



**Industry**

# Avaya Smart School Solution

## Keeping students safe through instant, coordinated communications

Parents send their children off to school each day expecting that it will be a safe, nurturing environment. The vast majority of time, it is. But what if something happens that puts them in danger?

The question is not whether an emergency will occur at the school, because chances are that someday it will—weather emergency, fire, intruder or other risk. When it does, time can be as precious as the lives and safety of the students, teachers and staff inside. Fortunately, advances in communications technology are providing schools with powerful and economical tools to respond quickly and comprehensively.

The Avaya Smart School Solution takes such advances to a new level. It can help school districts bring the latest safety and security communications capabilities to their campuses efficiently and economically, while making the most of existing infrastructure and resources. When an emergency happens, an array of notification and security capabilities, from E9—1—1 emergency calls, to alarms and strobe lights, to door locks and loudspeakers—some triggered automatically—can save critical time and protect the well—being of students, faculty, staff and visitors.

### Preparing for threats

For years, authoritative voices, including the U.S. Department of Homeland Security<sup>1</sup> and the National Electrical Manufacturers Association,<sup>2</sup> have provided guidance on creating effective real—time communications systems to support school safety and security. Key system elements can

<sup>1</sup> "Primer to Design Safe School Projects in Case of Terror Attacks and School Shootings," U.S. Department of Homeland Security, January 2012, <http://www.dhs.gov/bips-07-primer-design-safe-school-projects-case-terrorist-attacks-and-school-shootings-2nd-edition>

<sup>2</sup> "Communications Systems for Life Safety in Schools," NEMA standard SB 40-2015, January 28, 2015, <http://www.nema.org/news/Pages/NEMA-Publishes-ANSI-NEMA-SB-40-2015-Communications-Systems-for-Life-Safety-in-Schools.aspx>

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include broad access to E9—1—1 emergency call dialing and emergency broadcast devices, preemptive emergency communications, schoolwide broadcasts that are intelligible even in loud environments, and visual notifications for persons who are hearing impaired.

Achieving such capabilities can be especially challenging in educational environments. School infrastructures routinely include disparate legacy systems for paging, alarms, door security, public address communications and general telephony. Some of those systems may be aging, and replacing them entirely may trigger local, state or national regulations requiring major renovation or remediation of hazardous materials, such as asbestos insulation. With tight budgets, few schools have the appetite for total system replacement.

For new school construction, installing the latest communications technology is a natural fit, including all of the associated hardware, software applications and wiring. But for existing schools, wouldn't it be refreshing to know that you can introduce the latest technology a layer at a time without "going behind the walls"? Avaya gives you the flexibility to deploy all or part of the Avaya Smart School Solution at whatever pace works best for your situation.

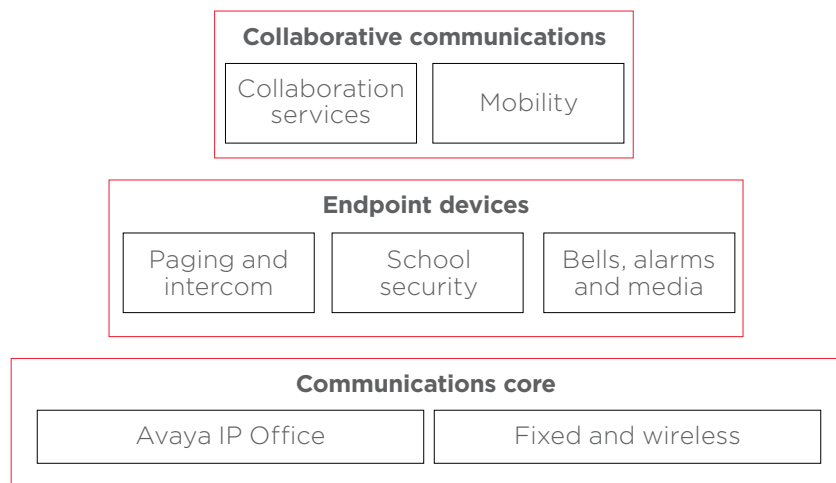


Figure 1. A comprehensive, end-to-end solution

**Avaya Smart School Solution: Flexible. Fast. Economical.**

The Avaya Smart School Solution, a joint endeavor with Avaya DevConnect Technology Partner, Algo Communication Products Ltd. is an end-to-end solution that can be deployed in a wide range of environments. Algo endpoints are built on Session Initiation Protocol (SIP) technology that can integrate into aging analog systems, Internet telephony networks and advanced unified communications (UC) systems. The relationship between Avaya and Algo gives schools access to best-of-breed capabilities.

On-site notification, provided by the SENTRY™ Emergency Response Management solution, delivers device details and floor plan information to internal emergency responders so they understand where to direct resources when they arrive on the scene.



### Industry—Leading Features

- Anywhere access with mobile devices
- Centralized visual management and control
- Audible alerting through next-generation paging
- Fully integrated visual alerting
- Communications-enabled door controls and emergency buttons
- Open architecture for media streaming

Avaya is a leader in customer and team engagement solutions, and Algo is a leading suppliers of notification, security and paging capabilities. The compatibility and interoperability of our products and services are achieved through extensive compliance testing.

The Avaya Smart School Solution provides the enhanced communications capabilities required for managing emergencies, including access control for campus building(s) and priority communications and situational awareness. It works seamlessly with core school communications systems, intercoms and collaboration services (Figure 1), and SIP-enablement allows for full integration of point-of-entry devices with Avaya IP Office communications systems. As a result, it not only delivers a broad scope of emergency communications capabilities, but it also provides state-of-the-art communications and collaboration capabilities schools need for day-to-day operations, including paging, announcements, bell scheduling, door control and communications, and administrator-teacher collaboration.

The Avaya Smart School Solution is intended to provide cost savings over solutions with multiple disjointed telephony, intercom and security systems. It integrates SIP-and IP-based endpoints for audible and visual alerting, paging, visitor assistance and door intercom security. The result is a comprehensive, cost-effective and validated solution specifically customized for safe school deployment.

Scalable deployment models can meet the needs of schools of all sizes. The Avaya Smart School Solution can be rolled out quickly, helping meet tight deadlines that can arise within school funding cycles.

**School emergencies typically require one of five responses: evacuation, reverse evacuation, lockout, lockdown or response to an isolated emergency. In any of these situations, the Avaya Smart School Solution supports quick, appropriate action.**

## Advanced, fully integrated technology powering the Avaya Smart School Solution

**Collaborative communications.** Avaya Smart School Solution allows for comprehensive, flexible and affordable options for collaboration services, including multimodal collaboration through Avaya Aura Conferencing; room—based, desktop and mobile video collaboration through Avaya Scopia® solutions; mass notification solutions for rapid dissemination of information across multiple channels; and contact engagement solutions for multichannel response to incoming queries associated with emergency incidents. Mobile alerting and communications capabilities are also available through Avaya Equinox for IP Office. School personnel can manage communications and emergency actions from their mobile devices, including door access control, emergency soft button, broadcast messaging and emergency response activation and announcements. In an emergency, seconds count, and having mobile capabilities may literally save lives.

**Endpoint devices.** A wide array of intelligent, integrated endpoint devices are available from Algo for the Avaya Smart School Solution, including SIP—based audio and visual alerting, door access controls, emergency buttons, options for legacy integration, and application controller. Algo SIP paging and speaker devices support wideband voice capabilities (G.722), providing optimum speech clarity that makes it easier for students, faculty and staff to hear emergency announcements in noisy environments.

**Communications core.** The foundation of the Avaya Smart School Solution is Avaya IP Office, a simple and powerful communications solution. Using virtualized software and a dedicated server or appliance, Avaya IP Office supports a broad range of endpoints. In addition, the IP Office Soft Console provides incident administration and monitoring for instant communications during emergencies and allows you to manage the activation of emergency buttons.

## The Avaya Smart School Solution at work

School emergencies typically require one of five responses: evacuation, reverse evacuation, lockout, lockdown or response to an isolated emergency. In any of these situations, the Avaya Smart School Solution supports quick, appropriate action. Examples of potential scenarios in which the Avaya Smart School Solution could be used include:

**Evacuation**—when school buildings are unsafe because of a gas leak, power loss or bomb threat, requiring assembly outside the school, or a drill is initiated.

- Principal dials activation code using Avaya phone, softphone or mobile application.
- Strobe lights display evacuation flash pattern and announcement activates evacuation procedure and requests staff acknowledgement.
- Staff and fire department monitor the evacuation from the office via video door controllers.



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- Teachers report student status to office staff with Avaya Equinox.
- Principal dials evacuation deactivation code.
- “All clear” announcement is made and the school transitions to reverse evacuation.

**Reverse evacuation**—when an external threat exists near the school while students are outside the building, such as after an evacuation.

- Principal dials reverse evacuation activation code from Avaya Equinox application.
- Strobe lights display reverse evacuation flash pattern and announcement activates reverse evacuation procedure and requests staff acknowledgement.
- Staff and fire department monitor the reverse evacuation from the office via video door controllers.
- Teachers report student status to office staff with Avaya Equinox.
- Principal dials reverse evacuation deactivation code.
- Announcement and flash pattern signal end of situation, and essential outside contacts are notified.

**Lockout**—when a weather—related emergency or other outside threat occurs.

- Principal activates “school lockout” code.
- Strobe lights display lockout flash pattern, protective procedure is announced, and audio / visual alerts are broadcasted for students and staff to reenter the school.
- Teachers report student status to office staff with Avaya Equinox.

### Answering the E9—1—1 imperative

Emergency 9—1—1 calls, especially ones from schools and multi—building campuses, must provide details about the device making the call and its location so internal first responders can coordinate with, and provide pre—arrival assistance to, emergency first responders. In the Avaya Smart School Solution, this information is generated by the SENTRY™ Emergency Response Management solution and can appear as a screen pop at the desktops or be displayed on smartphones, thereby delivering the critical situational awareness needed to speed response and help save lives, as well as link to other relevant resources on the network.

- Mass notification system alerts parents and transportation authorities via e—mail, SMS and phone calls that lockout is in effect.
- Once situation has been resolved, deactivation code is dialed, “all clear” notification plays on all speakers, and parents and transportation authorities are notified that normal operations have resumed.

**Lockdown**—when a threat arises inside or directly outside the school such as an armed intruder.

- Video surveillance trigger alerts office staff of a potential forced entry, and emergency services are contacted to report incident.
- Principal is informed via a call to his or her Avaya Equinox and uses authorized smartphone to dial activation code for “school lockdown.”
- Strobe lights display a specific lockdown flash pattern.
- Teachers report student status to office staff with Avaya Equinox.
- Parents / transportation authorities are notified that lockdown is in effect.
- Proximity sensor on the door controller triggers a call to staff that first responders have arrived, two—way video validates first responders’ credentials, and access is granted with a private access code.
- At situation resolution, deactivation code is dialed and “all clear” notification plays on all speakers.
- Essential outside contacts are notified that normal operations have resumed.

**Emergency**—for example, a student discovers another student lying unconscious in a school bathroom.

- Student activates an emergency button and office receives auditory and visual alert notifications.
- Staff confirms status of the emergency and any active alarm conditions from the office management console.
- Visual alert outside the bathroom illuminates with preconfigured “emergency” flash cycle.
- Principal communicates with students via intercom and calls emergency responders.
- Principal uses Avaya Equinox—equipped tablet to activate reverse evacuation procedure for specified campus areas.
- “Reverse evacuation” strobe light pattern and announcement are activated; teachers and staff acknowledge event status with Avaya Equinox.
- 9—1—1 personnel communicate directly with those assessing the student while first responders are in route.
- Two—way video validates first responders’ credentials and building access is granted through a private access code.
- Principal dials deactivation code and “all clear” announcement plays on speakers augmented by visual alerts.



**No school welcomes an emergency, but every school needs to be prepared for one. The Avaya Smart School Solution provides a cost-effective way to have clear, reliable and intelligible communications in extraordinary circumstances.**

### Keeping students and staff safe

No school welcomes an emergency, but every school needs to be prepared for one. The Avaya Safe School Solution provides a cost-effective way to have clear, reliable and intelligible communications in extraordinary circumstances, as well as immediate access to critical situational information. It's technology you can trust in an emergency.

### Learn more

For more information about Avaya Smart School Solution and Avaya DevConnect Technology Partners, contact your Avaya Account Manager or Authorized Partner, or visit us online at [avaya.com/12](https://avaya.com/12) and [devconnectmarketplace.com](https://devconnectmarketplace.com).

