

Safer Schools and Campuses



Prevention



Protection



Mitigation



Response



Recovery

Solutions to help protect what matters most

Protecting the security of students, educators, staff, and visitors is top of mind for everyone engaged in a school community. While tragic events attract headlines—and the attention of the nation or world—for days or weeks, those closest to schools, colleges, and universities understand that safety is a daily concern, and many are asking questions and searching for resources and strategies to help them take meaningful action.

Threats and risks at schools and on campuses can take many forms,

- from a campus intruder to a team of sixth-grade hackers
- from a bully on a school bus to a crowd of college students celebrating a Super Bowl victory
- from an exterior entry door with a broken lock to a catastrophic weather event
- from the failure of an emergency alert system to a fight in the cafeteria

The greatest frustration for everyone concerned about safety and security at schools or on college and university campuses is that no single solution can prevent all danger and ensure complete safety. The most effective approach may be to focus on those capabilities and solutions that address individual concerns and can make schools and campuses *safer*.



A coordinated, collaborative approach to preparedness

The Department of Homeland Security National Recovery Framework identifies five mission areas to facilitate preparedness and foster recovery.

Before an event: **Prevention** strategies can identify possible threats before they take shape, and **protection** strategies control access and monitor assets and public behavior, as well as use data to raise awareness and mitigate issues before they occur.

During an event: **Mitigation** strategies identify what is taking place and direct people, resources, and processes with the goal of reducing risk and lessening the impact of the event on both people and property. Mitigation strategies support dynamic processes, such as real-time action plans for building evacuations vs. shelter-in-place.

Response strategies enable collaboration within and across groups engaged in a school community: administrators and staff, first responders and other law enforcement or medical personnel, and community leaders and the public. Effective response can save lives, protect property and the environment, and ensure that basic human needs are met after an incident.

After an event: **Recovery** strategies process and disseminate information to those involved and inform those preparing for future events. The goal is to help those affected recover.

Challenges that limit preparedness

Schools, colleges, and universities are ready and willing to embrace and adopt the elements required to ensure preparedness, but many are hampered by the limitations of the typical campus security infrastructure. In fairness, many of these infrastructures were envisioned and implemented before the advent of some of the latest threat categories—and before technology had evolved to combat the growing risks.

For example, security technology in many locations is aging and disparate; a single district or campus may use security cameras with various capabilities in different schools, buildings—even on individual floors. At the same time, security technology was often deployed in separate, siloed systems so that tools like access controls and video surveillance systems are unable to communicate or work collaboratively to trigger action or alerts. Beyond being inadequate, this aging technology can also be costly to maintain and monitor.

Finally, most of the security technology in place was designed to be used reactively. Administrators or law enforcement typically reviewed access logs or video after an event had occurred, rather than in advance to identify early indicators of potential risk. A video recording can show administrators which students were part of a fight, but video surveillance can show a crowd gathering or an increase in foot traffic, so security personnel have the ability to prevent an altercation before it happens.

School and campus safety solution use cases

As you consider the Department of Homeland Security's mission areas and what they mean for your school, you'll next want to think about what technology solutions best map to each area. A few to consider:

Prevention

- Camera access from any location to view visitors at a single exterior entry door, and allow access only upon validation
- Deterrents such as surveillance cameras
- Intelligence-led threat identification and reduction using data mining and analytics on social media and in public records, including publicly available databases of criminal convictions
- Alarm systems with sensors, sirens, and lights on exit doors and windows to identify emergency use
- 24x7 secure mobile chat rooms for instant communication about hazards or other security-related concerns

Protection

- The ability to stream, store, and play back video of activity from throughout the district or campus from any location; enable security officers to view potential threats, even while on patrol
- Smart access control for doors, gates, and parking systems with time of day and event trigger actuation
- Electronic badging and asset/location tracking for staff, students, and visitors as well as for

high-value items

- Video analytics for facial recognition, license plate recognition, object and crowd monitoring, and loitering and violent behavior monitoring
- The ability for students, staff, and parents to alert security personnel through a mobile app quickly and reliably

Mitigation

- Sensors and analytics to detect acoustic, optical, and thermal changes, including motion, violent behavior, and gunshots
- Distress or panic button applications
- The ability to stream, store, and play back video of activity throughout the district or campus from any location
- The ability to target hazard/emergency alert information to administrators, staff, parents, and students
- Mass notification/alerting and reporting across devices and applications, including mobile and desktop devices, desk phones, digital signage, intelligent whiteboards, and social media

Response

- Internal and external collaboration using voice, video, and data sharing to ensure complete situational awareness, response coordination, threat identification, and resolution
- Geofencing to inform staff, students, visitors, and respondents of current events and share response instructions
- Real-time information management for response coordination
- Mass notification/alerting and reporting across devices and applications, including mobile and

desktop devices, desk phones, digital signage, intelligent whiteboards, and social media

Recovery

- Mass notification system for public awareness
- Notification system reporting and follow-up
- The ability to track location and status of victims, staff, and students
- Collection of forensic data from sensors, communication systems, etc. for post analysis and lessons learned

How Cisco can help

With our partners, Cisco supports schools, colleges, and universities as they overcome many of the barriers to integrated, end-to-end safety and security. Schools can benefit from comprehensive surveillance, access control, and collaboration solutions that can help protect what is most valuable—students, staff and visitors.

Cisco offers:

- Integrated access controls that help protect people and physical assets by managing access to networks, doors, gates, and parking facilities. These access controls fully integrate with video surveillance systems.
- Intelligent video analytics that provide real-time, automated monitoring and operational intelligence
- Instantaneous collaboration capability with emergency responders in real time
- Events-based alerts that help identify issues before they become problems
- These solutions are anchored with Cisco’s secured network capability, a robust security backbone that protects devices, networks, and private data.

To learn more, visit [cisco.com/go/education](https://www.cisco.com/go/education).

The table below shows capabilities aligned to the Department of Homeland Security mission areas

Prevention	<ul style="list-style-type: none"> • Alarm systems • Public Records Analytics and Data Mining • Social Media Analytics 	Video Surveillance	Collaboration
Protection	<ul style="list-style-type: none"> • Physical Access Control • Facial Recognition (alert positive or negative) • Badging • Desktop Phone Emergency Help Button • License Plate Recognition • Secure Door Access 	<ul style="list-style-type: none"> • IP Based 	<ul style="list-style-type: none"> • Inter/Intra Agency
Mitigation	<ul style="list-style-type: none"> • Sensors and Analytics • Gunshots, violent behavior, motion detection • Mass Notification • Integrated Wall-mounted Panic Button • Social Media • Digital Signage 	<ul style="list-style-type: none"> • Pervasive Indoor/Outdoor Coverage 	<ul style="list-style-type: none"> • Voice, Video, Messaging, Content Sharing
Response	<ul style="list-style-type: none"> • Collaboration Tools • Situational Awareness • Geofencing • Mass Notification • Integrated Communications - All Platforms • Digital Signage • Community Broadcast Alert • Interoperable Law Enforcement Communications 	<ul style="list-style-type: none"> • Network Based Recording 	<ul style="list-style-type: none"> • Persistence
Recovery	<ul style="list-style-type: none"> • Mass Casualty Incident (MCI) • Collaboration Tools • Digital Signage • Mass Notification • Post-event Data Collection 	<ul style="list-style-type: none"> • Remote Access to Stored or Live Recordings 	<ul style="list-style-type: none"> • Adhoc Conference
		<ul style="list-style-type: none"> • Shared with Law Enforcement 	<ul style="list-style-type: none"> • Open API's
Secure Reliable Network			