



FIVE KEYS TO HELP CREATE SAFER, MORE SECURE SCHOOLS

Securing our students

usa.siemens.com/SmartSchool

Abstract

At Siemens, we believe that students do their best learning when they feel they are safe, secure, and comfortable – and that teachers do their best teaching when they feel the same. Today, securing our students remains a key challenge, and a bigger responsibility more now than ever.

The average American student spends about seven hours¹ per day in school, making it the place where they spend most of their time every day. But today, school shootings are occurring with greater, more tragic, frequency. In fact, the U.S. averages a school shooting once every 77 days², marking a sad milestone: school shootings in America are at an all-time high³.

In this white paper, we will present five keys to help successfully create safer, more secure schools, and we will explore how the right partner in education and building technologies can bring a dedicated focus to develop, implement, and optimize the right strategies and technologies. It's a community effort, and together, we can secure our students.



¹ NCEE.org

² Center for Homeland Defense and Security

³ The Conversation

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Understanding the risks

In the two decades since the shooting at Columbine High School, the risks to our students have never been more clear. Parents, educators, and administrators all expect and strive to achieve the least exposure to risk and danger—all while balancing the need for an open, comfortable, and welcoming place for students to learn and grow.

From high-traffic, high-activity times and unsupervised building visitors to unauthorized access during off hours, before and after school programs, and community use of buildings, our schools face unique risks. Despite these threats, maintaining that openness is essential to the success and wellbeing of our communities.

The benefits of practice

Creating safe, secure, comfortable schools starts with effective emergency plans and processes. What happens when there's a fire alarm? A problem with a campus lab environment? An active shooter? If the building must be evacuated, where do students, teachers, and staff meet, and how are they accounted for?



The expectation is that administrators will know exactly what to do in each of these situations. The time to understand and learn these processes is not during an emergency. Consider how athletes get ready for a game: they practice game situations, run drills, and study the opponent. Schools must follow the athletes' lead. Securing our students isn't just about having an emergency plan. It's about practicing that plan, running drills, and studying the research so that in the event of an emergency, everyone can react appropriately and have a positive outcome.

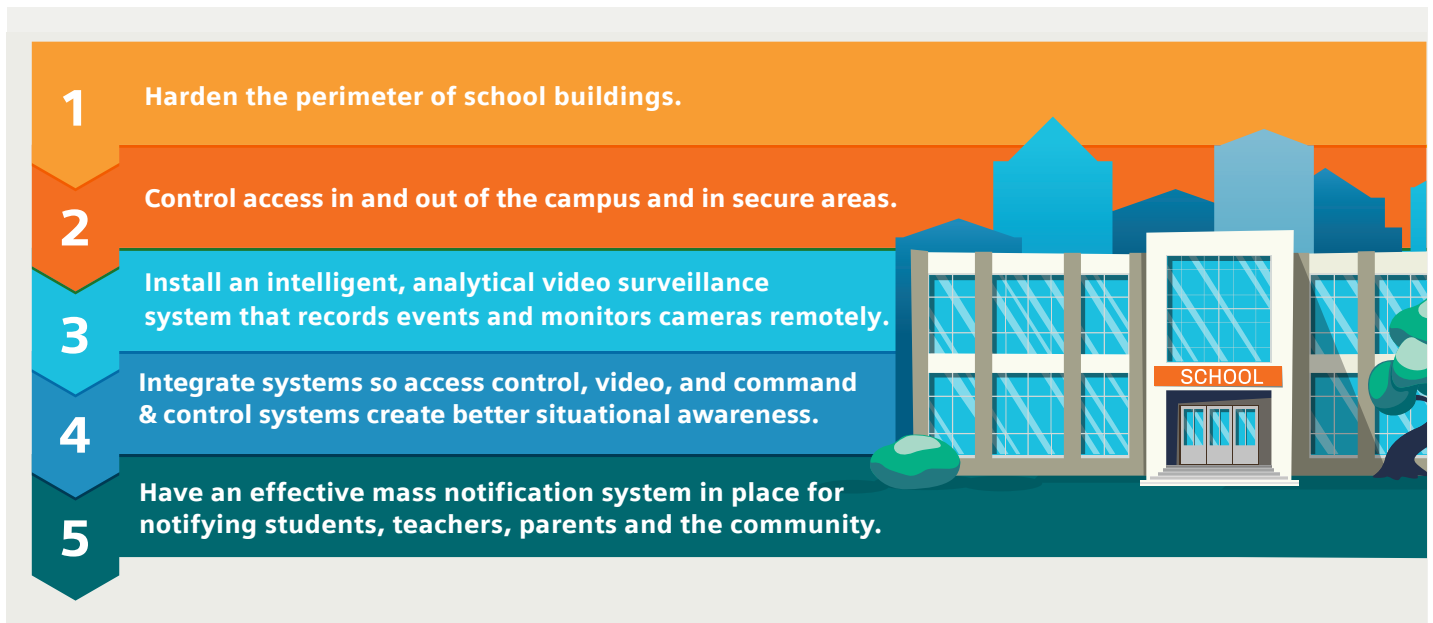


The National Fire Protection Association (NFPA) found the rising number of hostile incidents so alarming that they developed the Standard for Active Shooter / Hostile Event Response (ASHER)⁴, which they established as NFPA 3000™. This standard addresses many aspects of emergency responses, from identifying hazards and vulnerability assessments to resource and incident management to recovery.

To take a proactive approach to emergency management and loss prevention, and to help ensure a reasonable level of security for all students, teachers, and staff, schools must strategically align security into their daily operations. The other component to emergency plans that protect people and property, however, is communication. Administrators must be able to get the right messages out to the right people at the right time so that law enforcement can respond, so students know where to go and what to do, and so parents can get accurate and most current information.

⁴ NFPA.org

5 keys to creating a **safer,** **more secure school**



In the event of an emergency, situational awareness is paramount; it's about knowing what's going on in and around the buildings so schools are prepared to identify, process, understand, and respond to all of the information at any given time. Here, we present five keys to helping create safer, more secure schools that remain a welcoming place for students to learn and grow:

1. Harden the perimeter of the school campus.

Consider natural barriers and other fortifications to help protect the outside perimeter of the building and keep intruders out. Likewise, technologies such as exterior cameras, lighting sensors, and fencing can play a role in perimeter security.

2. Control access in and out of buildings and secure areas.

Access control systems include a range of technologies that control access in and out of school buildings while also helping to harden the campus perimeter. These systems will:

- Generate an alarm if a door is propped open or if there is unauthorized access
- Manage entry into the building and other secure areas
- Create a record of who enters or leaves the building or area
- Integrate with video platforms for verification and response or, if necessary, forensic review
- Integrate with identity and visitor management platforms to connect access using student, parent, and staff directories, as well as to restrict access as necessary / appropriate

Access control is an ideal way to balance the need for an open, welcoming school that also helps to protect the people inside.

3. Install an intelligent, analytical video surveillance system that records events and monitors cameras remotely.

The latest video surveillance platforms rely on smart cameras that provide high-quality, searchable digital videos. Today's intelligent cameras can analyze the scene and recognize people and objects that are out of place and inconsistent with typical school activities.

For example, when the school perimeter is properly set up and configured with an intelligent video system and license plate recognition, the video platform will automatically recognize when a vehicle has driven around the building multiple times over the course of a day, flagging the incident for additional investigation automatically detect motion and begin recording. Not only does this help activate emergency plans when necessary and can simplify follow-up investigations, but it also means onsite security personnel can more easily and visually verify alarms created by the camera's intelligence.

And when video platforms are bolstered by cloud-based access, school districts can take advantage of solutions that require minimal onsite hardware and the latest in artificial intelligence (AI), machine learning, and advanced analytics for even greater protection.

4. Integrate systems so access control, video, and command and control systems work in harmony to create better situational awareness and alarms.

In the event of an emergency, every second counts. Many schools may rely on a range of disparate, disconnected systems that independently monitor and manage access control, video, and other building systems. And because most of these systems require a high level of human interaction, the risk of human error may increase along with the potential for delayed response times and an inability to effectively respond to an emergency.

By integrating these systems into a unified security management system, however, administrators gain more visibility and therefore better situational awareness. Add-on modules, such as gunshot detection platforms, can make the unified system even more robust and supportive of effective emergency planning and response.



Reduce response time and increase occupant safety

with rapid active shooter detection

By integrating your intelligent video platform with an active shooter detection device, schools can improve responses when gunfire is detected in the building.



The latest advancements in building systems provides for intelligent solutions in the areas of security and fire & life safety, as well as energy performance, lighting, automation, and more. As these systems further develop, AI, deep learning, and shared data across platforms continue to be in demand, and schools must consider how an unified security system fits within their future roadmap. Today, data is considered the world's most valuable resource. As data from integrated security solutions are provided to other building systems for interoperability, the groundwork is set for a highly efficient, smart school environment—and it all starts with intelligent and integrated security systems.

5. Have an effective mass notification system in place to notify students, teachers, parents, and the community.

Research shows that people are more likely to take a warning seriously if they receive it more than once and from multiple sources. The right mass notification system will quickly, reliably, and accurately get both emergency and routine communications sent to and received by the right people, no matter where they are or what they're doing. These solutions, when properly implemented and configured, can support schools' efforts to comply with NFPA 3000 while also leveraging and integrating existing infrastructure for improved safety, security, and control.

A partner in education

It is time for schools across the U.S. to elevate their expectations for their building technologies and security providers. Instead of simply providing access cards and surveillance cameras, schools should instead rely on a partner who understands that the very mission of today's schools is to create the ideal environment for students to learn and grow.

Siemens can partner with schools to evaluate specific needs around safety and security, including NFPA 3000, to help protect students, teachers, and staff and to coordinate effective emergency responses. From technology planning, design, and implementation to commissioning, software maintenance, and system service, Siemens is a partner in education, helping create a comprehensive security strategy that aims to keep schools safer, more secure, and more comfortable.



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