

EmTech Perspectives

Emerging Technologies in a Time of Pandemic

Babst Calland
Attorneys at Law

Ben Clapp
Julie R. Domike
Gina N. Falaschi

Justine M. Kasznica
Boyd A. Stephenson

Can Technology Help Us Return to Work?

Coronavirus restrictions are both easing and tightening in cities around the country, and a nationwide return to work seems further off than it did a month ago. But it is never too early to plan ahead. As the United States looks to safely return to work, offices are preparing for a radical shift, accelerating a need for emerging technologies to focused challenges in the workplace. Separation, space, health, and cleanliness concerns are paramount, in an abrupt about-face from the pre-virus trends towards flexible workspaces and open floor plans. This has created a host of novel issues for business administrators, who are leveraging technology to keep work environments safe while maintaining a semblance of business normalcy in these unprecedented times.

In Part II of Emerging Technologies in a Time of Pandemic, we looked at the benefits of the use of autonomous vehicles and drones during a time of pandemic and the regulatory obstacles to overcome before these technologies can be fully deployed. Part III, the final article in our series, focuses on returning to the workplace and whether technology can address the challenges in keeping work environments safe while maintaining a semblance of business normalcy in these unprecedented times.

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While many employers and employees are preparing to return to the workplace, an opportunity has opened for new work models as employers and employees are planning, or have been instructed, to never come back, at least not in the same capacity as before. Some employees will now rely exclusively on technology to stay connected to colleagues as routine daily office life is increasingly under scrutiny as a “thing of the past.” For example, the London office of the law firm Slater & Gordon recently [announced](#) that it would not be renewing its office space lease this year. Instead of keeping permanent office space for all employees, the firm’s 200 London-based employees will work from home permanently, and the firm has decided to keep only a small office space for meetings. These lawyers and staff will rely heavily on internet-based communications and tools to do work that, until now, has been performed (and was expected to be performed) in a shared office environment.

As data show, social distancing is key to stopping the rapid spread of the coronavirus. Even those companies that are requiring employees to return to work in a physical office or location are overwhelmingly relying on technology – often simple, off-the-shelf technology – to keep employees safe. Common approaches include technologies designed to help maintain personnel separation, support routine health checks, and regular cleaning of communal spaces. In April, the [Ford Motor Company](#) tested a technology-assisted social distancing pilot program at its Plymouth, Michigan plant, where workers developed and manufactured ventilators and respirators for hospitals. The employee volunteers wore watch-like devices that vibrated when coming within six feet of another user to encourage the volunteers to keep the distance recommended by health experts to contain the spread of coronavirus.

Radiant RFID, a technology company based in Austin, Texas, is responsible for developing [the software program](#), which is loaded on Samsung wearable devices, used by the Ford employees. In addition to giving employees automated alerts through vibration and color-coded messages to notify them of social distancing issues in real time, data are transferred to a cloud-based processing system. The collected data



allow for contact tracing of employees and produce key information to give employers feedback to help improve staff training and workflows.

In addition to providing real-time benefits to employees on the job, expanded use of this wearable technology eases the administrative burden on human resources professionals who, during this period of transition, bear the additional burden of contact tracing and monitoring social distancing practices in the workplace. Administrators have taken on the responsibility of implementing employee temperature checks, as required by some state and local governments, and technology companies are developing solutions to meet this demand.

In the spring, some [hospitals](#) in India began using robots equipped with infrared thermal cameras to screen individuals as they enter the building. Tablets on the robot give the patient instructions about where to stand so that the reading is accurate. After the patient’s temperature is taken, the robot gives the patient instructions about where to go, separating the potential coronavirus patients from patients whose temperature does not indicate infection. All this without the patient encountering any staff. Similar devices are also in use in [Turin, Italy](#), where robots are scanning pharmacy customers for high temperatures and adherence to the mandatory mask policy as a requirement for entry.

As coronavirus-related restrictions ease in the United States, comparable technology will likely be used here as well to establish safe return-to-work practices. U.S.-based robotics companies are offering, and already selling, these devices to businesses. [Promobot, LLC](#) is offering a [Thermocontrol](#)



[screening station](#), which allows for autonomous, contactless temperature checks in five seconds with 0.2 degrees accuracy. The screening station stores each entry and, if a temperature is too high, a notification is sent to an administrator. This technology is designed for use in offices, factories, schools, hospitals and clinics. Because the screening station functions autonomously, this technology will reduce the additional burden that mandatory temperature checks place on administrators and companies by flagging intervention only if a high temperature is recorded.

Additionally, robots can reduce the spread of infection in the workplace by keeping the workspace clean. While cleaning robots are certainly not new – [Walmart](#) added floor cleaning robots to 1,500 stores in 2019 – the need for contactless cleaning has significantly increased.

UVD Robots, a Danish portfolio company of Blue Ocean Robotics, has deployed its [UV-Disinfection \(UVD\) Robots to combat coronavirus](#).

What started as a co-development project between the Odense University Hospital and Blue Ocean Robotics has resulted in an automated hospital disinfection system that uses ultraviolet light to disinfect and kill viruses and bacteria, while limiting exposure of hospital staff to infection. In February, the company began shipping its disinfection robots to Chinese hospitals to fight coronavirus, providing more than 2,000 hospitals with the technology. UV-Disinfection (UVD) Robots is now delivering its robots to other parts of Asia, as well as Europe and the U.S.

In some respects, the coronavirus has helped to prove and streamline the efficacy of robotic technology solutions to address pandemic-driven human health and safety concerns, and the potential to expand the use of this technology is practically unlimited. Hotels, airlines, gyms, healthcare providers, and office buildings will likely embrace these technologies out of necessity – to use robots to clean areas without exposing cleaning

personnel to infection after known contact with a coronavirus patient, or even as part of everyday cleaning routines.

The increased cost savings and safety of contact tracing using artificial intelligence (AI) rather than manual contact tracing is also widely acknowledged. Voice 4 Impact has developed I.D.ECO, a responsive crisis prevention and management tool that automates contact tracing in real time using AI and a combination of mass marketing and social media technologies. I.D.ECO helps authorities contain the spread of COVID-19 by: (1) detecting points of interest (POI), commonly known as hot spots; (2) identifying citizens and businesses with potential virus exposure; and (3) alerting and informing at-risk citizens and businesses to take appropriate steps to self-quarantine, get tested or deep clean. [Voice 4 Impact](#) recently completed a case study using the actual COVID-19 infection statistics from Delaware, as well as the state's current Phase

I reopening response and financial spend for contact tracing. The case study definitively showed AI-driven contact tracing is substantially more efficient – in terms of both speed and cost: One year of manual contact tracing in Delaware would cost the state \$40 million while the use of I.D.ECO would cost the state \$2 million.

The examples offered are only the tip of the iceberg. For every new product mentioned here, there are dozens more new technologies making their way to the market to help distance people, trace infection, assess health, and disinfect common spaces. New ways of handling everyday interactions and activities is inevitable in a world with coronavirus. Technology is available to help make these changes, allowing the workforce to maintain a sense of normalcy and easing the burden on workers and administrators, while meeting the new challenges that we face in the midst of a global pandemic.



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Babst Calland's Emerging Technologies Group has recently created [EmTech Law Blog](#) which contains news, articles and legal and regulatory information published by our attorneys in an effort to provide timely legal and business information on issues impacting companies developing or investing in new technologies, new companies, and new ideas.

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