any other company in history.

It takes a sophisticated maintenance operation to keep Cessna's facilities and aircraft manufacturing operation working flawlessly. The job of Cessna's maintenance engineering department is keeping it all running smoothly; from the hundreds of thousands of light bulbs in the company's 1,400-acre Wichita facility to huge paint bays that

complete million-dollar aircraft paint jobs – and everything in between.

"We pretty much do it all," says the head of Cessna's maintenance engineering department Randy Thon. "We have the responsibility to set up equipment, engineer projects, document the work order history, and maintain the facilities – from complex machinery all the way to the doors and windows. If it's on site, it's our domain."

### A need for automation

The maintenance engineering department had previously relied on a manual, time-intensive system to schedule maintenance operations, generate reports and write work orders. In addition, the maintenance operations were



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scheduled based on time instead of usage. For example, a part on a piece of machinery would be changed every three months, regardless of use.

In keeping with Cessna's history of innovation, Thon saw a great potential for time and cost savings by combining a robust reporting system with report automation capabilities. Thon chose Crystal Reports for its powerful reporting functions and combined it with ChristianSteven Software's CRD reporting automation tool for Crystal Reports.



"Crystal Reports is only a piece of the puzzle, it is how you work it and what you do with it that makes the real difference," says Thon. "That's where CRD has been outstanding, in getting the knowledge and the information from Crystal Reports and actually delivering it where it's needed."

Thon chose ChristianSteven's CRD software because it had all the capabilities Cessna needed – and more. "It checked everything we needed off our list, and I knew we could grow into the many other features it offered," says Thon.

### Changing the face of maintenance

Adding CRD reporting automation has resulted in tremendous time and cost savings for Cessna. "We've changed the whole face of how we do maintenance," says Thon. With CRD, reports that were previously compiled manually – or not at all – are now automatically delivered to the people that need the information. In addition, all work orders are generated automatically with no manual inputs or processes required; the Cessna equipment is simply linked to the reporting software and when it hits a specified level of usage, a work order request is triggered.

Other reports CRD automatically generates include internal customer notifications of work order changes, invoices and notifications of purchase orders that have not been delivered. Altogether, Cessna uses CRD to generate more than 1,000 reports a week.

CRD has allowed Cessna to shift from time-based maintenance to predictive maintenance, which has resulted in significant time and

cost savings. For example, the maintenance operation associated with changing filters in aircraft paint bays costs \$50,000. Previously, maintenance crews changed the filters at regular time-based intervals. Now with CRD, filters are changed based on how often they're used. As a result, Cessna has reduced the need for one filter change a year on each of four paint bays. This saves \$200,000 each year – more than \$1.4 million in savings over seven years on a single maintenance operation alone. Add in the dozens of other costly maintenance operations performed at Cessna, and the savings in dollars and time grows exponentially.

Reporting automation at Cessna translates to time savings as well. Before adding CRD, generating reports and work orders took about four hours a day – that's more than 1,000 work hours and 26 work days a year. It's also saved Cessna lost time due to equipment problems because CRD has greatly reduced reactive maintenance and replaced it with a preventive maintenance strategy. Based on the savings in work hours alone, Thon estimates the CRD software paid for itself within the first three months of purchase.



Finally, CRD allows maintenance engineering to provide a higher level of service to its internal customers. For example, instead of receiving a basic email describing their work order request, customers now get a detailed email describing the work to be completed – it even contains photos of the equipment or machinery involved. CRD provides decision-makers with the most up-to-date and complete information concerning Cessna's equipment as well, allowing them to make informed purchase decisions.

"CRD helps guide people into looking deeply at data that is meaningful, and helps them coordinate how we spend money more wisely," says Thon.

Tremendous cost and time savings, increased productivity and improved customer service – the benefits for implementing reporting automation at Cessna Aircraft really add up.

"We have a saying at Cessna, 'greatness starts here', and CRD automation has really been a part of that," says Thon. "Now, people can keep proceeding forward without always having to step back one step before they start their day."

Cessna is continuously finding new uses for its ChristianSteven CRD automation software. Thon expects that in keeping with the Cessna spirit, they will continue to find more ways to leverage the technology and innovate even greater business efficiencies and advancements in the future.

### Business benefits realized with CRD

- Allowed maintenance engineering to shift from time-based to usage-based maintenance – saving \$200,000 a year and \$1.4 million over seven years on a single maintenance operation alone.
- Eliminated manual processing of maintenance work orders and reports, saving more than 1,000 work hours a year.
- Improved communication between Cessna maintenance engineering and its internal customers, leading to enhanced levels of customer service.
- Significantly reduced the amount of time needed to respond internally to maintenance requests.
- Allows for better planning of preventive maintenance operations, resulting in time and cost savings.
- Operational efficiencies have eliminated the need to hire additional maintenance employees in times of increased demand.
- Full return on initial software investment realized within three months of purchase.
- Report automation puts key information in the hands of company decision-makers each day.



**CRD for Crystal Reports, part of the powerful range of business automation software, alongside SQL-RD for Microsoft® SQL Server and MARS for Microsoft® Access.**



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