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Using a real-time locating system to keep employees safe

For most businesses, the coronavirus pandemic has proved to be one of the most difficult challenges in decades. Manufacturers in particular have faced an array of complex issues with maintaining operations while preventing outbreaks and ensuring adherence to safety protocols.

On the one hand, physical distancing and proper personal protective equipment (PPE) usage are vital to keep employees safe and production running smoothly. On the other hand, ensuring that employees abide by these protocols is a logistical nightmare. Last but not least, if someone does test positive for COVID-19, the shutdown of a facility, manual contact tracing, and disinfection/cleaning procedures can be incredibly costly.

Manufacturers need a reliable solution to keep their employees safe and healthy while maintaining operations. Siemens' SIMATIC Real Time Locating System is the answer to this challenge. This advanced platform uses small transponders and gateways to track individuals and materials throughout your facility in real-time. Furthermore, you can leverage cutting-edge analytics to gain crucial insights on the movement of employees and materials within the facility, as well as visualize movement patterns for deeper understanding.

In short, SIMATIC RTLS is a state-of-the-art, highly efficient solution for elegantly ensuring physical distancing at your facility. Allow us to elaborate on how it works.

Keeping employees safe by ensuring distancing with the SIMATIC real time locating system

With SIMATIC RTLS, companies can assign every employee a wearable transponder that transmits tag ID, location data and timestamps. This information is gathered at infrastructure devices called gateways throughout the facility. The system can then determine if two or more people are too close together. Furthermore, employees will see a visual indicator on their tag warning that they must move further apart.

Of course, while workforce distancing is crucial to keep employees safe, there will inevitably be times when employees will pass within 6 feet of one another. For this reason, businesses can tailor the solution to trigger an alarm after a time interval that they deem most appropriate, which is typically 1-10 seconds.

The SIMATIC RTLS platform can also be fully tailored to the customers' needs, such as ensuring transponders are only active in certain areas of a given facility. Likewise, privacy concerns can be easily addressed by encrypting data to make it only available to authorized personnel such as HR.

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Using smart solutions to anticipate and prevent the spread of dangerous diseases

The biggest concern for the spread of COVID-19 within an organization is any area where people are gathering, especially on a regular basis. SIMATIC RTLS compiles data over time and offers customers unparalleled insight into how employees are moving about within the facility and where they may be congregating. This makes it easy to quickly identify potential hotspots or areas where violations regularly occur, allowing businesses to implement preventative measures before an outbreak.

Furthermore, SIMATIC RTLS can be used in combination with camera systems and video analytics to ensure PPE is being used properly. Siemens' video analytics tools can detect up to 20 people in a frame without occlusions, as well as analyze what they are wearing and how they are acting. If the cameras observe that individuals are wearing proper PPE, the system can suppress alarms, offer a greater leniency period, or otherwise relax physical distancing rules to ensure realistic adherence to safety protocols.

Siemens' video analytics can also be used to ensure employees are wearing typical industrial PPE, such as welding shields, face masks, or helmets. This is valuable as an efficient method of ensuring OSHA compliance independent of COVID-19 concerns.

Improve operational efficiency with tracking beyond COVID-19

While COVID-19 is a top concern for many businesses at present, SIMATIC RTLS can be used by manufacturers for a variety of applications including asset tracking and logistics. By granting manufacturers the ability to track products, materials, equipment and personnel in real-time, this platform opens a wealth of options for eliminating bottlenecks and improving throughput. The ability to visualize and analyze data from location tracking makes it easy to identify patterns, gather actionable insights and develop improved processes.

To give you an idea of how SIMATIC RTLS is broadly useful in industrial settings, allow us to share how we use the platform at one of our own facilities.

How Siemens uses SIMATIC RTLS to keep employees safe and drive efficiency

We first implemented SIMATIC RTLS as a solution for COVID-19 cases at our gas chromatograph plant in Houston. Several employees had tested positive, which meant sending these individuals home for two weeks in self-quarantine as well as rigorous cleaning and disinfection throughout the plant.

To keep employees safe and avoid these disruptions, we implemented SIMATIC RTLS with SieTrace to ensure physical distancing of 6 feet among the employees at the facility. All 80 employees at the facility received RTLS tags that display an alarm when employees linger within 6 feet of one another. Additionally, we have been collecting risk scenario data in a database which is then visualized with our SieTrace application.

With SieTrace, manufacturers can review detailed reports on violations that may have occurred anywhere from the last few hours to those from several weeks ago. With this information, hotspot areas can be readily identified and addressed. Additionally, contact and path tracing can be done automatically, eliminating the need for imprecise and time-consuming manual contract tracing.

Although the platform is currently being used to ensure employees are minimizing the risk of COVID-19 transmission, this facility is also planning on expanding the RTLS system into other use cases such as tracking chemical bottles.

Unprecedented challenges require groundbreaking solutions

Virtually no manufacturer had a foolproof response plan for this historic pandemic. To keep our facilities in operation while prioritizing employee safety, manufacturers must look to innovative new solutions. The ability to track the locations of hundreds of employees or more in real-time with accuracy down to centimeters is one such solution.

Any savvy manufacturing leader knows we will continue to face truly difficult challenges as a result of the COVID-19 pandemic. The question is, what new strategies and tools will you implement to address them?

To find out how we can help your business, or to get in contact with us, please visit usa.siemens.com/digital-enterprise-services

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