

BEHIND THE GLASS

CMMS facilitates migration to PdM and shrinks downtime to less than 1%

As maintenance manager for the Buford, Georgia, Cardinal CG plant, Boyd Helm manages more than 100 assets for fabricating glass products. Despite a staff reduction, he reduced downtime from 15% in 2008 to an impressive 0.8% in 2011. Helm is no superhero. He's just a regular guy who uses teamwork and every available tool to achieve desired results.

Cardinal (www.cardinalcorp.com) was founded in 1962 in Minneapolis. It designs and fabricates glass windows and doors, and it has 28 plants and 4,500 employees, all focused on superior-quality products, a competitive marketplace, and high-end customer service.

With more than 25 years of experience, Helm brought extensive maintenance management knowledge to Cardinal. His role includes responsibility for assets in the tempered division, including furnaces and high-volume cutting machines.

Downtime was running at 15%. Work orders and maintenance management were still done in a run-to-failure culture centered on reactive maintenance. Downtime reports weren't circulated to the maintenance department; communication and teamwork were lacking. Helm needed better tools to deliver effective maintenance management.

He implemented a CMMS program for scheduling and tracking PMs. He reduced downtime through scheduling and planning but had difficulty extracting information in a usable format. After 15 months, downtime plateaued. Without reports, he couldn't analyze data and trends or produce reports to share. He needed to track labor, generate PM checklists, perform predictive maintenance, and track spare parts. The ability to easily generate planned activity and work status reports was essential. With these tools, Helm was confident Cardinal could achieve a turnaround.

Helm selected X3 CMMS, a Web-based system from eMaint (www.emaint.com), to reduce upfront costs and speed deployment. He imported all information into the new system and used it to schedule and track PMs, work requests, repair orders, and inventory. Using eMaint's reporting tools, he calculated depreciation and cost to maintain assets. He manages labor with a scheduling feature and a Gantt chart tool to maximize productivity.

Downtime dropped by 95% in three years. The improvement allowed Cardinal to reduce labor hours by 43% and overtime by 60%, and to increase daily production by 40%.

This resulted in Cardinal CG operating at a 45% profit.

In this economic downturn, the Cardinal plant had no layoffs and is profitable due to its increased efficiency.

Helm knew he couldn't derive the full benefit without reporting and analysis, as measurements would present countless opportunities for improvements. Using the CMMS reporting feature, Helm produces reports and data to show the true cost of maintaining vs. replacing. Instead of continuing to repair piecemeal in a low-cost, short term manner, Helm can fix it right the first time.

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Helm shaped the corporate mindset to embrace predictive maintenance (PdM). The migration to PdM is a result of the CMMS. Helm was able to make a difference using the eMaint CMMS, but communication was critical.

Thirty-minute meetings between maintenance and production allowed the departments to plan maintenance to achieve PM completion rates of 90%. He held safety meetings between shifts, posted photos of hazards, added safety inspections, and used daily walk-throughs. His department has been accident-free for more than 800 days.

Helm continues to craft improvements. He sets goals and uses bar-coding to track inventory costs, and he plans to strive for continuous improvement. ☺



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