



TenCate Leverages LLumin's CMMS+ to Achieve Lean & Efficient Maintenance Processes

Business Challenges

- Establish and maintain lean maintenance processes.
- Integrate maintenance management with key enterprise systems including control systems, MES, and ERP.

LLumin CMMS+ Key Features

- Offers connectors to control systems such as Allen Bradley and Aveva.
- Provides a user-friendly and highly flexible interface.
- Methodology that allows users to gradually learn system functions.

The Results

- LLumin CMMS+ helps avoid catastrophic equipment failures and associated repair and operations costs.
- LLumin CMMS+ improves the efficiency of maintenance work performed during scheduled shutdowns.
- LLumin CMMS+ captures wrench-time and total equipment parts costs.

About the Customer

TenCate Geosynthetics, a division of Solmax, and based Pendergrass, GA, is the world's leading provider of geosynthetics and industrial fabrics.

Through the processing of synthetic raw materials, TenCate develops, manufactures, and provides innovative and reliable industrial technical textiles that enhance the performance of their customers' products. Key markets TenCate serves include transportation, site development, agriculture, soil reinforcement, paving and environmental dewatering.

The company employs 500+ people and operates 24/7.



Challenge: TenCate Requires A Robust CMMS

The demand for TenCate products is growing rapidly across many markets and to stay innovative while meeting this demand, it's critical for TenCate to establish and maintain lean manufacturing processes. Richard Funderburk, the Plant Manager for TenCate Geosynthetics Americas, realized that the key to building lean processes was tied closely to how well the TenCate computerized maintenance management system (CMMS) operated.

“When we first opened our newest plant, we originally tried a solution attached to our accounting software, Funderburk says. “But we could not track maintenance work orders properly, and the system did not retain data and historical information in a meaningful way.”

In looking for a more robust CMMS solution, Funderburk wanted to identify technology that his staff would find user-friendly, and which would allow him better visibility. “To improve our maintenance processes, we needed more information to identify bottlenecks,” Funderburk explains. “We also found that our staff sometimes avoided the previous solution because using it was not intuitive—especially for non-computer savvy personnel.”

TenCate also wanted the new solution to integrate with its Industrial Control System and the company's internally developed financial system.

Solution: Finding The Right CMMS Solution

TenCate narrowed its search for a new CMMS to three. This included LLumin CMMS+, a Lotus Notes add-on, and IBM Maximo.

In comparison to the other two solutions, LLumin offered the perfect balance among capabilities, user-friendliness, and price.

LLumin offers native connectors to popular financial systems, such as Microsoft Dynamics AX and SAP, and to leading industrial control systems such as Aveva InTouch. The software also comes standard with a set of Web services APIs and is built on a database structure designed for data exchange.



LLumin understands exactly how to integrate all aspects of the business into their CMMS system. Also, given the size of our maintenance operations, it was a large task to organize all of our asset and maintenance data, but LLumin kept the project moving forward expediently.

Results: The Maintenance Process Streamlined and Optimized

The TenCate maintenance department now functions much more efficiently. The Aveva Control System—with hundreds of sensors constantly monitoring values from manufacturing equipment—connects directly to LLumin. LLumin’s CMMS+ reads the “values” and automatically generates any necessary maintenance work orders. An example of how this technology is being applied is a pre-set rule that generates a work order with a specific set of instructions if sensor “tags” on equipment gearboxes indicate vibration levels are running high.

“This helps us prevent catastrophic failures due to loom frames or couplings that could break,” Funderburk says. “We also set rules if oil temperatures or if motor loads exceed their thresholds. When any of these conditions occurs, LLumin triggers a notification and generates a work order so we can respond immediately and reduce the number of product quality issues.

Results: Enterprise Wide Applications Integration

By connecting LLumin directly to the TenCate ERP system, the purchasing and receiving functions are now integrated with the materials management functions within LLumin. This creates streamlined workflows that ensure all the parts the maintenance team requires are on-hand when needed.

TenCate has also experienced an uptick in its lean operations initiatives. LLumin offers a Operator dashboard that drops into a human-machine-interface (HMI) screen, giving visibility to upcoming preventative maintenance work on any equipment they manage. Operators can also access documentation about assets from CMMS+, while staying within the native HMI.



Integration with total productive maintenance (TPM) processes and Tencate’s manufacturing execution system (MES) enables work orders created by operators at the point of work to be automatically transferred into LLumin. Production operators can also initiate upcoming preventative maintenance work orders at the time of corrective action.

Results: Mobility Streamlines Work Processes

“LLumin also provided us with a mobile component,” Funderburk adds. “When our maintenance team is out on the plant floor, they can scan bar codes on equipment and parts. This streamlines overall work processes and enables cycle counting and real-time inspections.”



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