

# Vectren Energy: Transforming Asset Management and Utilization—A Case Study

Tired of using Excel spreadsheets, or worse, managing years of illegible pen and paper records that are error prone and incomplete?

Are you ready to take the next step towards an asset management software that:

- Increases your plant's efficiency
- Mitigates operational risks
- Lowers maintenance costs

Discover how MAINTelligence™ helped one of our many clients achieve their operational goals.

**Vectren Energy Delivery (Vectren)** provides gas and/or electricity to more than 1M customers in adjoining service territories that cover nearly two-thirds of Indiana, and 20% of Ohio. Companies like Vectren are asset-intensive industries and rely on MAINTelligence™ to help them realize maximum productivity. Our integrated system increases asset reliability and safety, while reducing operations and maintenance costs, to achieve operational goals.

## Why MAINTelligence™?

Production Supervisor Bill Phipps has been with Vectren for over 33 years, and believes that incorporating MAINTelligence™ into their existing system has proven vital to the company's success. Phipps' goal was to find a program that would allow field operators to record equipment readings, create easily accessible data history, as well as provide trending graphs for short- and long-term analysis.

*"Other programs didn't provide all the functions I was looking for. I wanted to be able not only to store the data, but also be able to trend it, set alarms, and for the data to be accessible. I also wanted it to be easy for the operators to use."*

—Bill Phipps

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Whether it's a small business or a big corporation like Vectren, keeping track of paper documents and plant assets takes a lot of time and space. Relying solely on a paper-based system is also simply not practical in our digital world. Implementing an asset management system allows for a vast database of reports which can be sorted and filtered according to manager preferences and the plant's requirements. The Integrated Condition Monitoring system keeps the plant running smoothly and assets in optimal condition, ensuring their maximum life expectancy. It has the tools required to control and monitor all of the maintenance expenditures, allowing you to budget and plan while saving time and money.

## The Human Factor and Increased Accountability

*"The software puts an operator right there with the equipment—it's about what they see and feel. They are putting information in, and we are getting better checks. We're having less failed equipment out of the blue."*

Unclear parameters for who's in charge of equipment care and maintenance can get muddled as the instructions move down the line from management to workers, resulting in accountability issues. An efficient workflow requires workers to take responsibility for their work. MAINTelligence™ forms the necessary human interaction with the plant's assets through an electronic checklist via a mobile solution, and in return, improves reliability, maintenance performance, and overall productivity. Employees feel more accountable for taking care of the equipment they're responsible for and ensuring its proper working conditions.

Digital technology is bringing asset management to a new level. This generation of workers is accustomed to digitized data collection and isn't afraid of new challenges. According to Bill Phipps at Vectren, workers feel not only accountable for their actions during daily machine inspections, but also proud when the job is completed to the best of their ability.

*"The report I send out every month shows how many points the employees collected in their Routes, whether they skipped or missed, and what their percentage is. I have some employees that are in a kind of a points competition. There are about 260 points in a route, and they go and collect all points each shift."*

—Bill Phipps

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## Barcode Scanning – Efficiency and Safety

Manually entering asset health and condition monitoring data into a paper-based records system is a time-consuming process that creates many challenges associated with identifying, finding, tracing and taking inventory of equipment and thousands of parts. Barcode technology has become a critical addition to any robust asset management system. Not only does barcoding allow the data to be entered instantly and consistently, it also prevents costly mistakes due to human error or negligence. In today's fast-paced and demanding manufacturing environments, barcode scanning assures managers and supervisors that the equipment has been inspected. It puts you in control of your assets, as well as increases employee safety and bolsters the efficiency and profitability of the manufacturing operations.

*“The workers have to scan the barcode even if the machine isn't working, and that tells us that there was a guy standing there and the machine wasn't on fire!”*

—Bill Phipps

## The ROI of Preventative and Predictive Maintenance

At Vectren, asset management transitioned from a pen-and-paper endeavor to a digitized system with MAINTelligence™. Integrated preventative maintenance helps plants save money and avoid production disruption caused by equipment downtime.

During Vectren's first month using MAINTelligence™, over 800 work requests flooded in. It eradicated manual checks, workers could simply click the checkbox and the system auto-generated work requests.

*“There are much better equipment checks going on. The guy could sit in the chair and put the check marks on a piece of paper without even looking at the equipment. With MAINTelligence™, if they put readings in or a visual examination, they have to scan the barcode.”*

*“We went from \$84,000 [in repair costs] in one year down to \$14,000 the next. We saved around \$70,000!”*

—Bill Phipps

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At the Vectren plant, frequent pump failures were caused by the plugged nozzles putting pressure on them. In 2012, 12 pumps failed and at \$7,000 a piece, it cost Vectren \$84,000 in one year—not including labour to remove and install the pumps. In 2013 they began recording the pressure readings in MAINTelligence™ and only had to replace two pumps, totalling \$14,000.

Waiting for a piece of equipment to fail (reactive maintenance) results in more frequent replacements and unplanned equipment downtime that costs the plant unnecessary money. Utilizing preventative and predictive maintenance is cost and time effective. It mitigates equipment failure and improves workers' safety. Choosing a proactive approach in the company brings other benefits as well: maximizing equipment lifespan, optimizing employee productivity, and increasing revenue.

While preventative maintenance is based on the maintenance that follows some pre-set schedule, predictive maintenance is used to define maintenance that's task-based on material/equipment condition. Studies show that when preventative maintenance is utilized, equipment life is extended and its reliability is increased. Preventative maintenance gives somewhere from 12% - 18% cost savings over reactive maintenance programs, and predictive maintenance can present you with savings exceeding 30% to 40%.

## Predictive Maintenance Program Savings:

- Return on investment: 10x
- Reduction in maintenance costs: 25% - 30%
- Elimination of breakdowns: 70% - 75%
- Reduction in downtime: 35% - 45%
- Increase in production: 20%- 25%

Source: US Department of Energy Report -  
[https://www1.eere.energy.gov/femp/pdfs/OM\\_5.pdf](https://www1.eere.energy.gov/femp/pdfs/OM_5.pdf)

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## An Optimal Solution for Gathering Data

A digital solution for data gathering solves the pains associated with pen and paper forms, and improves day-to-day operations, saving valuable time and reams of paper. Before MAINTelligence™ was implemented at Vectren, all safety checks information was kept on paper: fire extinguisher checks, sprinkler system checks, SCBA and AED checks. It was inconvenient and time-consuming to find the right piece of information when needed. For example, when the insurance inspector requested the last three months of fire extinguishers' checks—or all of the previous year's documentation.

Once all the data was transferred to MAINTelligence™, with a click of the mouse it was easy to pull up the needed information on screen or create print-outs for inspectors.

*"We've got over 600 fire extinguishers and fire hose reels. On paper, it's about 40 to 60 sheets of paper for just one month. Now that they're in the database, it's not a problem to pull them up."*

—Bill Phipps

## Asset Management Systems Encourage Collaboration and Unity at Work

One cohesive asset management system promotes collaboration between departments and an overall healthy work environment. Various data can be collected and interacted with regularly across departments, ensuring everyone at the plant is working towards a common organizational goal. It gives workers a sense of ownership of the plant's assets and empowers them to act when repairs are needed, fostering awareness for the importance of proactive and preventative maintenance.

*"MAINTelligence™ is not used only by plant managers and maintenance supervisors, but also by engineers. There is one reading on a boiler feed pump that tells them its health. Since it needs to be replaced every five or seven years, engineers can decide if they can wait another year or not, based on the reading."*

—Bill Phipps

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## Customer Support

Clients don't usually consider how crucial customer support is until they really need help, and it's not available. DMSI offers support via email, phone or remote screen sharing to assist organizations make the MAINTelligence™ implementation process as smooth and seamless as possible. DMSI is committed to helping clients achieve success and excellence in their businesses and places the highest priority on earning trust through the delivery of exceptional support.

*"I can't say enough about the customer support staff at MAINTelligence™. It is excellent. If I try to explain something to them and they don't understand the issue, we remote in so they can see what's going on. They are very quick to provide solutions."*

—Bill Phipps