CASE STUDY

Focus: UVC Disinfection for Schools
Client: Housatonic Valley Regional High School

Safeology™
The Science of UV Clean

Safeology helps Housatonic breathe a deep, clean sigh of relief.

The background.

Housatonic Valley Regional High School (HVRHS) is housed primarily in a historic building constructed during the Great Depression. Voted the Most Beautiful School in Connecticut by Architectural Digest magazine, it first opened in 1939, and today is home to approximately 350 students. The school comprises dozens of classrooms, plus a library, auditorium, gymnasium, cafeteria, and an agricultural education center.

The objective.

Like every school in America, Housatonic Valley Regional High School was looking for the best way to create a clean, safe environment free of SARS-CoV-2, the virus that caused the unprecedented global COVID pandemic. With student, teacher and staff safety of paramount importance, school leaders, including the HVRHS school board, were looking for a proven, effective solution.

The challenge.

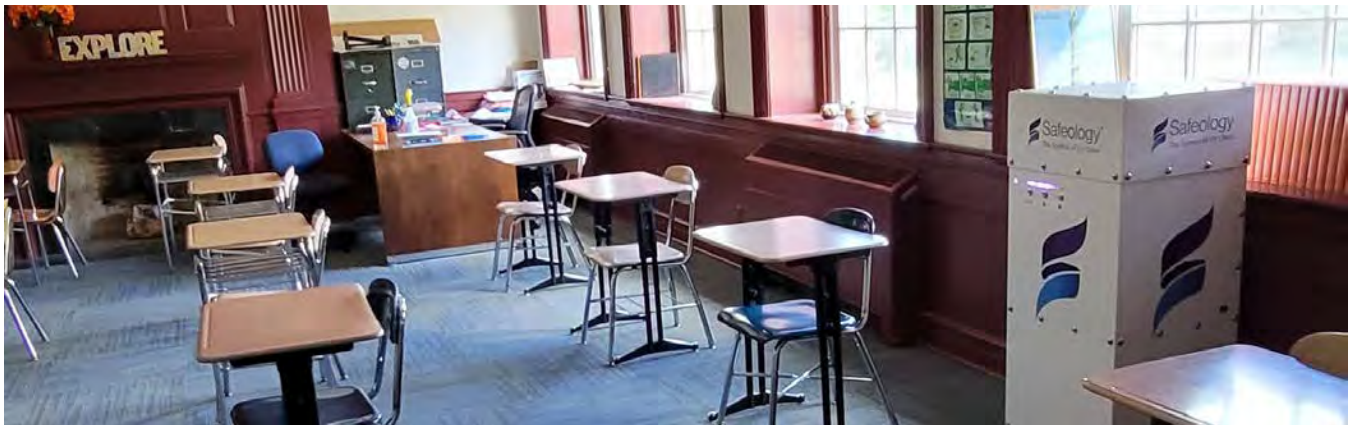
The State of Connecticut challenged HVRHS to find ways to improve ventilation in its school facilities, but due to the age of the buildings it would have cost millions to install proper ventilating systems. Even though the school applied for and received $1 million in CARES Act funding, it wasn't enough to cover the cost. To make matters more challenging, the school was required to spend the funds by the end of 2020.

The solution.

The Facilities Manager at Housatonic Valley Regional High School went online to learn about UVC disinfection solutions as an alternative to ventilation systems. Safeology and its IoT technology caught his eye so he reached out to the company. The Safeology team answered his questions, recommended Mobile Air Purifiers as the best solution for the school's specific situation, and confirmed they were available and could be provided in the required timeframe.

The results.

Housatonic Valley Regional High School now has 73 Safeology Mobile Air Purifiers at work cleaning and disinfecting the air throughout their school facilities. Delivering an estimated 6 to 10 air changes per hour, these air purifiers inactivate up to 99.9% of viruses and bacteria, and remove 99.97% of particles as small as 0.3 microns from the air. In the midst of the COVID pandemic, Safeology's Mobile Air Purifiers have proven to be a breath of fresh air in the picturesque Housatonic Valley of Connecticut.



Housatonic earns an A+ for classroom cleanliness.

Hunting for viable options.

Long after the COVID pandemic had shut down virtually all in-person learning, the CDC discovered that SARS-CoV-2, the virus that causes COVID, was being transmitted primarily through the air. Armed with this knowledge, schools began looking for a way to disinfect the air so students and teachers could get back in the classroom.

At Housatonic Valley Regional High School, Facilities Manager Jeff Lloyd was tasked with finding a solution to address air quality concerns throughout the campus. At first the logical answer seemed to be an upgraded ventilation system. But the age and configuration of the school's 140,000 square foot facilities meant they wouldn't be a good candidate for a complete HVAC overhaul. Even though the school had $1 million in CARES Act funding it wasn't nearly enough to do the job.

Finding the ideal solution.

Jeff researched UVC disinfection, a proven technology used for decades in healthcare settings, and came across Safeology. According to Jeff, three things really stood out. *"Safeology has a Scientific Advisory Board that guides product development. They have better solutions than standalone UVC lighting. And their Mobile Air Purifiers can be used when people are present in the same room."*

Sold on Safeology, Jeff and the school's Building Committee recommended Safeology products to the School Board, who approved the purchase of 73 Mobile Air Purifiers. *"We liked that they were free standing and simple to implement. We also liked Safeology's wireless cloud-based IoT platform that allows us to control and monitor all of the units from one central location."*

> *"Safeology was great to work with. They were the first UVC company we contacted, and after the first phone call, we knew we didn't need to look any further."*
>
> Jeffrey Lloyd,
> Facilities Manager, Housatonic Valley Regional High School

Partnering for optimal performance.

Once the order was placed, Safeology worked closely with the school's IT department to ensure the products would meet their needs. Along the way, the school made suggestions on how the products could be enhanced. *"The Safeology team was incredibly accommodating. They listened to our input and implemented many of the ideas we suggested."*

Some of those product enhancements include the ability to change fan speeds at different times each day, monitor the air quality in each room, schedule firmware updates so they don't interfere with classroom time, and export device data to CSV files for easy reporting and presentation.

Investing in the future.

Though the current pandemic will eventually pass, the airborne transmission of viruses, bacteria and fungi will always be of concern. Classroom cleanliness will always be a priority. With the implementation of Safeology Mobile Air Purifier technology, Housatonic Valley Regional High School has earned an A+ in taking a big step forward to create the cleanest education environment possible.

Safeology combines unmatched performance with efficient operations.

Abounding in features and benefits.

- Wireless IoT cloud-based control and monitoring
- Quiet operation due to optimized airflow design
- 6 to 10 air changes per hour
- 9,000 hours lamp life at 85% UVC intensity
- Auto-off switch for safe lamp replacement
- Easy-access filter replacement
- Certified to UL Standards
- Made in America with U.S. and global components

Commercial grade

Adaptable to room size

No HVAC integration

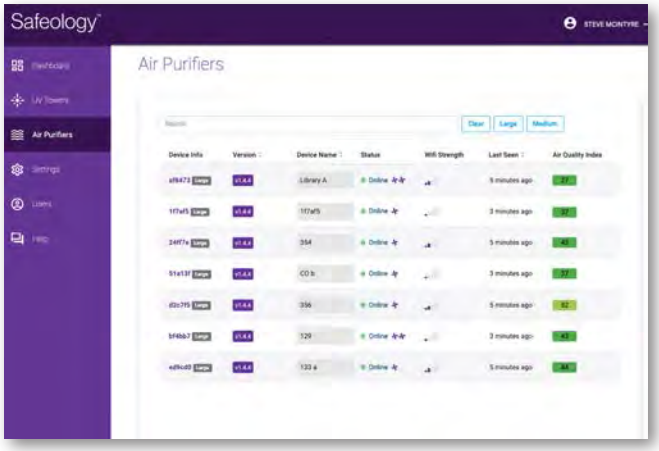
Quiet operation

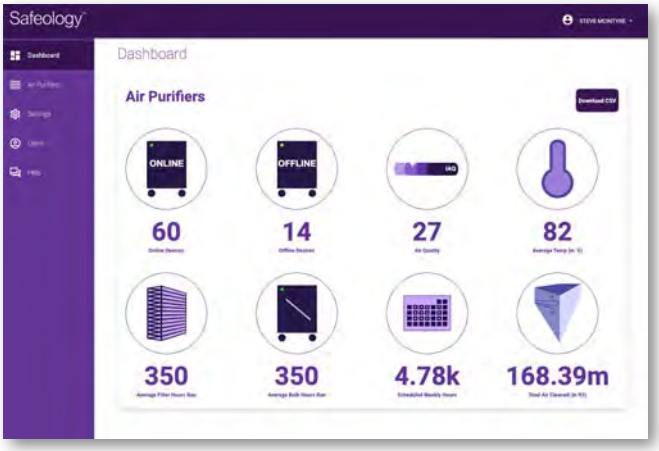
Making the best even better.

Housatonic Valley Regional High School is impressed not only with how well the Mobile Air Purifiers work, but of equal importance, how easy they are to manage.

Simply position them in a room and turn them on, and Safeology's UVC technology cleans and disinfects the air. The UVC lights inactivate 99.9% of airborne pathogens, and the built-in activated carbon and HEPA filters remove 99.97% of airborne irritants such as dust, mold, bacteria, and pollen.

But the story doesn't end there. Safeology's proprietary Custom Software Suite allows the school to operate all 73 Mobile Air Purifiers from a single, central location. With cloud-based IoT back-end systems management, school staff can program start and stop times. Change fan speeds. Monitor lamp and filter performance. Even generate reports for administrators and parents. Working with Safeology puts the most advance UVC cleaning technology right at Housatonic's fingertips.





Custom Software Suite Dashboards

Safeology: the ideal partner for pathogen protection.

Bringing it all together.

At Safeology, it's our calling to protect life. We bring the proven power of UVC light into schools and other environments to safely inactivate and eliminate disease-causing viruses that threaten life. Safeology UVC disinfection technology provides peace of mind, one pathogen-free space at a time.

PROJECT SUMMARY

Customer: Housatonic Valley Regional High School

Location: Falls Village, CT

Facility: Historic school building constructed in 1939

Objective: Deliver a high degree of indoor air quality and promote a healthier and safer environment for students, faculty, and staff

Strategy: Minimize the airborne transmission of harmful pathogens, especially SARS-CoV-2

Major Decision Drivers: Chosen solution must have a proven record of success, be easy to implement, and offer centralized control and monitoring

Solution: Safeology UVC Mobile Air Purifiers in two sizes: Model SM18 and Model SM7

Cleaning Potential: 6 to 10 ACH, capable of inactivating 99.9% of pathogens and removing 99.97% of airborne irritants

Unique Features: Combination of UVC light for disinfection and carbon and HEPA filters to trap irritants, all controlled centrally by cloud-based custom software

Installation Date: April, 2021

DID YOU KNOW

While not all are potentially harmful, on average, students come in contact with over 150,000 germs each day while at school.

Source: safespace.com

UVC 101

Normal DNA strand

Broken DNA after exposure to UVC light

How does UVC work?
UVC irradiation is a physical process that alters the DNA and RNA of harmful organisms, leaving them sterile and unable to function or reproduce. Since they can't reproduce, the organisms can't spread, and the pathologic effect has been eliminated.

Why is UVC a good option?
In today's environment, traditional cleaning protocols are no longer enough. Topical germicides typically clean less than 50% of surfaces and may include harmful chemicals and unpleasant odors. In contrast, UVC effectively eliminates 99.9% of pathogens.

Why do Air Changes per Hour matter?
Air Changes per Hour (ACH) is a measure of how many times the air within a defined space is replaced each hour. The CDC generally recommends at least 6 ACH to ensure clean, healthy air.