# Making School Safety a Priority with Smart Technology

RINGWOOD, UNITED KINGDOM, May 20, 2021 /EINPresswire.com/ -- With pupils set to go back to school on 8 March, there are a number of safety measures schools need to implement to ensure the health and wellness of staff, students and school communities.

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Matthew Margetts, Smarter Technologies

The first lockdown and closure of schools brought on by the coronavirus pandemic fired a “warning shot” for education facilities managers, forcing headteachers to re-examine school safety standards. Now that a third lockdown is here and schools have been shut down for a second time, anyone behind the curve with the benefits of smart technology should get on board now before children return to the school environment. And with the ever-changing variants of the COVID-19 virus, schools can’t afford to be “late to class” when it comes to health and safety.

Some schools in the US have been using smart technologies for a while to measure utility consumption and efficiency, streamline maintenance and enhance general school safety. Now, these technologies are playing a significant role in keeping school buildings healthy and preventing the spread of disease.

So, let’s take a look at how smart technology can help schools to become safer, as well as more energy-efficient and cost-effective.

Thermal detection cameras

Smart cameras placed at entry points of a school can remove the manual task of temperature testing. These cameras provide medically-accurate, real-time temperatures of individuals in real-time.

Thermal cameras use infra-red (IR) to read an object's temperature. Every item with a temperature above absolute zero emits a certain amount of radiation. The higher the temperature, the higher the level of radiation.

If a high temperature is detected, the software sends an instant alert to the relevant party, who can then follow the protocols in place. It can also be set to deny access to those with high temperatures or to people not wearing masks.

In some cases, crowd scanning and temperature-testing technology can be incorporated into existing CCTV systems, working alongside access control and alerting solutions.

This technology brings a number of benefits to schools by helping to create a safer, more compliant environment without additional resources and by maintaining social distancing. Smart thermal cameras are safer, more accurate and more cost-effective than having a person use a handheld temperature gun.

Safer water

As the coronavirus continues to sweep through the world's population, healthcare providers should also be on heightened alert for Legionnaires' disease, another potential cause of pneumonia with similar symptoms. Legionella are potentially deadly bacteria that can infect a school's water supply and cause an outbreak of Legionnaire's disease. It's a school's duty of care to prevent Legionella infection by monitoring the risk of the bacteria proliferating.

Particularly as schools reopen and previously stagnant plumbing and cooling systems return to use, additional Legionella cases could rear their ugly head to emergency departments in the coming months. Traces of Legionella were recently found at a Worcestershire school. The school was forced to remain shut while treatment and testing took place.

The Health and Safety Executive advises: "If your building was closed or has reduced occupancy during the coronavirus (COVID-19) outbreak, water system stagnation can occur due to lack of use, increasing the risks of Legionnaires' disease... If the water system is still used regularly, maintain the appropriate measures to prevent legionella growth."

Typically, managing the risk of Legionella includes running all outlets for two minutes, taking and recording the temperature of the water to ensure that it's not conducive to Legionella growth. This is a time-consuming process, which is why schools are looking to automated water

temperature monitoring systems. This smart system with automated flushing and temperature testing reports and records water temperature data in real time. Instant alerts will notify relevant staff if water temperatures fall within “Legionella-friendly” parameters.

Cleaner air

We know that SARS-CoV-2 can be transmitted through aerosols (particles smaller than droplets that remain in the air over time and distance). This is especially dangerous in poorly ventilated rooms, with the potential to lead to “superspreading” events.

Without any ventilation, it takes about four minutes for the number of small droplets in the air to be halved. With mechanical ventilation turned on in a room, the number of respiratory particles is halved in 1.4 minutes. If the rooms also have doors and windows open, the number of small droplets is halved after 30 seconds.

Advisers say that improving air filtration and ventilation in schools can help mitigate the potential airborne transmission of COVID-19.

Strategies include:

Increasing outdoor air ventilation
Filtering indoor air
Using portable air cleaners with HEPA filters

Smart building technologies such as advanced HVAC controls can help facilities managers promote cleaner air with less hassle. For example, smart HVAC systems use sensors to remotely monitor and control variables such as:

Humidity
Temperature
Indoor air quality
The level of carbon dioxide and other pollutants

This technology is also energy-efficient and cost-effective. If any potentially dangerous conditions are detected, the system will send an instant alert to the manager in charge, who can then intervene immediately to adjust the air quality settings. Even better, automated adjustments can be put in place to remove the need for any manul intervention at all.

While these solutions may be key to the reopening of schools in the era of COVID-19, they also bring long-term benefits. Although COVID-19 may have accelerated the adoption of smart technology, many of these solutions are focused on health, wellness and security in general; which have been needed in school systems for a long time.

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About the author

Matthew Margetts is Director of Sales and Marketing at Smarter Technologies. His background includes working for blue-chip companies such as AppNexus, AOL/ Verizon, and Microsoft in the UK, Far East and Australia.

About Smarter Technologies

Smarter Technologies tracks, monitors and recovers assets across the globe in real time, providing asset tracking systems to the open market and fulfilling the world's most complex asset tracking requirements. Our services cover a vast array of business sectors, products and equipment.

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