

The COVID-19 coronavirus and the human suffering it has wrought are rapidly changing the way we live and work. At Hitachi, we're leveraging our technology and expertise to providing ways to help reduce the risk of further outbreaks and to better safeguard workers, customers, and passengers, while maintaining as efficient and resilient operations as possible.

DATASHEET

Promote Health and Safety While Mitigating the Ongoing Spread of COVID-19

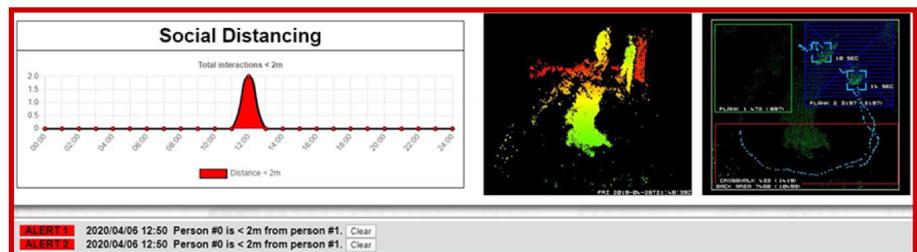
Digital Solutions To Assist in Containment, Mitigation, Compliance and Safety

Hitachi Smart Spaces is an end-to-end solution, enabled by Hitachi's Lumada Video Insights, that leverages video and 3D lidar analytics, as well as data visualization, to help organizations improve the safety, operations and experience of customers, workers or passengers. This solution can be used to provide data-driven insights to strengthen health and safety initiatives for factories, retail, food service and transportation. It can help mitigate the ongoing spread of COVID-19 and other diseases, as well as manage and minimize impact of accidents and injuries. These capabilities assist efforts in risk reduction for the organization and transparency for workers, customers and regulators, alike, about what the organization is doing to protect its people and the public.

Proactive Elevated Body Temperature Detection Sensing

One of the widespread symptoms of COVID-19 is elevated body temperature. Technologies like forward-looking infrared (FLIR) cameras can detect the temperature of a person from a distance, so that a passenger, worker or customer can non-intrusively be screened. Organizations can direct them to secondary confirming tests, or quarantine them in line with their internal or regulated procedures and policies

FIGURE 1. TRACK AND MONITOR SOCIAL DISTANCING ANONYMOUSLY



to prevent further spread and endangerment of others. Although many people may be asymptomatic, sensing elevated body temperature can be the first step in a layered approach to detection and containment, in line with the organizations policies and procedures. Armed with this information, organizations can determine the most appropriate way to follow up. We've seen these systems in place at airports, but many other organizations can benefit from them in their efforts to mitigate the risk of outbreaks in their facilities.

Automated Handwashing Monitoring

One of the most effective ways of preventing the spread of this disease, and others, is washing one's hands for at least 20 seconds, in accordance with guidelines from the CDC, ECDC and similar agencies. 3D lidar technologies, combined with analytics and machine learning, can learn to detect correct handwashing behavior. Because 3D lidar is using a point cloud of lasers, it is not designed to capture personally identifying information (PII).

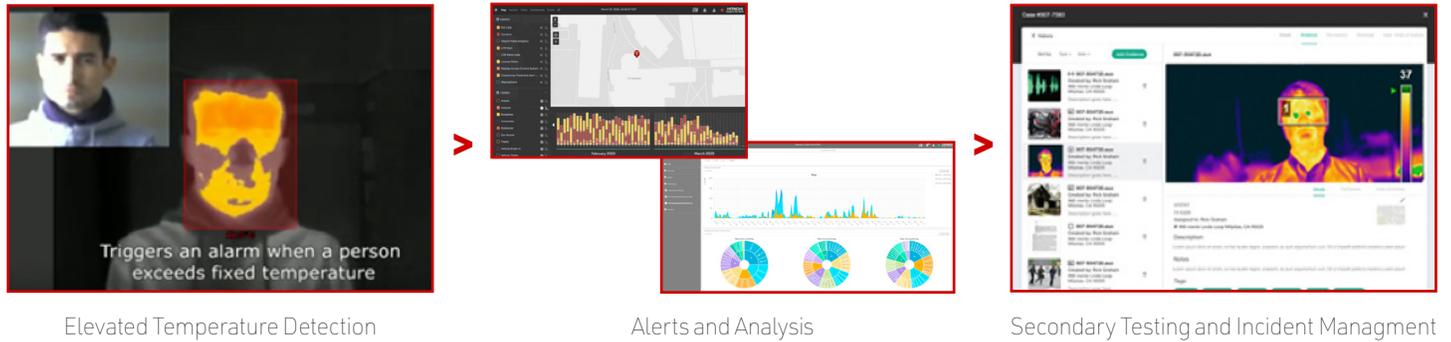
Patient Monitoring

If someone needs treatment in a care facility, automated patient monitoring, slip and fall detection, and restroom safety monitoring can help already overstretched care workers attend to more patients

Questions To Consider

- What remediation process will you take with symptomatic workers?
- How do you plan to prevent virus-related disruptions to operations?
- How quickly can you take action to isolate, contain and communicate events?
- How will you identify assets or facilities that may be affected, then isolate, clean and return to operations with minimal disruption?
- How will your workforce be confident that you are taking all possible measures to protect them and their families?

FIGURE 2. MULTILAYERED APPROACH TO HEALTH AND SAFETY



than they could otherwise. Like handwashing monitoring, 3D lidar can be trained to detect behaviors of concern, such as:

- Falling out of bed.
- Slumping over in the restroom.
- Slipping on the floor.
- Violent behavior or multiple people in restricted areas.

This analysis is designed to be performed without capturing personally identifying information. Response times can also be hastened, due to the ability to deliver automated real-time alerts to staff.

Social Distancing Monitoring

3D lidar has been used by retailers, manufacturers and transportation organizations to track granular movements of people throughout their facilities and gather analytics to improve safety, operations and experiences. The same technology is being used or being considered for monitoring and confirming social distancing in public spaces such as stores, transit stations, campuses, airports and event venues (see Figure 1).

Compliance and Incident Management

Alerts, incidents and historical data can be stored and managed for reporting and compliance verification, as well as case management in Hitachi Visualization Suite (HVS). This solution supports geospatial or graphical visualization of data, and archive of multiple data types (videos, images, PDFs and so forth) aligned to a case. Digital incident management allows users to readily provide transparency to employees, insurance companies and regulatory agencies as needed, while keeping the data secure.

Automated Safety and Personal Protection Equipment Detection

Compliance with safety regulations and the use of approved equipment like safety helmets, vests and masks can help prevent many injuries. Video and 3D lidar analytics can be leveraged to detect and confirm the usage of safety and protection equipment. This capability helps to ensure the correct usage of this equipment and enables managers to leverage analytics to target their

educational or enforcement programs to help keep their employees safe.

A Multilayered Approach to Health and Safety

Digital solutions provide the ability to provide less-invasive or labor-intensive approaches to screening large numbers of people for elevated body temperature. They allow an authorized person to do secondary testing with a medically approved thermometer and test for a targeted disease like COVID-19 (see Figure 2). The insights from smart spaces and 3D lidar solutions can enable valuable analytics to better manage and mitigate risk within the organization's physical spaces. Combined with solutions to prevent collisions with forklifts or other machinery, these solutions can provide a powerful tool to keep people safe in the workplace, during their commutes, or while in stores.

Disclaimer: The technology and solutions being offered by Hitachi Vantara, LLC are not cleared or approved by the U.S. Food and Drug Administration (FDA) for human temperature detection. This technology is being made available pursuant to an FDA enforcement policy to help expand the availability of tele-thermographic systems used for body temperature measurements for triage use for the duration of the public health emergency declared by the Secretary of Health and Human Services (HHS) on January 31, 2020. The technology is intended for initial body temperature assessment of an individual for triage use and measurements must be confirmed with a secondary evaluation method. Hitachi Vantara, LLC does not claim to be able to diagnose fever, infection, disease or any health or medical condition with this technology.

Mitigate the spread of COVID-19. Promote the safety of your workforce, passengers or customers with solutions for improving health and safety from Hitachi Smart Spaces and Lumada Video Insights.



Hitachi Vantara

Corporate Headquarters
2535 Augustine Drive
Santa Clara, CA 95054 USA
hitachivantara.com | community.hitachivantara.com

Contact Information
USA: 1-800-446-0744
Global: 1-858-547-4526
hitachivantara.com/contact



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