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## *Word to the Wise*

### **Optimizing Operations with IoT**

Have you heard of the Internet of Things (IoT)? In the consumer world, IoT refers to linked online-capable devices that allow objects to be controlled remotely. These devices include such things as wireless fitness monitors, smart home technology, and self-driving cars. Experts estimate that there will be as many as 14 billion of these devices active by 2022.

The industrial IoT is also booming. Forbes reports that 71 percent of those surveyed believe IoT will significantly influence their business, with 82 percent reporting the focus will be on operational efficiency and improved product quality.

Is your company ready to exploit the power of IoT technology?

### **Benefits Around the Plant**

It might be difficult to imagine how a wireless fitness monitor translates to a manufacturing plant. But in the same way that avid exercisers can use a fitness bracelet to track progress and sync data to their computers, progressive manufacturing and distribution executives can use IoT devices to track operational progress, increase efficiency, save money, and address operational issues.

What's involved is a network of data-gathering sensors that can communicate machine to machine, machine to person, and person to machine, capturing and analyzing data generated by equipment, systems, and people.

For example, an IoT manufacturing solution can do the following.

- **Track assets:** With real-time, continuous visibility into the location and status of assets like parts, fixtures, tooling, and goods in transit, you can accurately identify and anticipate issues that need attention. This type of monitoring can also keep tabs on production flow to eliminate waste and excess inventory.
- **Monitor equipment:** Regular equipment status checks minimize downtime and failure risk. IoT-enabled sensors automatically trigger alerts on variables such as temperature limits and initiate the appropriate response from maintenance immediately.
- **Ensure quality:** IoT makes it possible to monitor items at a granular level. For example, sensors embedded in a torque wrench used in assembling a complex part can capture the precise amount of torque applied, which wrench was used, when it was last calibrated, and who last used it.

With this information, you can identify faults in real time, such as flaws in the wrench, the product, or the user's technique. Historical data can reveal patterns that might indicate production issues requiring adjustment.

- **Improve safety:** When shop floor workers use wearable technologies, they receive real-time machine and production information to help them anticipate and resolve problems quickly, before they escalate. These devices can also be designed to detect obstacles in the path of a forklift, for example, to minimize the risk of injury.

## In the Executive Office

Of course, data collection is not useful without data analysis. IoT technology must include analytics to provide a higher level of awareness and truly actionable data.

Most manufacturers and distributors find a customized dashboard to be most helpful, with all aspects of the dashboard fine-tuned to deliver the right information to the right people at the right time. This instant visibility creates a culture of managing by the minute, not by the hour, week, month, or year.

With different views available for different job titles, executives and managers get precisely the information they need to make informed, data-driven decisions.

Of course security concerns come into play with this type of technology, so any software solution must be vetted for security protocols that protect access to your company's operations.

The IoT is upon us, so now's the time to investigate how this type of automation might work for your business.



Interested in IoT plant automation? We can help you determine your next steps.



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