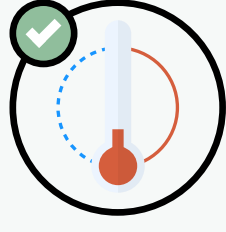


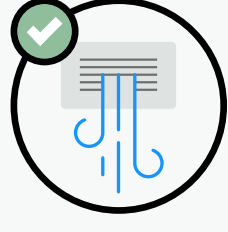
# Why HVAC Alone Can't Solve for Better Indoor Air Quality

**HVAC systems move air, but they weren't created with biosafety in mind.**

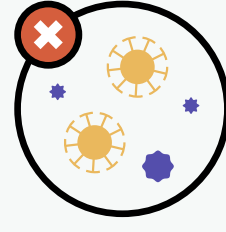
**HVAC systems are designed to:**



Optimize energy efficiency and occupant comfort



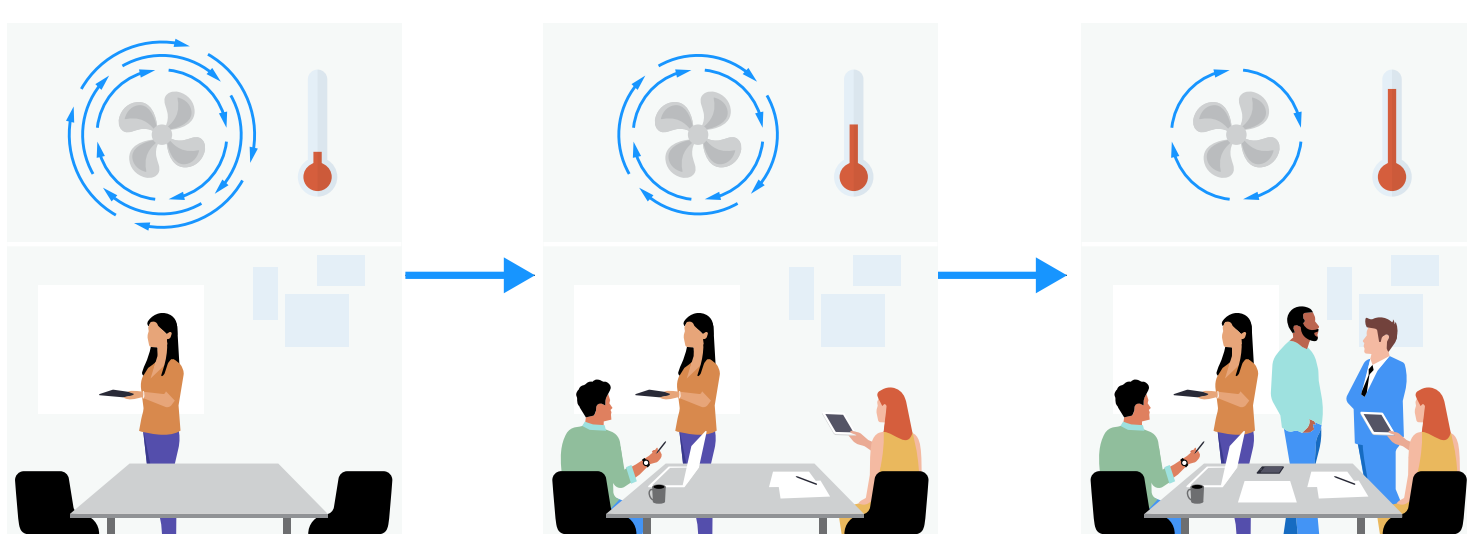
Provide basic levels of indoor air quality



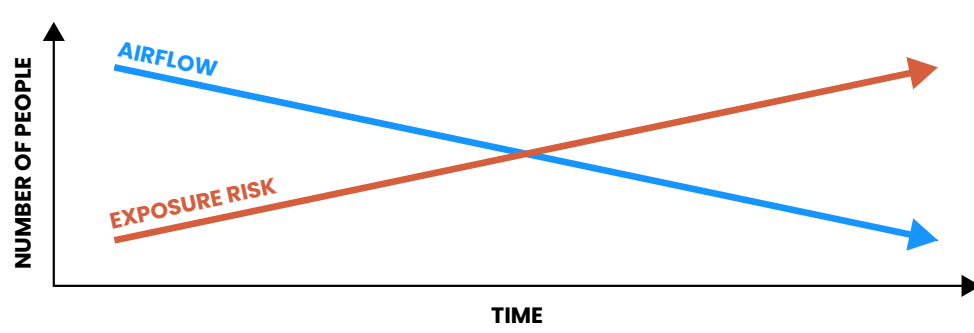
But they are **not designed** to deliver microbial disinfection.

Consider a cold winter day, when central air is used to keep tenants warm. As a room fills with more people, their body heat warms the room, signaling the HVAC system to pump out less air.

The more bodies in the room, the more ventilation is crucial for health—and yet, the HVAC system is signaled to *decrease* ventilation. This causes an increase in the risk of exposure to viruses and bacteria.

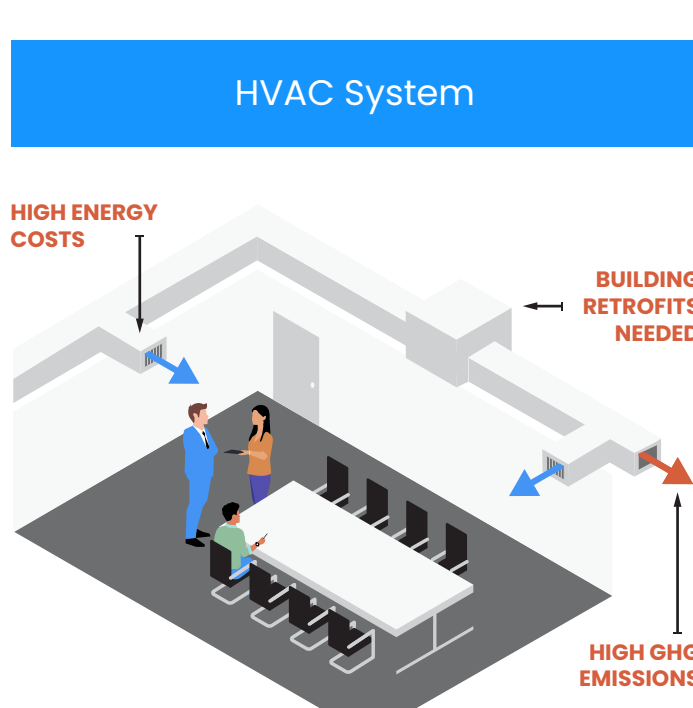


The more people that are in the room, the more ventilation is crucial, and yet, the HVAC system is likely to not increase the airflow accordingly. **This means the risk of exposure to viruses and bacteria increases.**



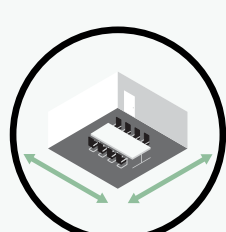
**Most HVAC systems struggle to raise indoor air quality standards without help.**

Healthier buildings mean better indoor air quality, and that message is spreading fast. But when the responsibility for raising that air quality falls solely on HVAC systems, they're pressurized by many factors: increased energy costs, higher GHG emissions, and the fact that most buildings were designed for a smaller duct size. Making ducts bigger to increase airflow for better air quality indoors means disruptive, expensive upgrades.

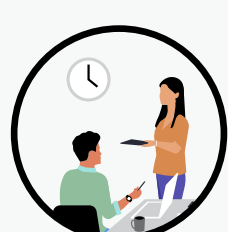


**HVAC can't sense which rooms need the most airflow.**

Your indoor risk of exposure to viruses and bacteria actually depends on various factors of the room you're in:



Room dimensions



How many people are in the room and for how long

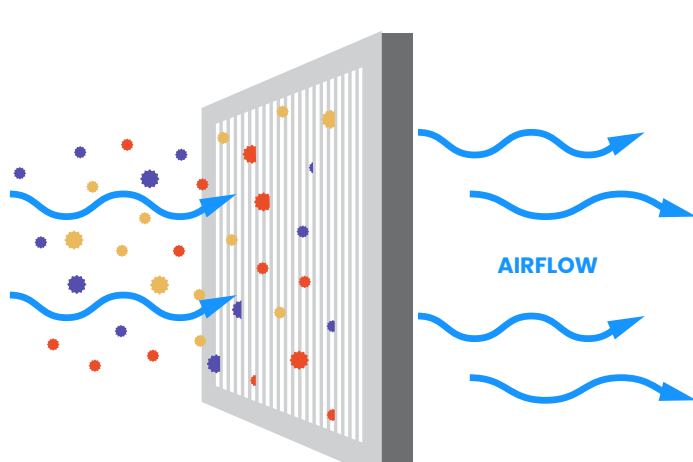


Activities those people are doing

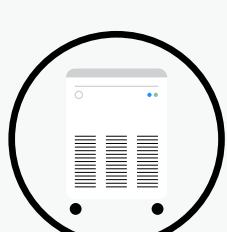
The problem is, HVAC systems were never designed to sense which rooms have the most risk at any given time. They just move air.

**HVAC systems move and store harmful microorganisms, but don't deactivate or kill them.**

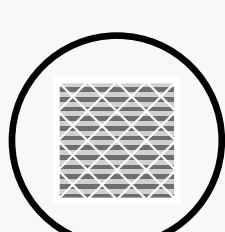
Unlike other methods of disinfection that actually kill or deactivate microorganisms in-room, the only way HVAC can decrease the risk of exposure to them is by pulling them across and out of the room and storing them in disposable filters within the HVAC system.



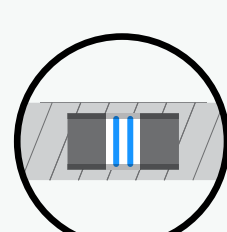
**What about other supplements to HVAC systems for improving indoor air quality?**



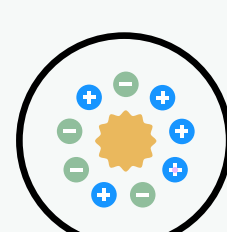
**Portable HEPA filters:** Are excessively noisy when achieving high levels of ACH



**MERV filters:** Do little for in-room risk



**In-duct UVC:** Cleans the HVAC system, not the room itself



**Ionization:** Lacks safety and efficacy evidence

But there is one solution that works *together* with HVAC to effectively, efficiently, and sustainably disinfect indoor spaces at a healthcare facility-level standard of biosafety:

**Upper-Room ultraviolet germicidal irradiation (UR-UVGI).**

Read on to learn more.

**HVAC + UR-UVGI**