



LLumin CMMS+ Increases Maintenance Workforce Efficiencies and Operations Uptime for Caterpillar Plant

Business Challenges

- Existing system with inefficient and unfriendly user interface
- Outdated architecture and information sharing functionality

LLumin CMMS+ Key Features

- Feature rich & cost effective
- Flexible and easy-to-use
- Supports rich content with multiple file formats allowed
- Integrated safety task notifications

Key Results

- LLumin CMMS+ streamlines work order generation and management processes
- Users have important information, easy to see, right when they login
- Increased OSHA compliance

About the Customer

As the world's leading manufacturer of construction and mining equipment, diesel and natural gas engines, industrial gas turbines, and diesel-electric locomotives, Caterpillar Inc. has been a household name for over 85 years.

From its beginnings constructing the San Francisco cable car system in the 1870's to its place today as the foremost name in equipment, Caterpillar has driven positive, sustainable change on every continent.

Its Mapleton, Illinois facility houses the Cast Metals Organization (CMO), which produces the cast iron cylinder blocks and heads used in the 115-6,600 horsepower engine platforms. CAT CMO occupies 880,000 square feet of space under its roof, 440 acres, and ships 150,000 tons of finished product each year. In a plant that size, keeping track of materials, maintenance, and work orders is critical.

workload and increase our service levels to the plant."

-Patrick Durbin, Maintenance Manager

Outdated Technology Hampers Productivity

In 2011, CAT CMO's old mainframe application for managing maintenance work orders had to go. In addition to not being user-friendly, which is a must for employees who are much more comfortable fixing complex machinery than using computer applications, the mainframe program was no longer supported by the IT department.

And so, the core challenge was to implement a user-friendly CMMS (computerized maintenance management solution) that would allow for rapid work order response, plant maintenance scheduling, and knowledge sharing. CAT CMO wanted a solution that could be deployed quickly, but also one that could scale for the future.

The Solution

Pat Durbin, Maintenance Manager for the CMO plant, began researching computerized maintenance management software providers that seemed to meet the short and long-term criteria; examining several that other Caterpillar plants were using. He also conducted an Internet search and came across LLumin's CMMS+, which he decided to evaluate along with a few other options.

"No question, cost was a huge driver," Durbin said. One option comparable to LLumin CMMS+ functionality cost 10 times what LLumin would cost, which was out of the question. But ultimately, what swayed the Mapleton team was the ease of use, reporting, and preventative maintenance scheduling utilities, available in LLumin's solution. CAT CMO purchased LLumin CMMS+ for the following features and capabilities: asset and maintenance management, the work order and service request intranet, real-time asset & facilities condition monitoring module, and the mobile workforce app – among many others.

Implementation began with LLumin's certified implementation team meeting with Caterpillar's IT department to ensure the software architecture and security model was following Caterpillar policies. The software was deployed in the cloud via software as a service (SaaS). Next, CAT CMO and LLumin Software worked together to develop import worksheets and mass upload asset and other plant/maintenance data into the CMMS. With their unique role based dashboards functionality, LLumin also configured the software and user interface to provide features and functionality that the plant floor would need – and hide features that most would not. Finally, LLumin's team spent approximately four weeks training the staff on their new solution.

LLumin Significantly Improves Productivity and KPI Levels

Using LLumin's CMMS+ has greatly improved productivity for CAT CMO, according to Durbin. "The difference is like night and day," he said. For example, creating preventative maintenance schedules is almost completely automated. The old system required entering trigger and most all PM associated information, for each piece of equipment, by hand.

CAT CMO also appreciates being able to enter and track significant amounts of information about an asset, its attributes, and incident history, all at the asset master level. The old system limited the number of characters that could be entered and didn't allow attachments. But with LLumin's CMMS+, CAT CMO can have the information needed on an asset at their fingertips, allowing them to send even a new technician to an asset for repair, since not only the specific instructions, but a ton of other asset data is all in the system, Durbin said. "Once you input correct instructions and information into the system, the amount of direction you have to give someone goes way down."

"It's hard to put a dollar figure on this," Durbin said. "However, the fact is that CAT CMO no longer has to rely on multiple sources – legacy software, handwritten notes, emails, and phone

calls – to request repairs and schedule and complete maintenance.” Instead, any of the 100 core plant maintenance personnel, plus another 1,200 employees, can request work – anything from a broken air conditioner to a faulty piece of machinery on the shop floor. The entire process has been streamlined dramatically.

Additionally, as a union shop, the second shift starts as the first shift leaves, without overlap. By using LLumin, the first shift doesn’t need to talk to the second shift, as everything the employees need is in the system when they start their shift.

Increased OSHA Compliance

Additionally, with Occupational Safety and Health Administration (OSHA) guidelines, CAT CMO needs to track inspections and incidents. LLumin has given the facility the ability to better track safety processes and inspections. Instead of using handwritten sheets and binders, CAT CMO is now inputting the information into the CMMS.

“Having that information electronically, and the fact that it’s going to be saved forever, is going to be really good for us in the long run,” Durbin said.

The Future

Looking toward CAT CMO’s plans for LLumin, Durbin sees the mobile module being implemented in a few months. “We would love to go to that,” he said.

Overall, LLumin has been invaluable to the operations at CAT CMO. Durbin advises any company needing a good CMMS to take a close look at LLumin’s software. “I spent a lot of time looking at the system, and it’s every bit as good as competitors, but for a fraction of the cost,” said Durbin.



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