CASE STUDY

Focus: Reducing the spread of airborne SARS-CoV-2
Client: Housatonic Valley Regional High School

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 cleaner environment that minimized the spread of SARS-CoV-2, the virus that caused the unprecedented global COVID pandemic. With student, teacher and staff wellbeing of paramount importance, school leaders, including the HVRHS school board, were looking for a proven, effective solution.

The challenge.

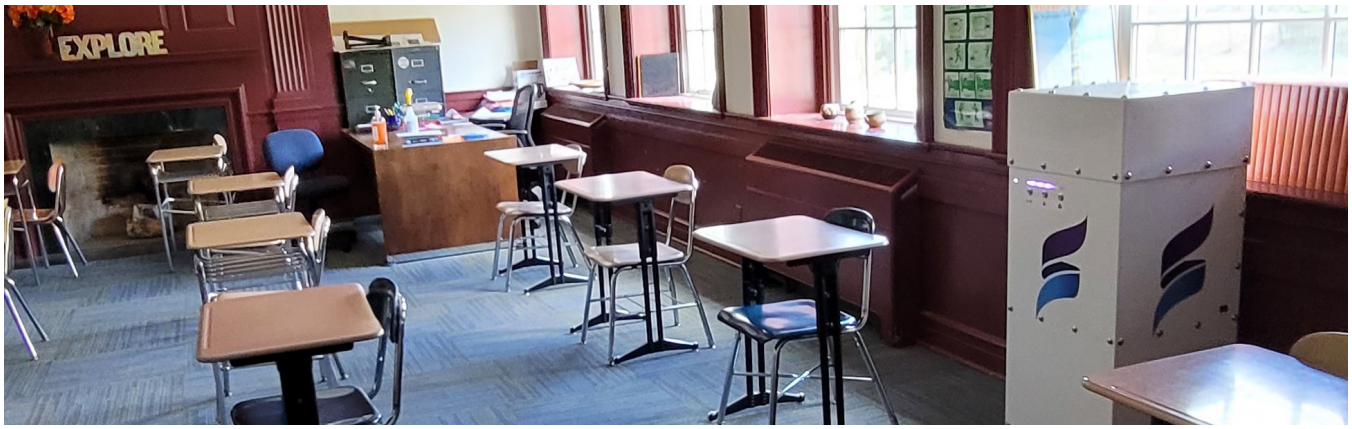
The State of Connecticut challenged HVRHS to find ways to improve ventilation in its school facilities, but due to the age of the buildings it would have cost millions to install proper ventilating systems. Even though the school applied for and received $1 million in CARES Act funding, it wasn't enough 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 cleaning 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 of Safeology's Mobile Air Purifiers at work cleaning the air throughout their school facilities. Delivering an estimated 6 to 10 air changes per hour, these air purifiers have been proven[1] to inactivate up to 99.998% of the SARS-CoV-2 virus, and remove 99.97% of particles as small as 0.3 microns from the air. In the midst of the COVID pandemic, Safeology has proven to offer 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 clean 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 cleaning 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's 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 will always be of concern. Classroom cleanliness will always be a priority. With the implementation of Safeology's 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.

The mobile air purifier from Safeology combines unmatched performance with efficient operations.

Abounding in features and benefits.

- Proven effective in eliminating 99.998% of SARS-CoV-2
- 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 lamp replacement
- Easy-access filter replacement
- Certified to UL Standards
- Made in America with U.S. and global components

Proven 99.998% effective

Adaptable to room size

No HVAC integration

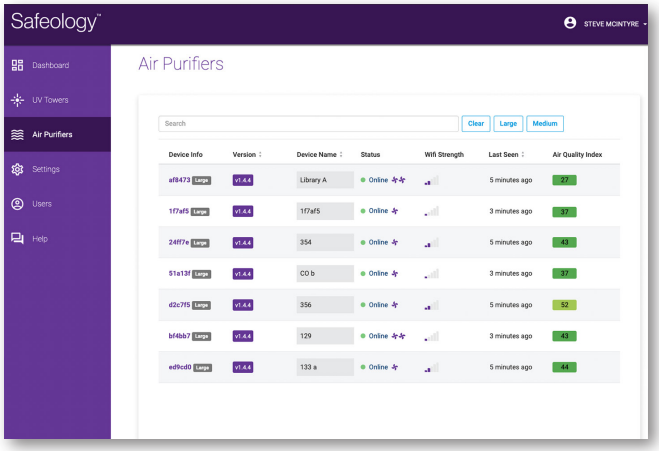
Quiet operation

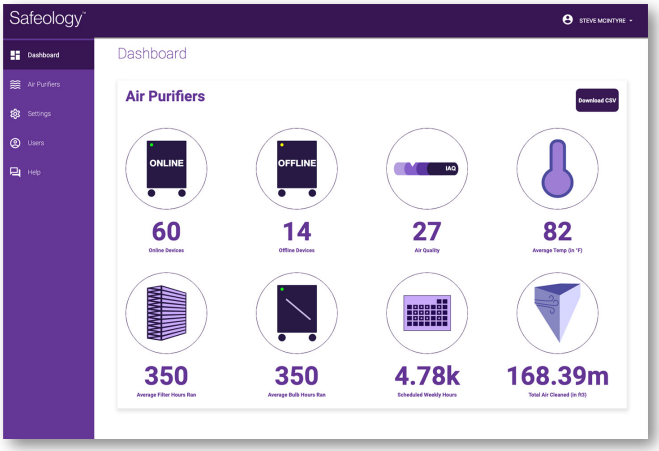
Making the best even better.

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 the UVC technology cleans the air. The UVC lights inactivate 99.998% of SARS-CoV-2, and the built-in activated carbon and HEPA filters remove 99.97% of airborne irritants 0.3 microns and larger.

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 advanced UVC cleaning technology right at Housatonic's fingertips.





Custom Software Suite Dashboards

Safeology: the ideal choice for cleaner air

Bringing it all together.

At Safeology, we bring the proven power of UVC light into schools and other occupied environments to inactivate and reduce the spread of disease-causing viruses like SARS-CoV-2. Contact us today to see how we can help you start creating cleaner air tomorrow.

PROJECT SUMMARY

Customer: Housatonic Valley Regional High School

Location: Falls Village, Connecticut

Facility: Historic school building constructed in 1939

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

Strategy: Minimize the airborne transmission of harmful viruses, 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: UVC Mobile Air Purifiers in two sizes: Model SM18 and Model SM7

Cleaning Potential: 6 to 10 ACH, capable of inactivating 99.998% of viruses and removing 99.97% of airborne irritants

Unique Features: Combination of UVC light for virus inactivation 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

[1]For information on Safeology's Research Study, contact sales@safeology.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 virtually eliminated.

Why is UVC a good option?
In today's environment, traditional cleaning protocols are no longer enough—especially since they primarily focus on surfaces. In contrast, the UVC mobile air purifier focuses on the primary method of virus transmission, eliminating 99.998% of SARS-CoV-2 from the air.

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.