



Education, Case story

Arizona Schools Combat Student Vaping with Arcules VSaaS

Vail USD integrates smart sensors with Arcules cloud VMS for swift, coordinated response to vaping, reducing incidents by 90%. With over 1.6 million students using e-cigarettes across the United States according to the Centers for Disease Control, schools nationwide face an urgent health crisis that demands immediate action. This surge in student vaping represents more than a discipline issue – it's a direct threat to student wellbeing requiring swift, coordinated response.

Vail Unified School District (USD) in Southern Arizona serves students across 24 schools, maintaining a strong commitment to student safety and wellbeing throughout their educational facilities. The district has invested significantly in security infrastructure, with over 300 security cameras deployed across their campuses and environmental sensors installed in key locations.

When faced with the growing challenge of student vaping, Vail USD launched a pilot program at Cienega High School to test an innovative integration between their existing environmental sensors and Arcules™ video surveillance as a service (VSaaS). Leveraging Arcules' open platform architecture, the district was able to seamlessly integrate their diverse mix of cameras and environmental sensors, without requiring wholesale infrastructure replacement.



Customer

Vail Unified School District



Milestone products

Arcules™ video surveillance
as a service (VSaaS)



Integrations

24 HALO Smart Sensors™
from IPVideo (acquired by
Motorola Solutions 2023)



Location

Arizona, USA



Camera count

61 Hanwha Vision™
video cameras



Partner

DH Pace Company



Challenge: swift response to a health crisis

With vaping on the rise in schools across the U.S., Vail Unified School faced a growing health risk. They needed to respond quickly and protect students in areas where traditional surveillance wasn't appropriate.

Bathrooms and locker rooms became blind spots where vaping, THC use, and disruptive behavior were escalating. School leaders needed a solution that could detect these incidents in real time and enable rapid, coordinated responses—all while maintaining student privacy.

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

Solution: real-time mobile alerts with video verification

Starting with a pilot at Cienega High School, Vail USD was able to connect their existing HALO Smart Sensors and Hanwha cameras through Arcules cloud-based VMS. Arcules' open platform architecture made this seamless integration possible without requiring costly infrastructure replacement. Vail USD administrators also worked with DH Pace, a certified integrator, to configure the optimal solution.

The three-part system—Detect, Respond, Verify—provides administrators with the tools to act immediately while preserving privacy in sensitive zones.



Now when vaping, THC, or other environmental changes are detected, the HALO sensors trigger a mobile alert via Arcules. With one click, staff members can pull up the alert from their mobile device and view corresponding live video footage from adjacent areas for incident confirmation.



Having sensors detect vaping was the first step. What really changed the game was Arcules giving us the ability to immediately see what's happening and coordinate our response. Once we catch them the first time, they're not doing it again on our campus, because they know that the sensors are in place and they're highly effective."

- Kim Middleton, Principal at Cienega High School

This integration enables staff to respond within minutes rather than hours or days, while providing the visual evidence needed to effectively enforce campus policy and maintain student safety.



Our integration expertise created a solution where sensors don't just detect incidents—they trigger immediate, coordinated response through Arcules' platform. This isn't just about catching students vaping; it's about creating a deterrent system that fundamentally changes campus culture and protects student health."

- Michael Waldron, Executive Vice President, DH Pace Company

Result: 90% reduction in vaping incidents

The results have been transformative, nearly eliminating vaping in school bathrooms and locker rooms at Cienega High School. The mobile-first approach allows Middleton and her team to immediately verify and respond to incidents from anywhere on campus through their smartphones.

Students have noticed the change too. Many comment that the restrooms are now less crowded, with students reporting they feel safer and noting these spaces are being used for their intended purpose.

Conclusion

This case shows how a thoughtful combination of detection, video integration, and rapid response tools can redefine campus safety. The district's approach preserves privacy while enabling meaningful intervention, setting a model for schools across the country facing similar challenges.

Next steps: district-wide expansion

With the pilot's success, the district is now evaluating how to expand the solution across additional campuses. The scalable architecture of the Arcules platform, combined with the flexibility of the sensor system, makes district-wide deployment both feasible and cost-effective by leveraging existing infrastructure.

Looking ahead, the solution offers strong potential for future development. Opportunities include expanding sensor event workflows, and integrating with additional systems such as access control. These enhancements could help build a more comprehensive, proactive safety infrastructure that evolves with the needs of each school site.





Recognize the challenges?

Do you also need to see what is happening on your premises, so you can respond in time?

Get in touch with us at milestonesys.com/book-a-demo/ and let's talk about what type of solution is right for you.

About Milestone Systems

Milestone Systems is a world leader in data-driven video technology used in industries as diverse as manufacturing, airports, law enforcement, retail, and traffic management. We provide a clear picture of how to create a safer, better and more prosperous world. Our XProtect video management software, BriefCam AI-powered analytics, and Arcules cloud VSaaS help our customers learn from the past, understand the present, and predict the future. Founded in 1998 and headquartered in Copenhagen, Milestone employs more than 1,500 people worldwide and has been an independent company in the Canon Group since 2014.

www.milestonesys.com