

APPLICATION NOTE

5 essential tips for integrating Fluke Connect® sensors with your eMaint CMMS

Prerequisites for expanding your reliability journey with wireless sensors

Computerized maintenance management system (CMMS) software is the foundation for starting and building on a reliability journey. By integrating Fluke Connect condition monitoring sensors with your eMaint CMMS, you gain a more comprehensive picture of maintenance activity and asset health.

If you're considering integrating the [Vibration Sensor](#) and/or the [Power Monitor](#), and you're already using eMaint CMMS software, know that the hardest part — implementing a CMMS — is done.

- Existing data is being uploaded into your CMMS
- PMs, processes, and workflows are optimized
- Asset data is being collected and stored
- Maintenance leaders can use the data to create reports and make informed decisions

Now what? As with any journey, you need to make sure you're prepared.

1. Confirm that your organization is prepared to add sensors.

It's vital to ensure that you and your maintenance team are ready to add [predictive strategies](#), such as condition monitoring (CM), to an existing maintenance program. The majority of organizations that successfully integrate Fluke Connect sensors and monitors with the eMaint CMMS have these elements in place:

- Maintenance professionals are maximizing the CMMS capabilities
- Team members are comfortable with how the system works
- Users are committed to entering accurate information into the CMMS
- Maintenance leaders have confidence in the data being collected and stored

Condition monitoring sensors from Fluke Reliability offer a cost-effective, scalable way to gather data remotely, especially for equipment in harsh environments or hard-to-reach or hazardous locations. As a result, your technicians are safer, and the need for route-based maintenance is reduced, freeing them up to tackle other important issues.

Here's a summary of just some of the many capabilities offered by the Fluke 3561 FC Vibration Sensor and 3540 FC Three-Phase Power Monitor.

Fluke 3561 FC Vibration Sensor - monitors asset performance data continuously and can detect a change in its condition based on a preset threshold. If an anomaly occurs, it triggers an alarm, and an email notification is sent automatically to a smartphone, tablet, or PC, alerting maintenance personnel of the event. The team can then plan appropriate maintenance and act immediately if necessary, to prevent possible failure.

Fluke 3540 FC Three-Phase Power Monitor - continuously screens assets for performance or premature wear remotely. The portable power monitoring device can detect fluctuations in current, voltage, frequency, or energy consumption. Like the Fluke vibration sensor, a notification is sent to a smart device if asset conditions change. Additionally, the collected historical data enables maintenance professionals to make asset replacement and repair decisions.

2. Ensure you have adequate connectivity.

Fluke Connect sensors and monitors transmit data to the Fluke Connect cloud using Wi-Fi. Fluke Connect software enables seamless [integration](#) with not only the wireless sensors and the eMaint CMMS software but also with more than 80 Fluke handheld tools.

Companies that use CM to gather data wirelessly should ensure the strength of their WiFi capabilities. Successful integration depends on solid connectivity. Now, and in the future. In doing so, they gain the connectivity needed for a successful integration and also set the stage for adding more [connected reliability](#) solutions in the future.

If your organization doesn't have a Wi-Fi gateway, you may have the option to link to the cloud via a cellular Wi-Fi hotspot or mobile router. No matter what, you must involve your IT department in the integration. IT staffers understand your organization's network, but also its security system. [Cybersecurity](#) should always be a top consideration when a company decides to add new devices into its infrastructure.

3. Start small with a pilot program.

Most people would never buy a car without taking it for a test drive. It makes sense to conduct a pilot program, whether you plan to invest in hundreds of sensors or just a few. A trial enables you to see if your organization is ready to add remote technology and has the connectivity necessary to accomplish the integration.

Most likely, you'll already know which assets you want to monitor using sensors. If you haven't decided, you can do so during the pilot. A criticality analysis provides you with a way to identify the equipment that is most vital to production. An asset's criticality score can also help justify the Fluke sensor integration with your eMaint CMMS because it exposes the potential cost of a failure.

Pilot – proof of concept

Many organizations, such as food manufacturers, rely on industrial refrigeration and climate-controlled warehouses to keep a stockpile of goods at safe temperatures until needed. Case in point: A warehousing company with more than 180 locations around the globe wanted to ensure customers that its maintenance operations could manage any major equipment problems quickly. Some of its customer's products required temperatures to be as low as -20 degrees.

Expensive, well-functioning ammonia compressors were critical to keeping its storage facilities at proper temperatures. The company decided to test out Fluke remote vibration sensors to see how effective they would be at alerting maintenance of an issue and at keeping critical equipment up and running.

During the pilot, one of the vibration sensors detected an increase in temperature on a compressor motor at one of the company's warehouses. A push notification was automatically sent to the organization's maintenance team, alerting them of the change in the asset's condition. A work request was created in the CMMS, and the decision was made to proceed and complete the work-order request.

Ultimately, the early warning gave the team the opportunity and time to act early and mitigate the problem before it became a failure. Two months later, maintenance members presented the results of the pilot to the organization's executives. As a result, the company decided to increase the number of sensors it had planned to install and add them to other critical assets.

4. Develop KPIs and decide how the sensor data will be used.

Data only becomes useful if you act on it. Establish when why, how and who will act on it. It's also critical to [develop key performance indicators \(KPIs\)](#) that align with your maintenance and reliability goals. Determine which KPIs are the most important to track regularly. With KPIs, you're able to use historical data to show overall maintenance and operations improvements. The goal is to create baselines for critical equipment during regular operation and to use the asset's performance history to determine its ideal health.

By continuing to capture the same measurements over time, you're able to leverage the data to identify failure mode patterns when a fault occurs.

5. Match the technology with the asset criticality.

It is essential to use an asset's criticality score to ensure that you're matching the right sensor to the right equipment or application. Whether you want to integrate a low-cost or a high-cost sensor with your CMMS consider the asset's value.

If you're still on the fence about integrating sensors with your CMMS or your executives need convincing, a Fluke [Connected Reliability Assessment](#) can help. During the assessment, your M&R leaders will engage with experts who will evaluate your maintenance organization and connective infrastructure. Upon completion, you'll have a roadmap to assist you with achieving your condition-based maintenance goals.

For more information:

- [How to get the most value from condition monitoring](#)
- [What to know about Connected Reliability](#)
- [Learn more about Fluke Reliability](#)

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