



Keeping K-12 students safe.

White paper

K-12 schools are strengthening safety with technology—while fostering a nurturing learning environment.

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Columbine. Sandy Hook. Parkland. Uvalde. Once unknown, these places are now synonymous with horrific school shootings. But behind these well-publicized tragedies there are hundreds of other lesser-known incidents. In fact, there were 346 shooting incidents at K-12 schools in 2023, with 249 fatalities or wounded victims.¹ And this disturbingly high level of violence gives no sign of letting up.

“The threats are not stopping, the shootings aren’t slowing down,” said John McDonald, co-founder of The Council for School Safety Leadership. “And I don’t see them slowing down,” he said. “I think the next five to seven years are going to be pretty tough years.”²

The fundamental purpose of K-12 schools is to nurture and inspire young students, helping impart the knowledge and skills they need to continue their education—and lives. But achieving this goal requires protecting these vulnerable learners. Armed guards, metal detectors, “zero tolerance” policies—these developments seemed unthinkable in the past. But they’re part of the response to threats facing today’s K-12 schools.

“School safety is more critical than ever,” says Matt Brumm of Verizon’s Public Safety Outreach Program, who spent more than 25 years in law enforcement.

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Matt Brumm, Verizon, Public Safety Outreach Program

“The response starts with enabling fast, reliable communication among the entire community, then goes much further.” Recognizing the complexity of the issue, visionary K-12 schools are responding with holistic safety plans and technology upgrades, including:



Pro-active communication, collaboration and planning

School communities are staying connected, training for worst-case scenarios, establishing safety standards and raising awareness about potential issues before they impact student safety.



Vigilant surveillance and monitoring technology

Stricter security protocols coupled with technology-driven monitoring—such as intelligent video—help ensure safer school days.



Fast emergency response

Schools are strengthening their communication capabilities to achieve maximum speed and reliability during any safety issue—connecting schools, parents and local law enforcement like never before.

Each K-12 school system and surrounding community is unique, so responses to violence and safety strategies will vary. But all schools share a clear goal—to keep their children safe at all times, while creating a learning environment that feels open and free. After all, students learn best when they’re not afraid. So enhancing school safety has a two-fold benefit—keeping students safe from harm and engaged in learning.

The challenge

Strengthening safety without compromising the learning environment.

Despite its critical importance, efforts to strengthen school safety can face significant challenges:

- **Crumbling infrastructure**

Keeping a K-12 school's physical plant in working order can be a major challenge. Keeping schools operating at a base level is often enough of a challenge, even without updating core infrastructure or implementing new safety technology. For larger school systems, the challenges grow exponentially. For example, Northside Independent School District—the largest school system in Texas, with more than 100,000 students—recently estimated that it had almost 30,000 doors that needed to be maintained, secured and controlled.³

- **Scarce funding**

Community-funded K-12 schools rarely have the financial resources of colleges, universities, or other civic institutions that need to increase security in light of new threats. Even when approached cost-effectively, new technology inherently means more investment and K-12 school districts can struggle to fund new initiatives.

- **Outmoded communication and collaboration**

School leaders, school resource officers (SRO) and local law enforcement must be able to communicate quickly and reliably during fast-evolving threat situations. Schools may have landline telephone systems, proprietary conferencing and other last-generation communication tech. Often, the shortcomings of these systems become painfully clear during a crisis. But effective communication is also critically important to engaging the broader school community, collaborating on safety plans and other non-emergency situations. Prioritizing communication and keeping technology updated requires organizational and financial commitment.

- **Lack of trained personnel**

The need for increased training among school staff—from therapists and counselors to school resource officers—is clear. Increasing security requires a commitment to training current personnel and bringing in new expertise if necessary. After all, today's SROs encounter a very different set of challenges than those faced by old-school guards. As school leaders and communities wrestle with how to keep their students safe from potential violence, they are struggling with other threats as well—including racism, sexual harassment, social-media harassment, bullying and hoaxes (swatting, false alarms)—which require specialized expertise to combat.

- **Outdated security standards and practices**

Keeping a K-12 school safe isn't an ad hoc process. It requires a set of clear standards and practices that are established, followed and enforced. Now that the issue of student safety has become more prominent, some states have established standards and practices for K-12 security. Other standards and practices are created via community engagement and involvement. These are processes that require time and attention, which can be in short supply among overworked, time-strapped K-12 school personnel (and parents). But in the end, standards and practices are needed to protect students not just from active shooters, but from all types of threats.



The solution

Constant communication, more awareness and fast response

Strengthening school safety plans and adopting new technology is a positive, preventive response to school violence. However, intrusive measures, such as metal detectors or digital surveillance technology, can have a negative impact on K-12 students' perceptions of school safety—since they affect that all-important nurturing environment. Enhancing K-12 safety needs to balance intent with impact. What will the change accomplish in terms of improving safety? And how will it affect the learning environment?

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HP Le, Verizon, Public Safety Solutions Specialist

Three core capabilities emerge as vital to improving K-12 school safety:

- **Streamlined communication—Connecting the entire school community.**
Safety relies on communication and collaboration—during a potential crisis as well as during calmer times.
- **More awareness—Knowing what's happening in the classrooms and beyond.**
When it comes to school safety, knowledge is power. Schools need to have clear visibility throughout the school and its grounds. They need to be able to identify unusual, potentially dangerous activities—and take action.

- **Fast response—Taking smart, decisive action when faced by a threat.**

If the unthinkable happens—a seventh-grade student arriving with a gun or an intruder entering through an unsecured door with criminal intent—the response has to be fast and appropriate to the threat. Administrators, teachers, students and security personnel all need to know what to do, immediately.

New technology is enabling higher safety.

The amount, variety and capabilities of safety technology used by K-12 schools has expanded in recent years. This increase is driven by technological innovation as well as the recognition that the right technology can help enable communication, raise situational awareness and speed response times.

“K-12 schools need to leverage technology to be proactive about physical safety, as well as to be able to respond to threats effectively,” says HP Le, a public safety solutions specialist at Verizon. “That’s why at Verizon, we go beyond our role as a wireless carrier to deliver a broad and deep portfolio of solutions, from situational awareness to interoperable communication during incident response. All designed to help the entire K-12 environment stay safe, from classrooms to the parking lot.”

Technology from Verizon and its partners helps schools stay connected, keeping parents and the broader community informed of all developments and engaged with the topic of school safety. It empowers SROs and administrators with new visibility into their schools and across even the largest districts. It improves their situational awareness every day, helping avert issues by spotting them earlier. And it enables fast, effective communication and collaboration between schools and local law enforcement during any potential crisis.

Here are just some of the solutions that K-12 schools can use to keep their schools safe—and their students focused on learning:

Interoperability and response: Responding quickly and effectively to safety threats.

A fast, effective response to any potential threat is based on a foundation of streamlined communication—and interoperability that keeps everyone connected. Verizon and its partners deliver:

- **Fast, reliable connectivity for K-12 school communities**
Communication is at the core of school safety. It keeps the entire K-12 community connected, communicating and collaborating. And it ensures a steady flow of information and ideas that can help improve school safety.
- **The power and security of 5G**
Many of the new devices and solutions for K-12 safety rely on fast connectivity and exceptional security. After all, information about students and safety incidents needs to stay private. 5G connectivity from Verizon gives school districts an exceptionally fast, reliable and secure communication foundation—for informational outreach, incident alerts via text and emergency instructions.
- **Streamlined access for public safety officers**
Providing the fastest, most reliable wireless communication and unequalled interoperability has made Verizon the #1 network for public safety.⁴ Verizon connectivity provides priority and preemption and can be provided to public safety officers (including SROs) as part of the Verizon Frontline platform.
- **Group First Response**
Another key solution from Verizon Frontline, one that expands interoperability and emergency communication beyond talk, is Group First Response. It meets the important Mission Critical Push to Talk (MCPTT) standard, which provides high-quality audio, low latency, connectivity between radios and cell phones, security and encryption and much more.
- **Interoperability**
Verizon and Mutualink team up to help solve difficult challenges posed by the federal mandates by providing on-demand interoperability, helping ensure that SROs and local public safety agencies can respond to incidents quickly and efficiently.
- **Panic buttons for key school personnel**
Verizon offers a range of panic buttons designed for K-12 school personnel, including administrators, teachers and SROs. A single push of a button can trigger a school-wide alarm, delivering instant alerts to every school device and display—and providing immediate connection with 911 and local first responders. Compact, light and easy to use, these devices support trusted Wi-Fi and cellular networks.

Situational awareness: Staying aware of all potential threats.

Ensuring safety requires a proactive and ongoing commitment to situational awareness—knowing what’s happening within and outside your K-12 school. Verizon and its partners increase situational awareness with:

- **Intelligent lighting**
It’s simple—well-lit school grounds are safer, during school hours and after. Verizon Intelligent Lighting helps provide essential lighting for increased safety on school grounds, while reducing energy and maintenance costs. Integrated management application provides monitoring, diagnostics, reporting and alerting. Facilities personnel can program lighting schedules, including on/off functions and dimming levels based on photocell, sunset and sunrise, time of day and special events.
 - **Smart video**
Intelligent video improves safety on campus by knowing what, when and where an anomaly occurs—and provides proactive alerts and notifications. It pairs high-resolution cameras with advanced, edged-based analytics that use AI-enabled camera options. It can observe and report what’s happening with greater speed and accuracy than possible with the human eye. Intelligent capabilities, such as video geofencing, use video to trigger alerts about suspicious activities in key areas, such as school entrances.
 - **Integrated web/mobile platform**
Verizon partner Intrepid Networks offers Intrepid Response, a complete, low cost situational awareness and collaboration platform. Using its easy-to-use application, schools can communicate, collaborate and coordinate their activities during day-to-day operations and emergencies. This web and mobile platform enables schools of any size to be more connected, enhancing safety and speeding response times.
- Whether it is a pre-plan or active event, Response Activate enables school/district-wide notification of school going into lockdown and with Mutual-Aid Channels School Administration, School Resource Officers and Emergency Responders are on a single common operating picture (map). With Response Connect, teachers can quietly and securely communicate critical details during shelter-in-place.**
- **Gunshot detection and lockdown capabilities**
Providing real-time, autonomous gunshot event detection and active-shooter countermeasure technology, gunshot detection and lockdown systems may offer indoor, outdoor and body worn gunshot detection that is DHS-certified. It can notify law enforcement of incidents and provide live video streaming. When integrated with existing access control systems, it can perform full lockdowns, automatically and autonomously.

Looking ahead: Leveraging technology to improve school safety.



K-12 school safety is an ever-evolving story, one that tends to be dominated by high-visibility tragedies that dominate the news. But behind the scenes, there is the significant day-to-day work of vigilant teachers, administrators, school security personnel, local law enforcement—and entire K-12 communities—to help reduce the possibility of school violence and avert the horrifying stories. K-12 schools are vibrant institutions that need to focus on nurturing young students. But they also have to ensure safety. And that takes careful consideration and ongoing commitment.

As a technology leader, Verizon serves as a trusted partner to educational institutions, providing proven expertise, innovative solutions and a commitment to advancing school safety. We're helping K-12 schools reduce risk and keep their classrooms and playgrounds safe by fostering ongoing communication and collaboration, increasing situational awareness and enabling a fast, effective response to any incident. Working and innovating together, we can help keep schools secure—and help create nurturing environments for young learners.



To find out more about Verizon's portfolio of solutions for K-12 schools, visit our [Cybersecurity and Campus Safety](#) page or [Contact Us](#) to speak to an Education/Government Sales representative.

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¹ K-12 School Shooting Database, www.k12ssdb.org, documents when a gun is fired, brandished, or a bullet hits school property.

² "Another Record High: Counting School Shootings in 2023," Kara Arundel and Naaz Modan, K-12 Dive, December 20, 2023. Source: www.k12dive.com/news/2023-total-school-mass-shootings/703007/

³ "Navigating the Complexities of School Safety," Chris Killian, K12 Facilities Forum, March 4, 2024. Source: <https://info.k12facilitiesforum.com/blog/navigating-the-complexities-of-school-safety>

⁴ Based on quarterly third-party wireless voice market share data, Q1 2023.

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