



Safety

COVID-19 Social Distancing: Technologies and Tactics to Keep Your Workers Safe

Roland Jones | Oct 15, 2020

Workplaces are adjusting to a new normal, and one of their biggest challenges is encouraging and monitoring social distancing. Thankfully, there are a ton of technologies that help keep employees apart, including wearables, mobile apps and video analytics. Here's what you need to know about social distancing technology.

Few of us had heard the expression "social distancing" at the beginning of 2020. Now it's a common phrase and an essential element for getting employees back to work safely and limiting the spread of the coronavirus.

In manufacturing, workers cannot do their work remotely, so ensuring they practice social distancing due to the high worker density in facilities is vital.

Digital tools and technological solutions are playing a crucial role in helping businesses maintain social distancing measures. U.S. automaker Ford *is looking at using buzzing wristband devices* to keep workers at a safe distance in its factories. And in hard-hit Belgium, the Port of Antwerp *is using a digital bracelet called the Romware ONE*—developed by technology company Rombit—to keep workers apart.

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Nick Jones
Gartner

These solutions certainly help, but they are not without their challenges. While technology helps keep workers apart, it's challenging to implement and maintain, and it comes at a cost. And businesses must still rethink workspace configurations and how their workers interact.

Here's a look at some of the most common social distancing technologies available and the pros and cons of each one.

How To Promote Social Distancing in Your Facility

To minimize worker interaction inside facilities, *the CDC has made several recommendations*, including the following:

- Limit facility access only to essential workers.
- If meetings must be held, such as at shift changes, break them into smaller groups instead of holding a larger meeting. Eliminate nonessential meetings.
- Encourage single-file movement with a 6-foot distance between each worker through the facility, where possible.
- Designate workers to monitor and facilitate distancing on production or assembly line floors.
- Stagger break times or provide temporary break areas and restrooms to avoid groups of workers during breaks. Workers should maintain at least 6 feet of distance from others at all times, including on breaks.
- Stagger workers' arrival and departure times to avoid congregations of workers in parking areas, locker rooms and near time clocks.
- Provide visual cues (e.g., floor markings, signs) as a reminder to workers to maintain social distancing.
- Encourage workers to avoid carpooling to and from work, if possible.

Ways to Keep Your Workers Apart

Social distancing technology uses technology such as the Internet of Things (IoT) and the cloud to identify areas where workers are not maintaining a safe distance from one another.

One of the key dimensions of social distancing is knowing how far apart people are at all times. Three common technologies help measure the proximity of individuals in a facility:

1. Wi-Fi Monitoring

Some companies use their existing Wi-Fi communication systems to monitor the distance between individuals. Wi-Fi can see the location of devices such as tablets, laptops or smartphones and show where individual users are stationed. This approach allows employers to monitor the location of employees, how many workers are congregating in certain areas, the movement of employees and the time elapsed in a specific location. When one or more of the limits is breached, the system displays an alert.

Advantages: Employers can identify hot spots in their facilities where crowds gather, giving them vital information to use when managing human traffic flow. It's also cost-effective, given that it uses existing Wi-Fi communication systems and requires no upfront investment or that workers wear sensors. No personal data is collected, so the privacy of users is maintained.

Disadvantages: Workers are not notified in real time of any distance breaches. And because individuals remain anonymous, contact tracing is impossible. The system also relies on workers downloading an app to their phone and keeping their Wi-Fi connections active.

2. Wireless Proximity Systems

These are typically wearable devices or mobile apps that transmit signals so their proximity to another device can be determined. They then sound an alarm, flash or send a text message to each person—or a supervisor—if individuals become too close.

Advantages: These devices warn individuals immediately when there's a distance breach, and they maintain personal privacy by not identifying the device wearer. Some systems don't even require a Wi-Fi connection. More sophisticated versions may track the location of individuals in a facility, record the identities of those who become too close, and then do contact tracing.

Disadvantages: If a wearable device is bulky or unsightly, some workers may refuse to wear it. These devices can also require additional Bluetooth beacons.

3. Video Analytics

Instead of using a wearable device or a Wi-Fi-connected app, companies may opt to use video analytics, in which artificial intelligence is used to monitor video and analyze the distance between individuals. The system alerts a supervisor when the minimum social distancing limit is infringed.

Advantages: Analyzing video allows you to use your existing office camera system if you have one already in place, and it requires no smartphone app or wearable devices, which require investments, monitoring and maintenance.

Disadvantages: You don't get real-time alerts using this system, but the information you collect can help you understand your office and plan it out for social distancing.

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Other useful technologies to consider for social distancing include RFID (radio-frequency identification) tags and readers, audio analytics (to identify coughing), sensors for counting the number of people entering and leaving rooms (to determine when they should be cleaned), or Bluetooth beacons, which can trigger mobile apps to report the locations of individuals.

Balancing Safety and Privacy

Implementing a social distancing technology in your workplace is about striking a balance between safety and privacy, says Nick Jones, a vice president and distinguished analyst at technology consulting company Gartner.

While some tracking technologies emphasize anonymity, relying on individual employees to report whether they are infected by the virus, others track named individuals inside a facility and so know their names and locations, helping companies get a start on contact tracing or employee testing programs.

As you begin to track individual identities you get into much trickier situations, with regulatory and legal issues such as HIPAA requirements, or the European Union's General Data Protection Regulation (GDPR), according to Jones.

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"If you are taking information from systems with named individuals, you need to seek advice from HR or your lawyers before you go too far down the road of employing it," Jones advises during **a recent**

webinar on COVID-19 social distancing technologies.

Some systems have cellular capabilities, so they can tell where you are outside the office, too, and that's even more concerning regarding privacy, he adds.

However, at other times you only really need to know where groups of people are gathering, without their identities, he says. This information helps you rearrange your facility for better social distancing, or to know which areas or rooms need to be cleaned.

The Challenges of New Technology

Aside from privacy concerns, using social distancing technology in your enterprise can raise several technological issues, Jones says.

One is product maturity. Many products in this space are new and haven't achieved the stability that comes with product maturity, Jones says. "They are not necessarily robust," he adds. "Some vendors are not enterprise-grade and they are not used to dealing with high volume and supply. They are not used to supporting enterprises."

Another issue is precision. Technologies such as Bluetooth don't always measure distance precisely and may generate false positives or negatives, he says, and this can be a huge problem for companies trying to keep workers safe. Similarly, some technologies take minutes to generate warnings, when immediate alerts are required.

Jones also notes that companies should weigh the costs and risks associated with these technologies. Some systems are expensive investments, and they can add up if a company has multiple facilities. This is especially true if new hardware is required. Companies will have to assess the risk they face, as they could be spending a lot of money to protect workers from what is, ultimately, a low-level risk.

"So there are a lot of problems with all of these systems," Jones says. "There are no real perfect answers here."

In the end, technology will only be part of the solution for combating COVID-19, Jones says. Incentives will be needed to encourage other mitigating behaviors, such as testing, wearing masks and hand-washing.

"There are a lot of things to do with this that are not to do with technology but about the operation of the workplace," Jones says. "Technology is just part of a much bigger story."

What strategies or technologies are you using to increase compliance with social distancing rules? Share your thoughts in the comments below.

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