



Vail Unified School District solves vaping problem with the Arcules open platform

Case Study



The customer

Vail School District, located in Southern Arizona, serves thousands of students across multiple campuses. With increasing concerns about student health and safety, particularly around the growing challenge of on-campus vaping, the district needed an effective way to protect student wellbeing while maintaining a positive learning environment. Cienega High School, one of the district's largest campuses, took the lead in implementing innovative solutions to address these challenges.



The challenge was not just detection – it was enabling swift, coordinated response to protect student health.

The challenge: A surge in student vaping

Like schools across the nation, Vail Unified School District in Southern Arizona found itself on the front lines of a mounting health crisis. The surge in student vaping wasn't just a discipline issue – it represented a direct threat to student wellbeing.

School administrators needed a way to quickly respond when vaping was detected in bathrooms, locker rooms, and other hidden spaces. The challenge wasn't just detection – it was enabling swift, coordinated response.

A breakthrough solution: The power of cloud integration

Starting with Cienega High School, Vail Unified School District found their answer by connecting HALO Smart Sensors with the Arcules cloud-based video surveillance platform. What sets this solution apart is Arcules' ability to take sensor data and transform it into immediate, actionable intelligence through its open platform architecture and real-time mobile notifications.

Here is how it works:

Detect: Advanced Vape and Air Quality Detection

The solution begins with HALO Smart Sensors providing advanced detection capabilities, identifying vaping incidents, including THC, along with monitoring abnormal noise levels and changes in air quality. This detection system works continuously, monitoring spaces like bathrooms and locker rooms where video surveillance would be a breach of privacy.

Respond: Mobile-First Rapid Response

Once a sensor alarm goes off, Arcules delivers instant notifications to the appropriate staff members' smartphones. This enables them to take immediate action from anywhere on campus.

Verify: Synchronized Sensor and Video Evidence

Most crucially, the integration provides comprehensive incident verification by automatically linking sensor alerts with corresponding video footage. This synchronized evidence creates an indisputable record of events and enables staff to instantly assess situations.

The combination of immediate detection, rapid response, and verified documentation has created a powerful deterrent while providing staff with the tools they need to effectively enforce campus policies.



Key outcomes

- 200% increase in vaping incidents verified and acted on in the first 30 days of system implementation.
- Real-time text alerts increase response rate from hours or days to minutes.
- Immediate incident verification through integrated video and sensor data.
- Stronger deterrent effect as students realize the effectiveness of the combined solution.
- Improved staff coordination through customizable alert workflows.

From detection to action

The results at Cienega High School have been transformative. "Having sensors detect vaping was just the first step," says Kim Middleton, Principal at Cienega High School. "What really changed the game was Arcules giving us the ability to immediately see what's happening and coordinate our response."

Thanks to the mobile-first approach, Middleton and her team can immediately verify and respond to incidents from anywhere on campus through their smartphones. "Our ability to respond immediately sends a powerful message to our students that we're always aware, always ready to respond, always protecting their wellbeing," said Middleton.

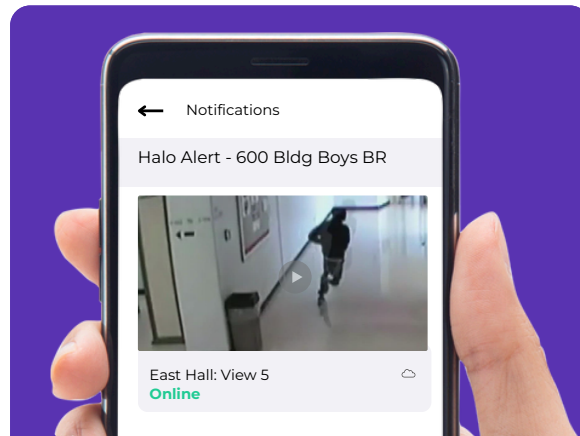
In addition, she noted that the synchronized sensor and video evidence has emerged as a crucial tool for addressing disciplinary issues. "Having irrefutable documentation has transformed our ability to enforce policies fairly," explained Middleton.

A valuable partnership

The full solution couldn't have happened without DH Pace, a specialized security integration partner. The coordination between the teams at DH Pace, Arcules and Halo Smart Sensors maximized the solutions effectiveness from strategic system design to optimal camera placement around key areas.

Looking forward

The success at Cienega High School demonstrates how intelligent integration of sensor data with cloud video surveillance can transform campus safety. Based on these positive results, Vail Unified School District plans to expand this system to additional schools across the district, setting a new standard for how schools can protect student health in the modern era.



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