

INDOOR ENVIRONMENTAL QUALITY (IEQ)

Enhancing indoor air quality and occupant health



Volpe Center
Cambridge, MA
410,000 sf facility
4 acres
5 research labs
500 employees

For over 50 years, the U.S. Department of Transportation (DOT) Volpe Center has been at the forefront of innovation. In 2023, GSA opened a state-of-the-art facility, marking the first-ever federal building exchange between the government and a private partner, the Massachusetts Institute of Technology. Building on its legacy of leadership, the Volpe Center has launched a GPG Learning Lab to test and evaluate emerging IEQ technologies.

This lab will serve as a hub for IEQ advancements and provide workshops and hands-on training to improve occupant health while fostering public-private partnerships.

GPG Technologies Piloted at the IEQ Learning Lab

ONGOING EVALUATION

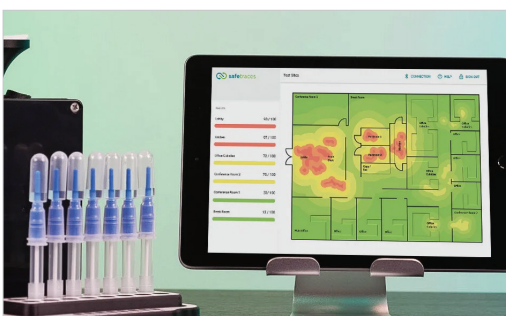
Germicidal Ultraviolet by Far UV, R-Zero, and Louvers International



- Uses light to disinfect air without increasing ventilation
- Reduce HVAC runtime by up to 70%
- Enhance occupant health: reduces transmission of viruses; 99% efficacy

ONGOING EVALUATION

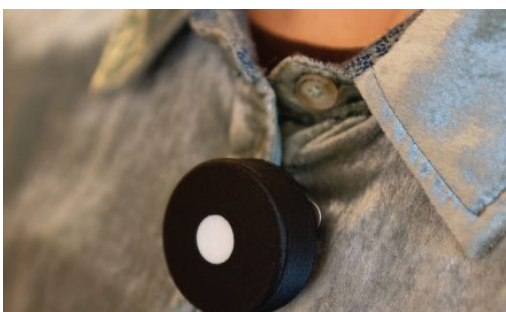
Biotech IAQ Verification and Energy Assessment by SafeTraces



- Uses DNA-tagged particles sprayed into the air to map indoor air quality (IAQ)
- IAQ findings can be used to reduce HVAC energy use by up to 20% by reducing outside air
- Reduce capital costs, use strategic HVAC repairs/upgrades instead of full replacement

ONGOING EVALUATION

IoT Light Exposure Sensor by Blue Iris Labs



- Measures spectral power distribution to provide a holistic understanding of light quality and impact on circadian rhythms
- Supports better lighting control strategies that improve occupant health such as mood, sleep, and hormone regulation