

# Healthier Buildings: IWBI Guidance on Reopening & Market Response to COVID-19



75F

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

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MacBook Pro Microphone


 

MacBook Pro Speakers


Talking: 75 F


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**Healthier Buildings Webcast Rehearsals**  
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**TEMPERATURE CHECK**

# IWBI Guidance on Reopening

1. Recap: Guidelines  
and Science

2. IWBI Intro

3. WELL Health-Safety Rating

4. Building Wellness Diagnostics  
and 75F Epidemic Mode

5. Energy Impacts of Ventilation

6. Q & A

# IWBI Guidance on Reopening

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Centers for Disease Control and Prevention  
CDC 24/7: Saving Lives, Protecting People™

[A-Z Index](#)



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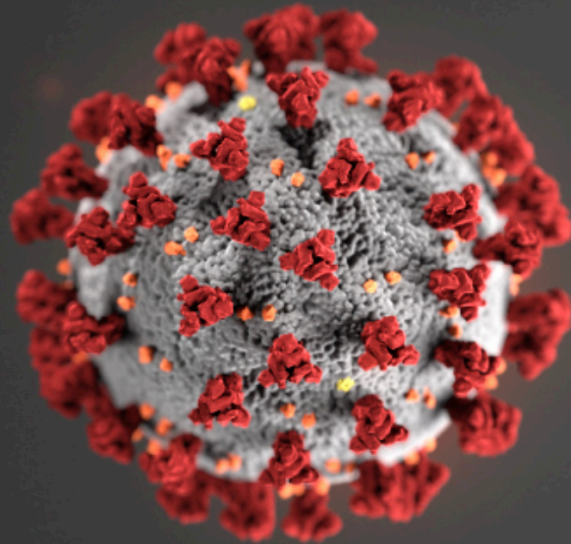
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# Coronavirus Disease 2019

CDC is responding to the novel coronavirus outbreak.

[Learn More About COVID-19](#)

# CDC: How COVID-19 Spreads

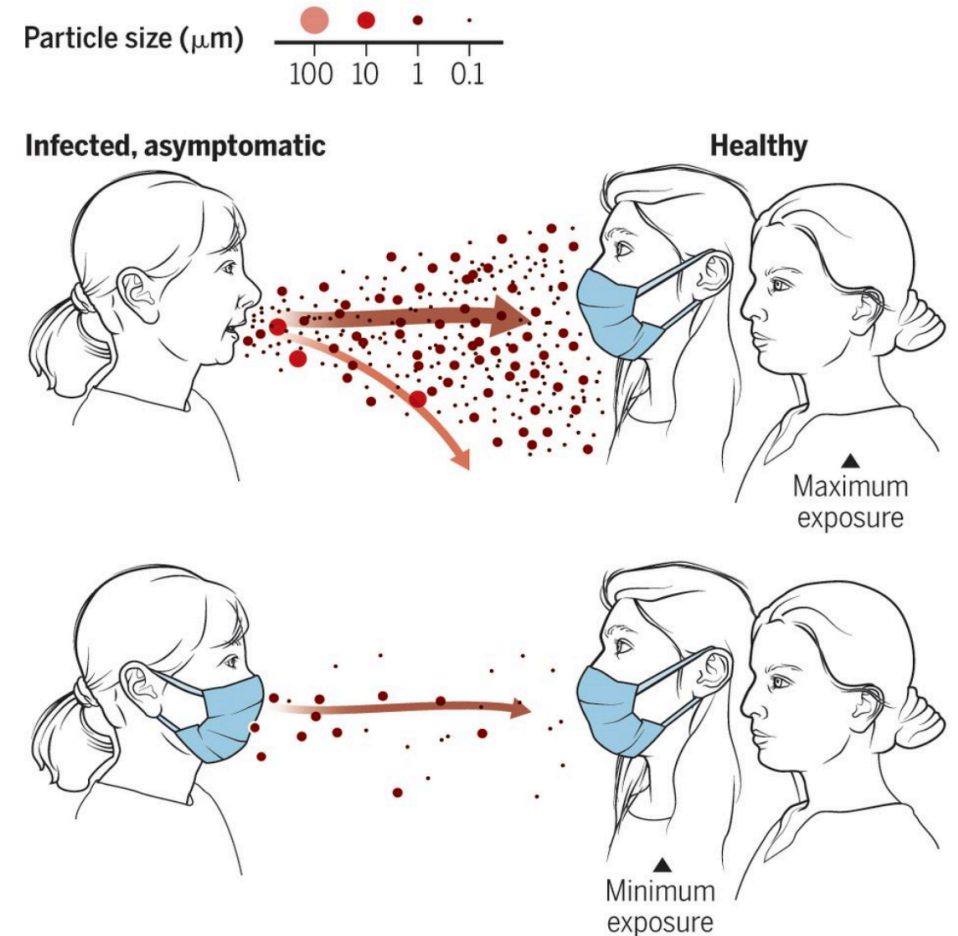
The virus is thought to spread mainly from person to person.

- Between people who are in close contact with one another (within about 6 feet).
- Through respiratory droplets produced when an infected person coughs, sneezes, or talks.
- These droplets can land in the mouths or noses of people who are nearby or possibly be inhaled into the lungs.

The virus may be spread in other ways.

- Touching a surface or object that has the virus on it and then touching their own mouth, nose, or possibly their eyes. This is not thought to be the main way the virus spreads.

Source: [CDC](https://www.cdc.gov)



GRAPHIC: V. ALTOUNIAN/SCIENCE

## *239 Experts With One Big Claim: The Coronavirus Is Airborne*

The W.H.O. has resisted mounting evidence that viral particles floating indoors are infectious, some scientists say. The agency maintains the research is still inconclusive.



## NEWS

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## Coronavirus: WHO rethinking how Covid-19 spreads in air



REUTERS

The World Health Organization has acknowledged there is emerging evidence that the coronavirus can be spread by tiny particles suspended in the air.



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## COVID-19 (CORONAVIRUS) PREPAREDNESS RESOURCES

SHARE THIS



“Transmission of SARS-CoV-2 through the air is sufficiently likely that airborne exposure to the virus should be controlled. Changes to building operations, including the operation of heating, ventilating, and air-conditioning systems, can reduce airborne exposures.”

“Ventilation and filtration provided by heating, ventilating, and air-conditioning systems can reduce the airborne concentration of SARS-CoV-2 and thus the risk of transmission through the air...”

**CDC**

**COVID-19 Employer Information for Office Buildings**

**ASHRAE EPIDEMIC TASK FORCE**

**Commercial COVID-19 Guidance**

# ASHRAE: Reopening Guidance and Building Readiness

ASHRAE has issued guidance for commercial buildings.

ASHRAE > COVID-19 > Buildings > Commercial

- Flush the air in a building for two full hours before and after occupancy.
- Open Outside Air (OA) to the maximum possible while maintaining acceptable indoor conditions.
- Disable Demand Control Ventilation.
- VAV systems: Increase discharge air temperature to max to encourage open VAV terminal unit dampers.
- Maintain a slightly positive building pressure.
- Divert outside air to occupied spaces.
- Maintain relative humidity levels between 40 and 60%.

## CDC and ASHRAE Summary

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Both the Centers for Disease Control and Prevention and ASHRAE currently recommend increasing outside air ventilation rates as the principal means of lowering risk of transmission.

- Increase the percentage of outdoor air, (e.g., using economizer modes of HVAC operations) potentially as high as 100% (first verify compatibility with HVAC system capabilities for both temperature and humidity control as well as compatibility with outdoor/indoor air quality considerations).
- Increase total airflow supply to occupied spaces, if possible.
- Disable demand-control ventilation (DCV) controls that reduce air supply based on occupancy.
- Flush the air in a building for two full hours before and after occupancy.
- Improve central air filtration to the MERV-13 or highest compatible with the filter rack.
- Use methods to physically separate employees in all areas of the building, including work areas and other areas such as meeting rooms, break rooms, parking lots, entrance and exit areas, and locker rooms. Adjust controls for partial occupancy.



AMERICAN  
SOCIETY FOR  
MICROBIOLOGY

ASM NEWS

# COVID-19 Research Registry

This registry includes top-ranked, COVID-19 research articles curated by experts and serves as a resource for scientists working to accelerate scientific research on SARS-CoV-2.

[VISIT THE REGISTRY →](#)

EXPLORE

SHOW ME ALL YOUR  
**SCIENCE**

FIND ME  
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MORE

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SARS-CoV-2

CAREERS

**Help Me  
Get Ahead →**

**TEMPERATURE CHECK**

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Prioritize health and safety in a post-COVID-19 world with the third-party verified WELL Health-Safety Rating

# IWBI HEALTH & WELLNESS PROGRAMS



WELL  
CERTIFICATION



PROFESSIONAL  
ACCREDITATION



MEMBERSHIP  
PROGRAM



WELL  
PORTFOLIO



WELL HEALTH-  
SAFETY RATING

# INTERNATIONAL WELL BUILDING INSTITUTE

The organization that oversees the world's premier framework for advancing health in buildings and spaces of all kinds: the WELL Building Standard (WELL).

4,400+

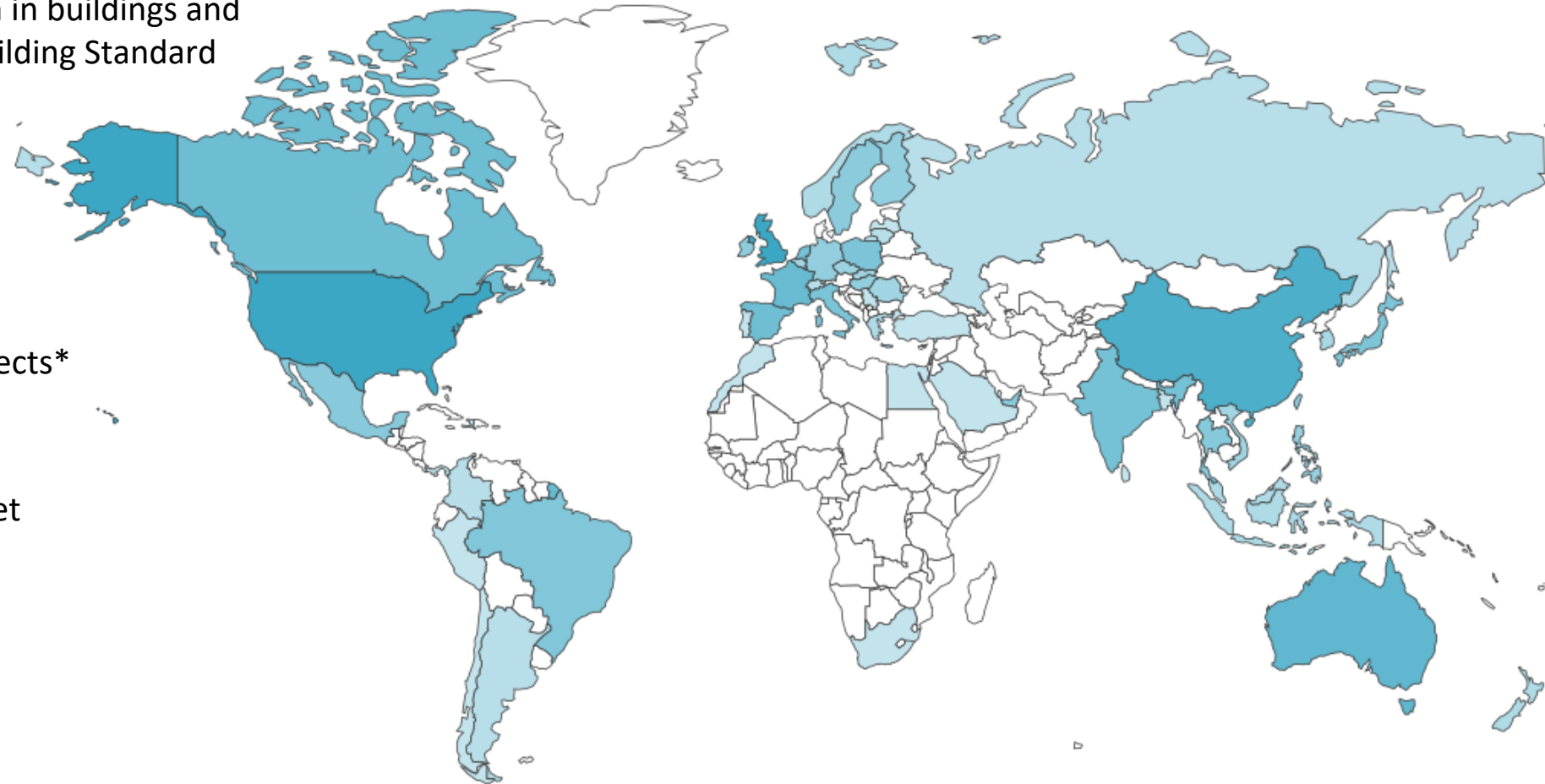
WELL projects\*

618M+

Square Feet

62

Countries



\*Includes WELL Certified, WELL Precertified and WELL registered projects

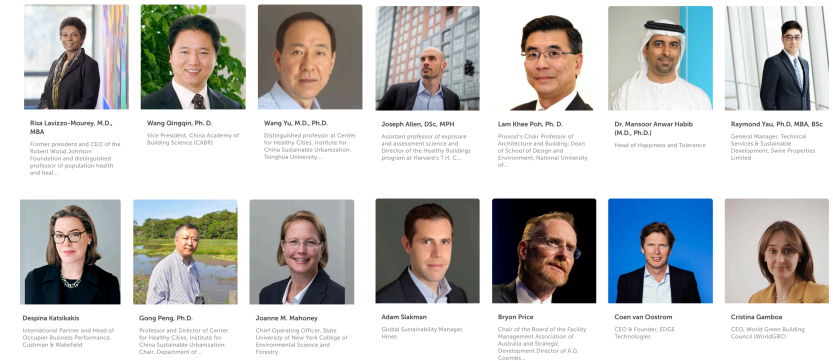
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# EVIDENCE-BASED APPROACH TO HELP SUPPORT SPACES THAT ADVANCE HEALTH AND SAFETY

## IWBI TASK FORCE

On COVID-19 & Other Respiratory  
Infections: Prevention and  
Preparedness, Resilience and  
Recovery

The genesis of the rating was feedback from the IWBI Task Force on COVID-19, a group of nearly 600 public health experts, virologists, government officials, academics, business leaders, architects, designers, building scientists and real estate professionals established in late March 2020 to inform IWBI's response to the pandemic.



## INSTITUTIONAL KNOWLEDGE

Guidance on the spread of COVID-19 and other respiratory diseases developed by the World Health Organization (WHO), U.S. Centers for Disease Control and Prevention (CDC), global disease control and prevention centers, emergency management agencies, recognized standard-making associations, and leading academic and research institutions.

## WELL BUILDING STANDARD

A sub-set of evidence-based strategies, adapted for facilities operations and management, from the WELL Building Standard

## WELL ADVISORIES

**Industry experts and researchers** across the WELL Concept Advisories, the WELL Research Advisory, the WELL Advisory for Sports and Entertainment Venues, the WELL Advisory for Hotels and Resorts and the WELL Airport Advisory also provided extensive insights

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The **WELL Health-Safety Rating** is an evidence-based, third-party verified rating focused on operational policies, maintenance protocols, emergency plans, and stakeholder education and engagement to address a post-COVID-19 environment now and broader health and safety-related issues into the future.



## Operational Policies

Adoption of policies and procedures to facilitate a healthy and safe workplace or facility.



## Maintenance Protocols

Implementation of facilities management and maintenance protocols designed to reduce the risk of infectious disease transmission.



## Emergency Plans

Development of emergency plans and protocols that, when applied, help to safeguard building users.



## Stakeholder Education and Engagement

Regular communications, education and signage that capture important updates, activities and information.

# EARLY ADOPTERS

Meet some of the iconic buildings and leading organizations that have enrolled in the WELL

Health-Safety Rating:

ACCIONA SA  
Adventist Health  
Aedifica  
Alpin Limited (Masdar City)  
American Savings Bank  
Bartra Capital Property  
CAMCO Management Co.  
Carrier  
Catalyst Partners  
CBD Z03  
CBRE Barcelona  
CBRE Madrid  
China Overseas Office Capital  
Cleveland Clinic Courts / Cleveland Cavaliers  
Climate Pledge Arena  
Community Investment Strategies, Inc  
CR Land  
Deerns  
Delos China  
Delos Living LLC  
Delta Electronics, Inc.  
Denholtz Properties  
Department of Earth System Science, Tsinghua University  
Empire State Realty Trust  
EMSI  
GFP Real Estate

Ghelamco Poland Sp. z o.o.  
Glenstar  
GuocoLand China Ltd.  
HBMSU  
Heitman  
Herman Miller Group  
Hornets Sports & Entertainment - Spectrum Center  
HRO  
Infancix Co., Ltd  
International Commerce Centre  
International WELL Building Institute PBC  
Ivanhoé Cambridge  
Jiahui Health  
JLL  
Karisma Hotels and Resorts  
Kilroy Realty Corporation  
Kimball  
Laguna  
Lendlease Australia Office Portfolios: Australian Prime  
Property Fund Commercial, Lendlease International  
Towers Sydney Trust and Lendlease One International  
Towers Sydney Trust  
Lincoln Property Company  
M Moser Associates  
Mace  
Maple Leaf Sports & Entertainment (MLSE), which encompasses the Toronto Maple Leafs (NHL), Toronto

Raptors (NBA), Toronto FC (MLS), & Toronto Argonauts (CFL)  
Menarco Development Corporation  
Milliken & Company  
ML7  
Montage International  
Moody Center  
National University of Singapore  
New Belmont Arena  
New York Yankees  
Oak View Group  
Out of the Box Ventures  
Overbury Morgan Lovell  
OVG Arena Alliance & Stadium Alliance  
OVG Facilities  
Pacers Sports & Entertainment: Bankers Life Fieldhouse (Indianapolis, Ind.)  
Pacers Sports & Entertainment: St. Vincent Center/Indiana Pacers Training Facility (Indianapolis, Ind.)  
Parmenter Realty Partners  
Phipps Conservatory and Botanical Gardens  
RMZ Corp  
Rocket Mortgage FieldHouse / Cleveland Cavaliers & Cleveland Monsters  
Royal Albert Hall  
Rubrik India Pvt Ltd

Savanna  
Serpentini Auto Group  
Shanghai Landleaf Architecture Technology Co. Ltd  
ShouGang Group  
Sino-Ocean  
Space Matrix Design Consultants Pvt. Ltd  
Spurs Sports & Entertainment  
TAIPEI 101 Tower  
Taiwan Architecture & Building Center  
Teknion  
The Florida Panthers and BB&T Center  
The Forestias  
The Related Group  
Thornton Tomasetti  
TITANIUM OFFICE SOLUTIONS MEXICO  
Uber Technologies, Inc.  
UltraStar Harrah's Ak Chin Resort Maricopa, Az.  
United Center  
Webster Bank Arena  
Wells Fargo Center, Philadelphia, Pa.  
Wolfgang Puck Fine Dining Group  
Woonerf Inc.  
Yuexiu Commercial

# Why this rating matters **now**

Created in response to the COVID-19 pandemic and consisting of operational interventions that can be made to help mitigate its spread, including the five key themes covered in the rating:

- Cleaning and Sanitization Procedures
- Emergency Preparedness Programs
- Health Service Resources
- Air and Water Quality Management
- Stakeholder Engagement and Communication

# CLEANING & SANITIZATION PROCEDURES

## GET TO KNOW THE FEATURES

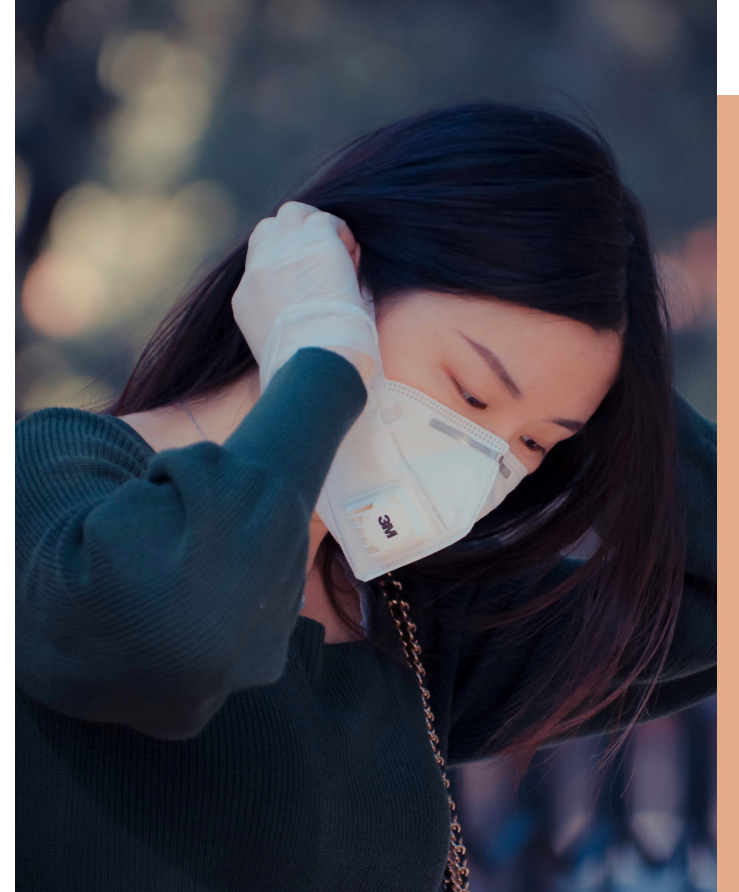


- Support Handwashing
- Reduce Surface Contact
- Improve Cleaning Practices
- Select Preferred Cleaning Products

# EMERGENCY PREPAREDNESS PROGRAMS

## GET TO KNOW THE FEATURES

- Develop Emergency Preparedness Plan
- Create Business Continuity Plan
- Plan for Healthy Re-Entry
- Provide Emergency Resources
- Bolster Emergency Resilience



# HEALTH SERVICE RESOURCES

## GET TO KNOW THE FEATURES



- Provide Sick Leave
- Provide Health Benefits
- Support Mental Health Recovery
- Promote Flu Vaccines
- Promote a Smoke-Free Environment

# AIR AND WATER QUALITY MANAGEMENT

## GET TO KNOW THE FEATURES



- Assess Ventilation
- Assess and Maintain Air Treatment Systems
- Develop Legionella Management Plan
- Monitor Air and Water Quality
- Manage Mold and Moisture

# STAKEHOLDER ENGAGEMENT & COMMUNICATION

## GET TO KNOW THE FEATURES

- Promote Health and Wellness
- Share Food Inspection Information



# INNOVATION

This feature provides projects several options to go beyond features of the WELL Health-Safety, including proposing new interventions that address health and well-being in novel ways and achieving relevant design-based features from the WELL Building Standard.

WELL HEALTH-SAFETY / INNOVATION / FEATURES

## Innovate WELL Health-Safety

Promote excellence in project design and continuous evolution of the WELL Health-Safety Rating

OVERVIEW

RESOURCE 0

VERIFICATION

### SUMMARY

This feature provides projects several options to go beyond features of the WELL Health-Safety, including proposing new interventions that address health and well-being in novel ways and achieving relevant design-based features from the WELL Building Standard.

### REQUIREMENTS

#### For All Spaces

Choose between the following:

#### *Option 1: Innovation Proposal*

The project submits a proposal that meets the following requirements:

- a. Consistent with applicable laws and regulations and leading practices in building design and operations.
- b. Substantiated by existing scientific, medical and/or industry research.
- c. Positively impacts project occupants or the general public through one of the below:
  1. Goes above and beyond the current requirements of an existing WELL Health-Safety Rating feature.
  2. Relates to acute health and safety in a novel way that is not already addressed in a WELL Health-Safety Rating feature.

# YOUR WELL HEALTH-SAFETY JOURNEY



## Enroll

Review the criteria and sign up to pursue the WELL Health-Safety Rating.



## Customize Your Approach

Select the features that are relevant to your project.



## Review

Upload documentation for third-party review by GBCI to confirm you've successfully met the feature-specific intent and requirements.



## Achieve

Earn the WELL Health-Safety Rating and promote your achievement.



## Renew

Apply for your annual seal to demonstrate ongoing commitment to upholding operational policies, maintenance protocols, emergency plans and stakeholder engagement.

# PRICING

## Standard locations

**\$4,200** USD /location

---

Individual spaces/buildings not yet registered to pursue WELL Certification or subscribed in the WELL Portfolio program. Bulk pricing is available for locations having a single owner and applying streamlined documentation.

Projects already registered for WELL may also pursue the rating.  
See pricing details for more information.

## High-volume, multi-use locations

**\$12,600** USD /location

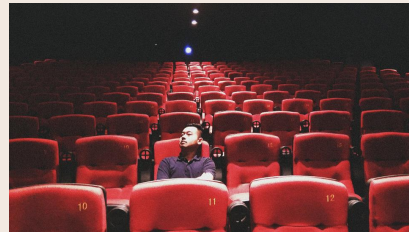
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High-volume locations are designed to accommodate more than 10,000 people daily and provide four or more distinct uses, such as retail, dining, entertainment, residential, lodging, offices, etc.  
Examples: **stadiums, large hotel complexes, airports and shopping centers.**

# APPLICABLE FOR ANY FACILITY TYPE



Sports &  
Entertainment



Movie Theaters



Hotels & Resorts



Restaurants



Offices



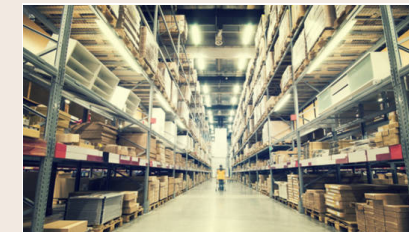
Education



Retail



Multifamily



Industrial

and more.....

# WELL HEALTH-SAFETY RATING: **REOPEN WITH CONFIDENCE**



**FLEXIBLE:** Applicable for large and small organizations alike across all facility types. Users can pursue the strategies that reflect their specific needs and goals, with the option to adjust their approach at each annual renewal.



**VERIFIED:** Anchored in third-party document review and annual verification of policies, protocols and strategies through Green Business Certification Inc. (GBCI), instilling confidence in an organization's stakeholders.

**SCALABLE:** Provides a framework for helping organizations to efficiently develop, implement



and validate health and safety protocols and plans across multiple properties with streamlined documentation pathways and scalable pricing.



**ACCESSIBLE:** Priced for accessibility, with a focus on interventions that require little to no capital expenditure.

# LOOK FOR THE SEAL



## Communicate to Build Confidence

The WELL Health-Safety seal can be placed on every space that has earned the rating as a visual mark to indicate the work an organization has done to apply measures mapped to scientific evidence that help to support the health of individuals in a post-COVID-19 world.





# A MOVEMENT OF LEADERS

## JOIN THE WELL AP COMMUNITY

The WELL Accredited Professional™ (WELL AP™) credential denotes expertise in the WELL Building Standard and a commitment to advancing human health and wellness in buildings and communities.

GROW YOUR KNOWLEDGE • ADVANCE YOUR CAREER • MAINTAIN LEADERSHIP

# Get in touch

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[wellcertified.com/health-safety](https://wellcertified.com/health-safety)

[jaclyn.whitaker@wellcertified.com](mailto:jaclyn.whitaker@wellcertified.com)

[carlie@ecoworks-studio.com](mailto:carlie@ecoworks-studio.com)



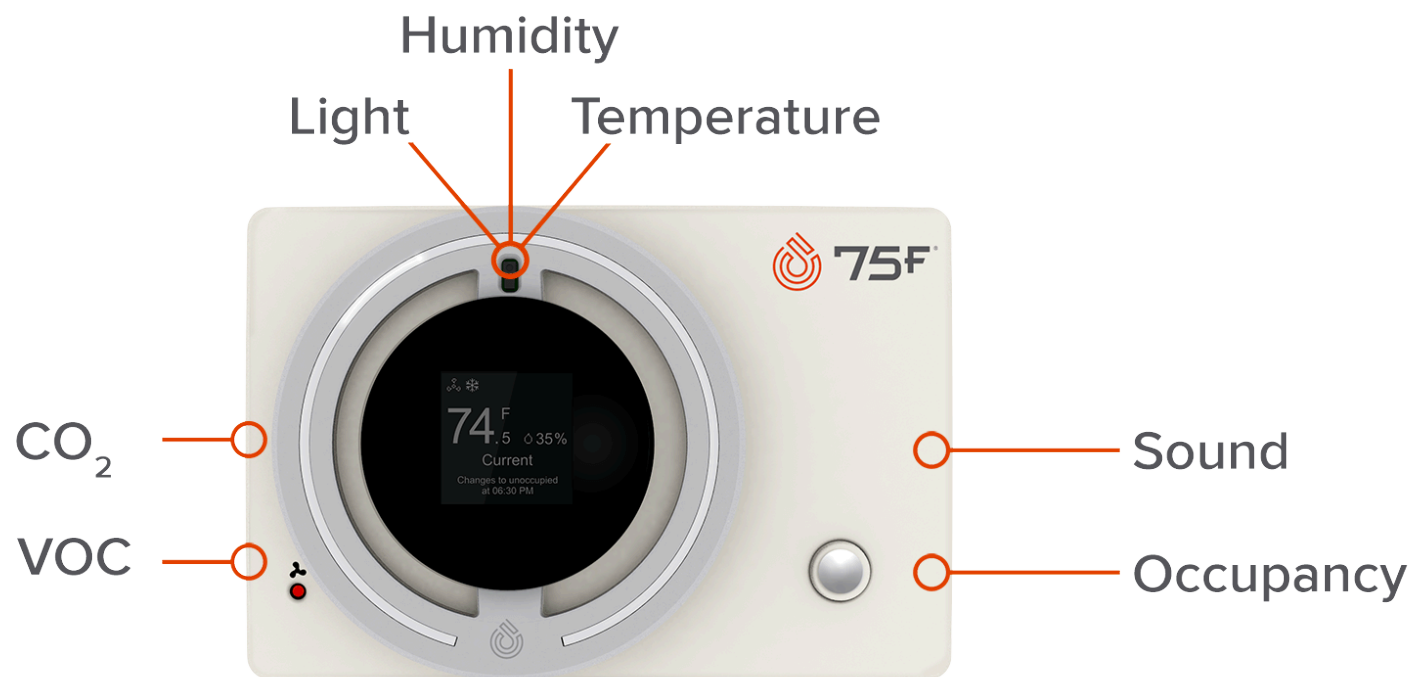
**Q&A**

**TEMPERATURE CHECK**

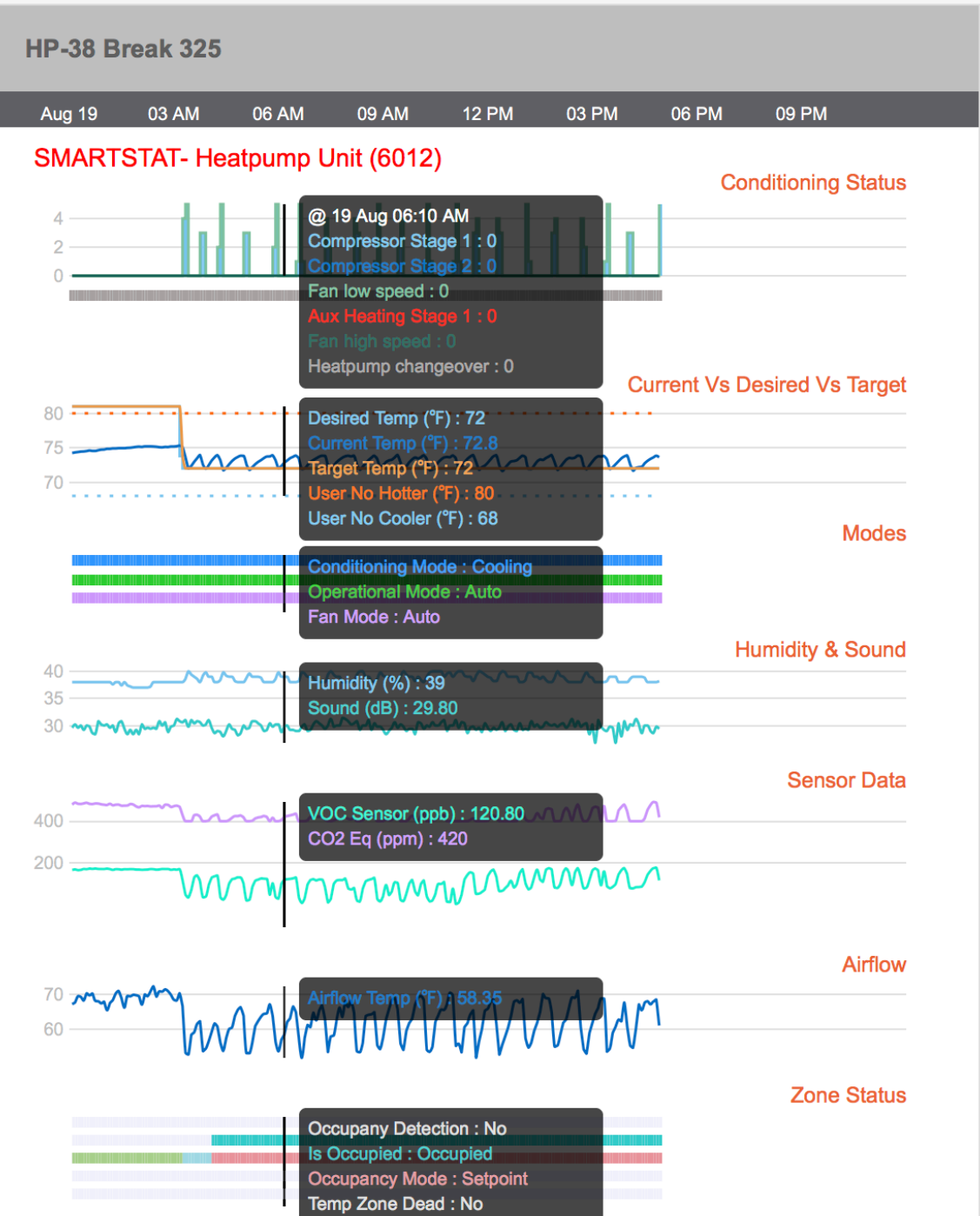
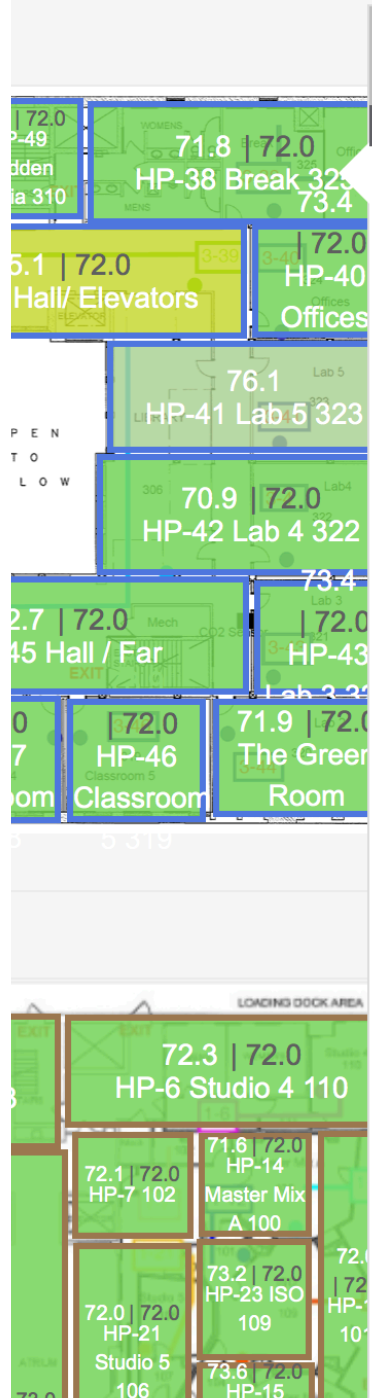
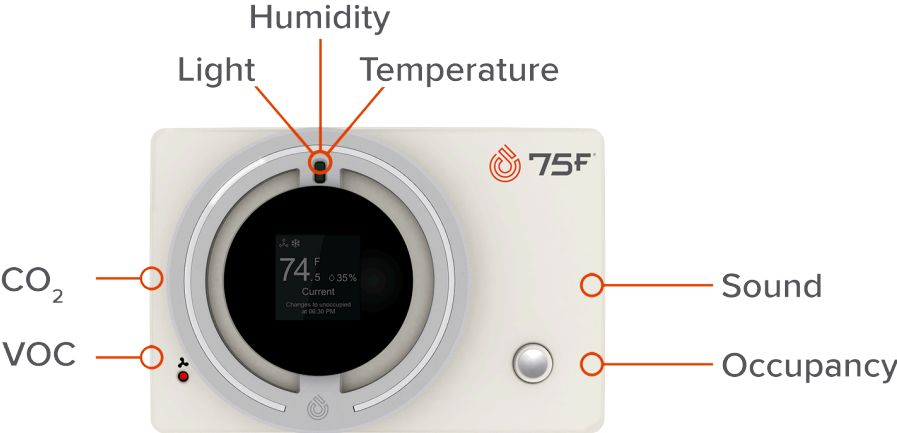
# IWBI Guidance on Reopening

- |                                  |   |
|----------------------------------|---|
| 1. Recap: Guidelines and Science | 2. IWBI Intro   |
| 3. Health-Safety Rating          | <b>4. Building Wellness Diagnostics and 75F Epidemic Mode</b> |
| 5. Energy Impacts of Ventilation | 6. Q & A  |

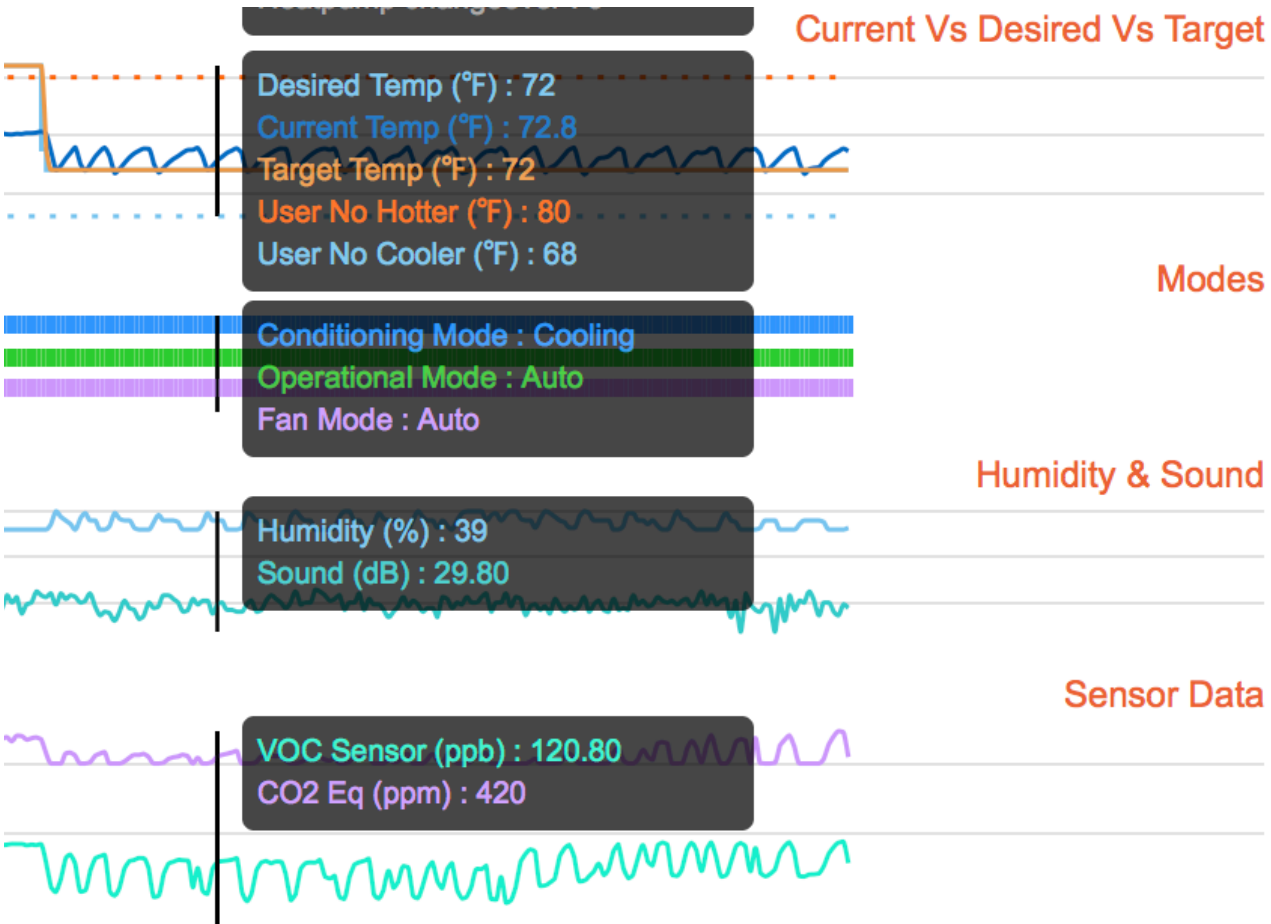
# 75F Sensing



# 75F Sensing



# 75F Sensing



## 75F Epidemic Mode™

- **Smart Purge™** automatically flushes the air in the building prior to occupancy.
- Maximize outside air intake based on equipment and weather.
- Open up zone dampers or VAV boxes.
- Sequences are automatically updated as CDC and ASRAE guidelines change, or to meet state or federal regulations.







OAO

AUTO

HEAT ONLY

COOL ONLY

Equipment Status :

Fan Stage 1 thru 4 **ON** | Cooling Stage 1,3 **ON**

ECONOMY



Min Inside Humidity 40 % ▼

Max Inside Humidity 40 % ▼

Compensate for Humidity



Demand Response Mode



Epidemic Mode Settings

Smart Pre Purge



Smart Post Purge



Enhanced Ventilation





## Enhanced IAQ Monitoring and Management:

- Monitor the temperature, humidity and occupancy and indoor air quality of each zone independently.
- Maintain space setback temperatures during unoccupied periods along with emergency building heating so relative humidity does not rise above critical levels.

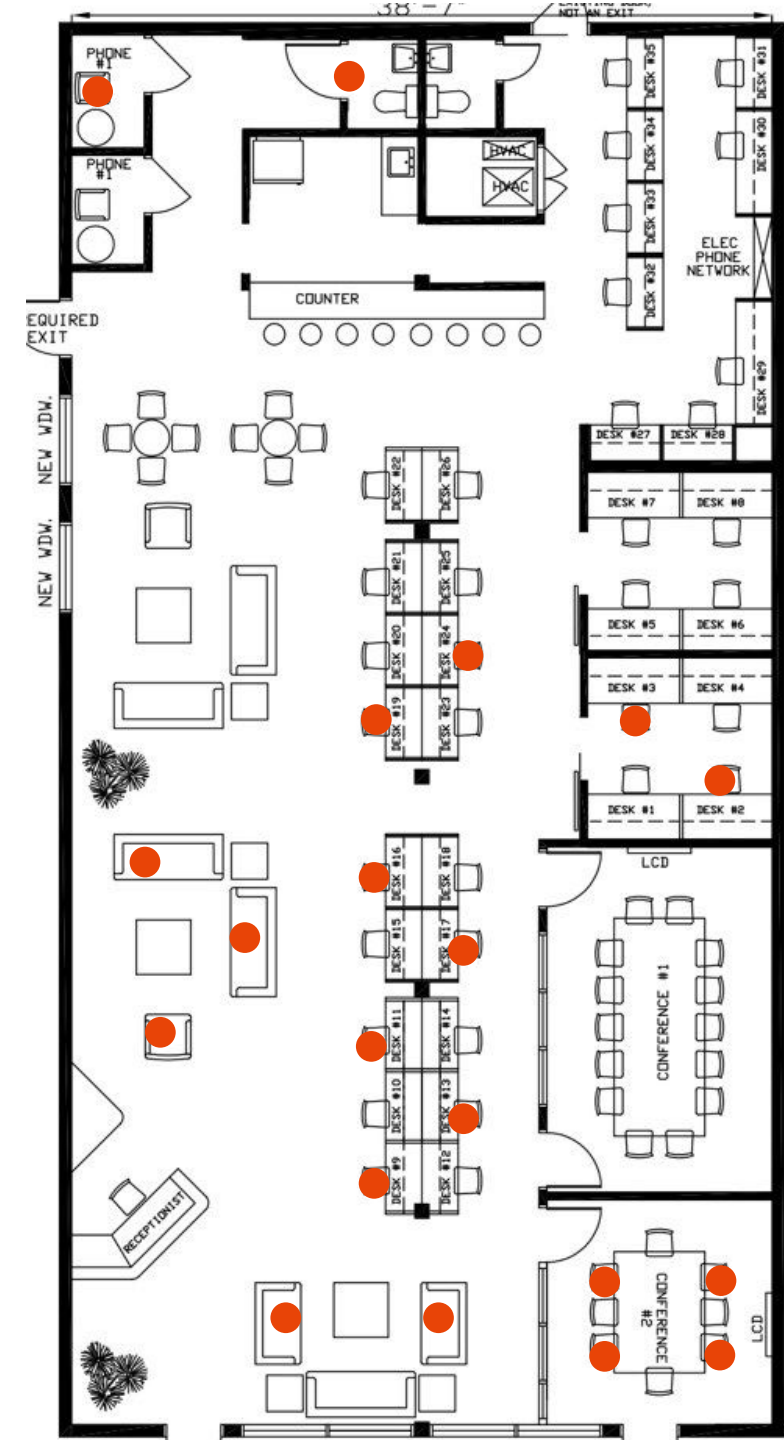
## Built-In Occupancy Sensors Track Building Utilization Rates:

- Dynamically rebalance airflow from partially occupied or unused spaces to increase outside air ventilation in all high occupancy areas.
- Reduce operating expense and equipment and maintenance costs from ventilating or cooling unoccupied indoor spaces.
- Review granular occupancy data for each building or office at a zone level to comply with policies or regulations.



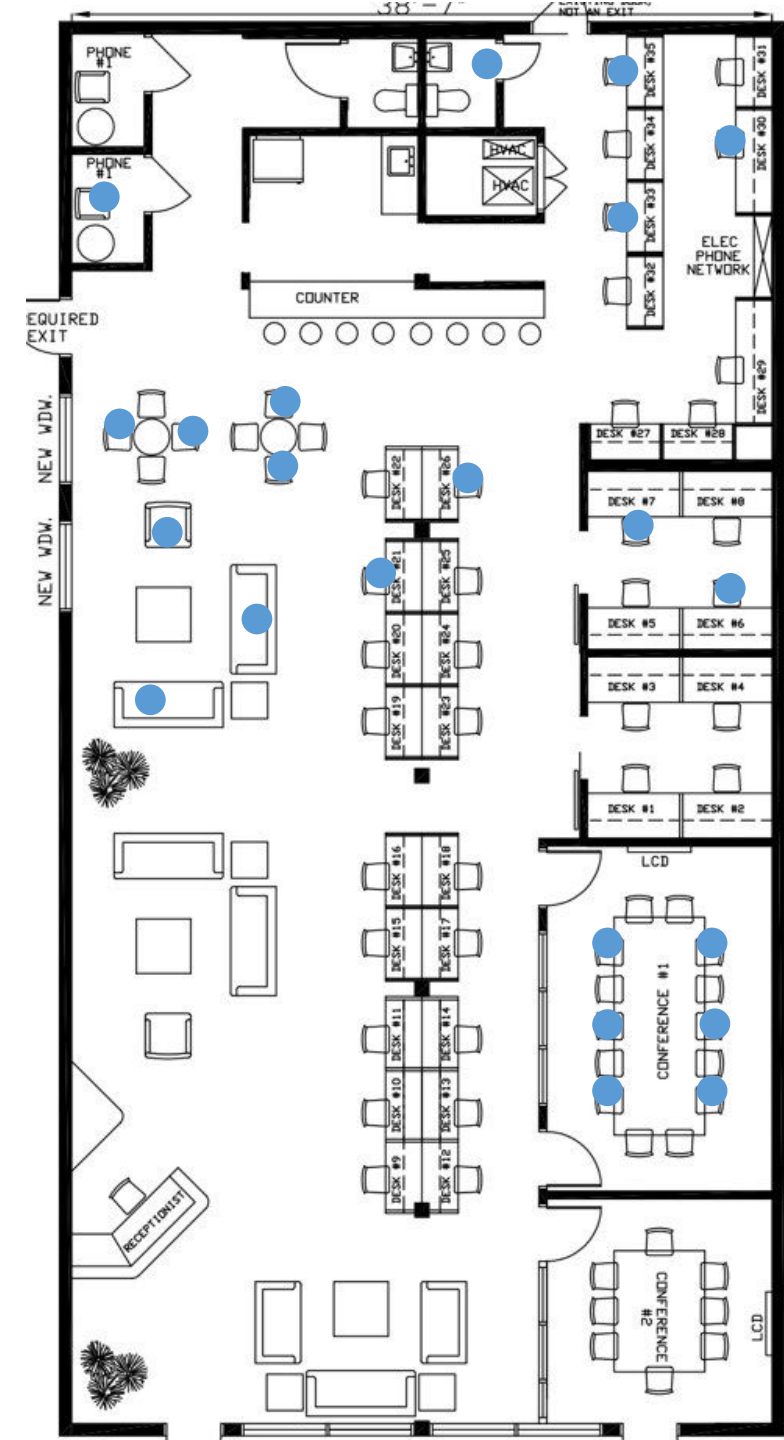
## No Occupancy Detection – Alternate Use

- Alternate occupancy of a space to every other day – this creates a 36 to 48-hour period for Coronavirus to deactivate.
- Program your BAS to direct air to the occupied zones by changing the unoccupied zones to setback.
- Change schedules on single-zone systems to condition occupied spaces.



## No Occupancy Detection – Alternate Use

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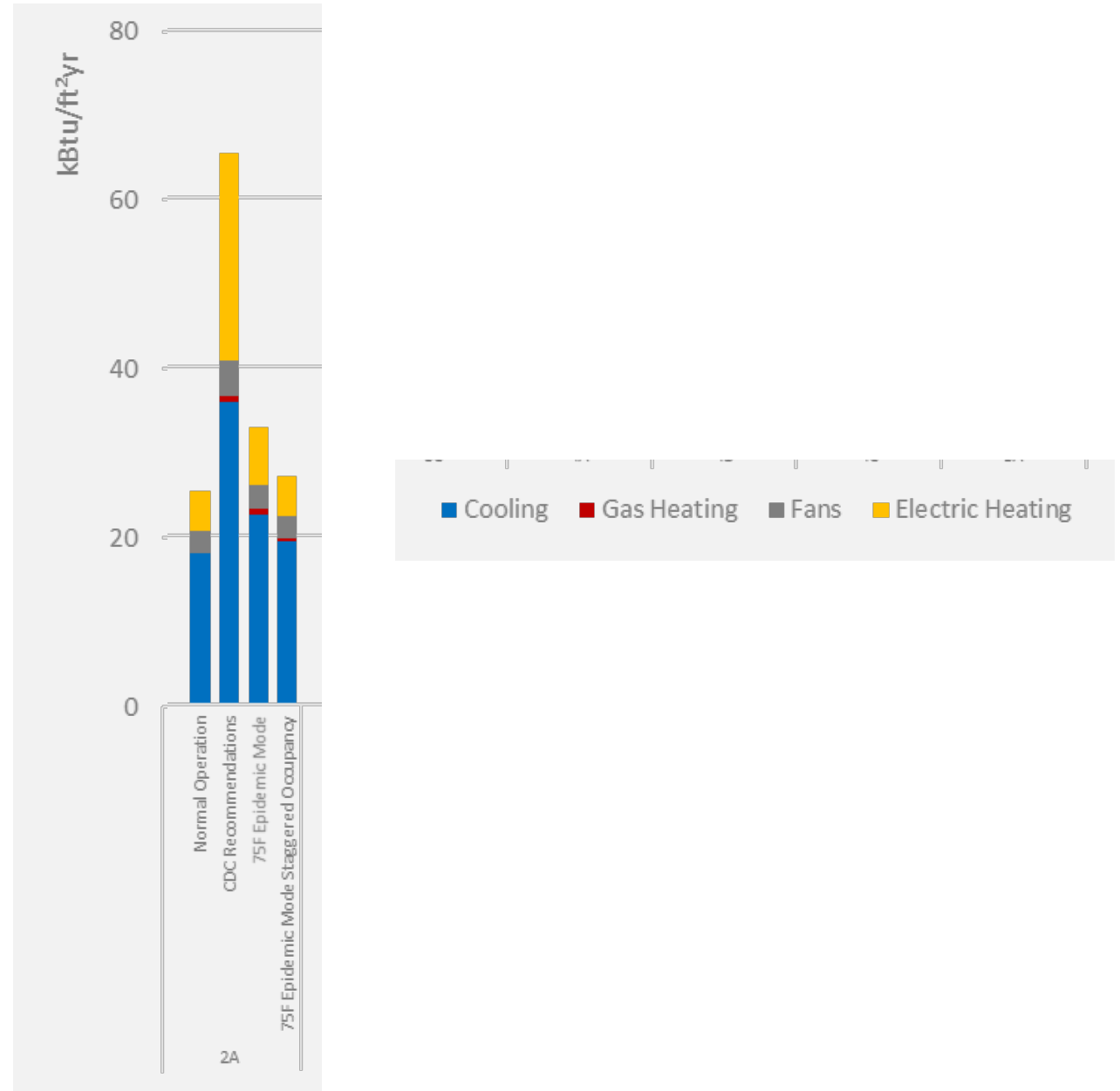
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75F Epidemic Mode

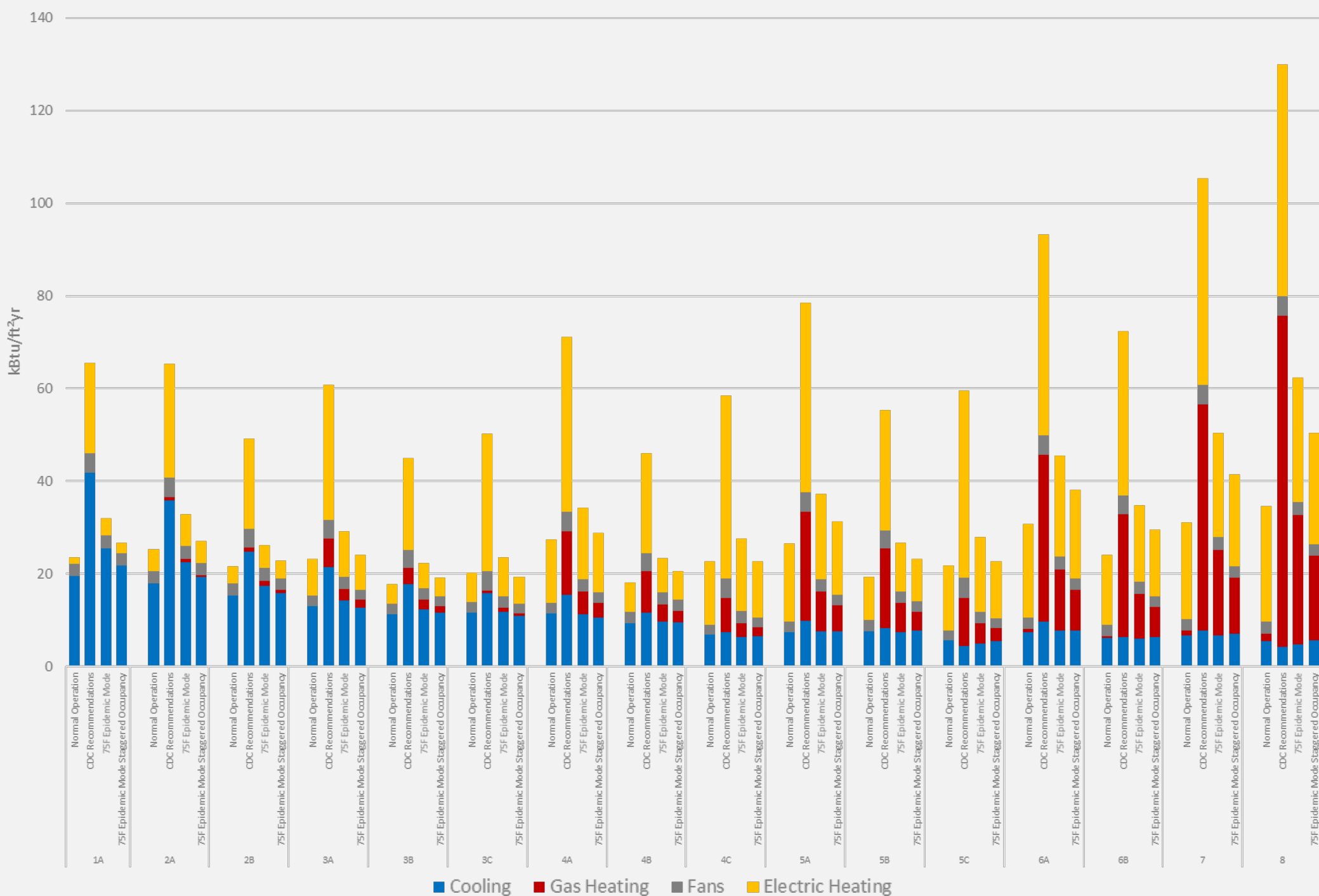
6. Q & A

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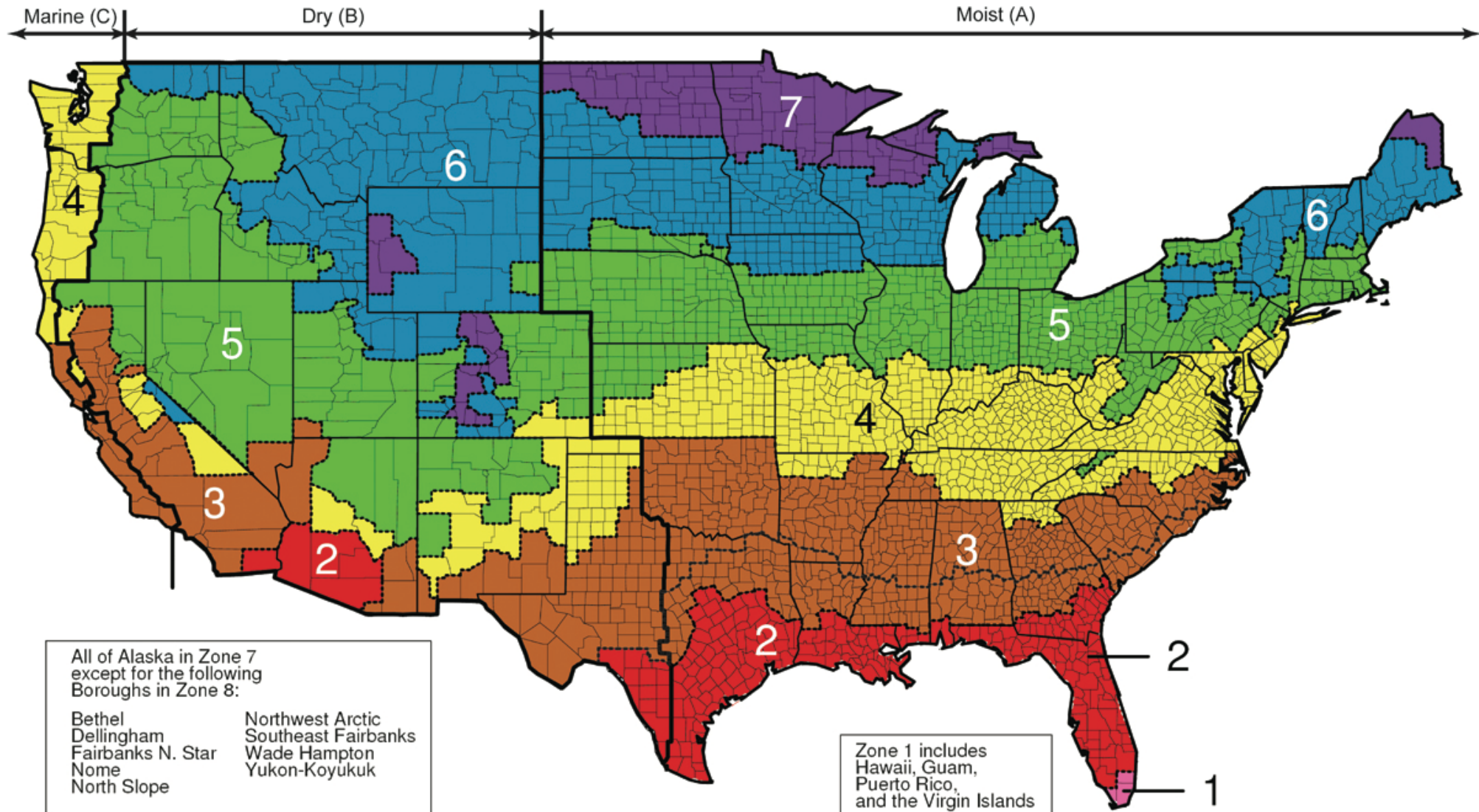
## Annual Results by HVAC End Use



# Annual Results by HVAC End Use

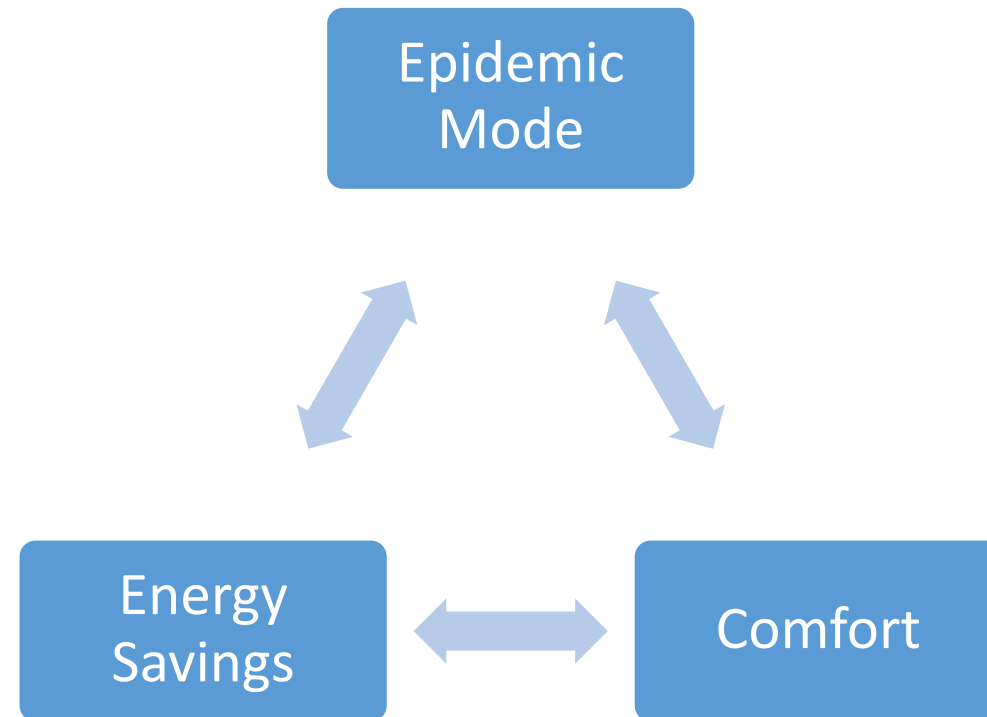


# U.S. Climate Zone Map



Protect your employees and customers today while saving energy

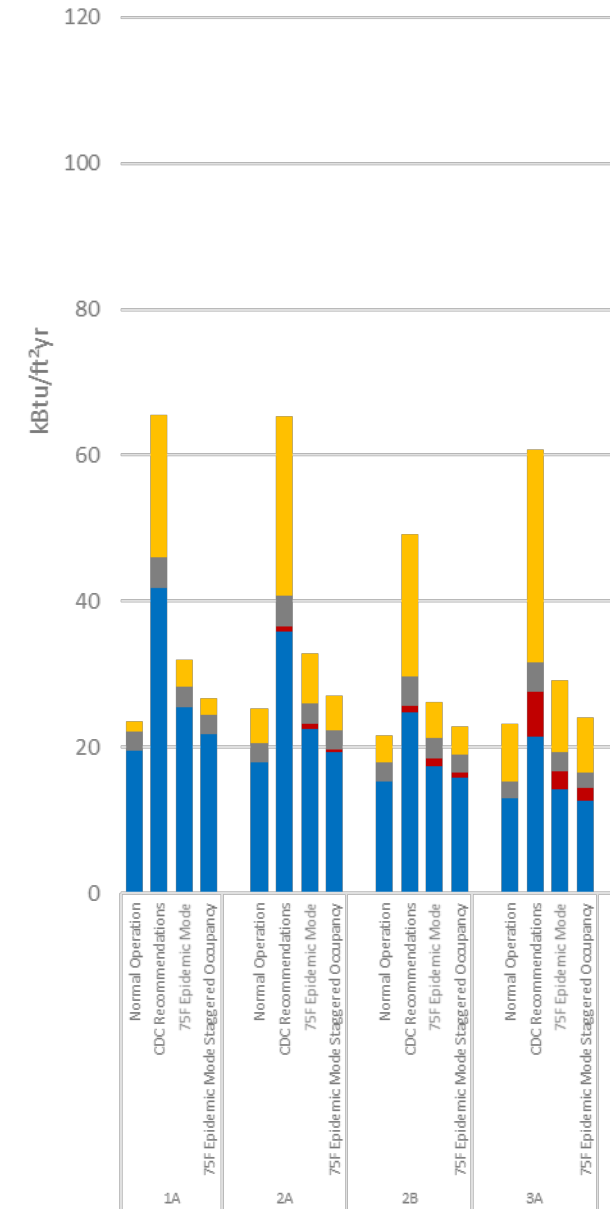
Save the planet with 30-50% energy savings



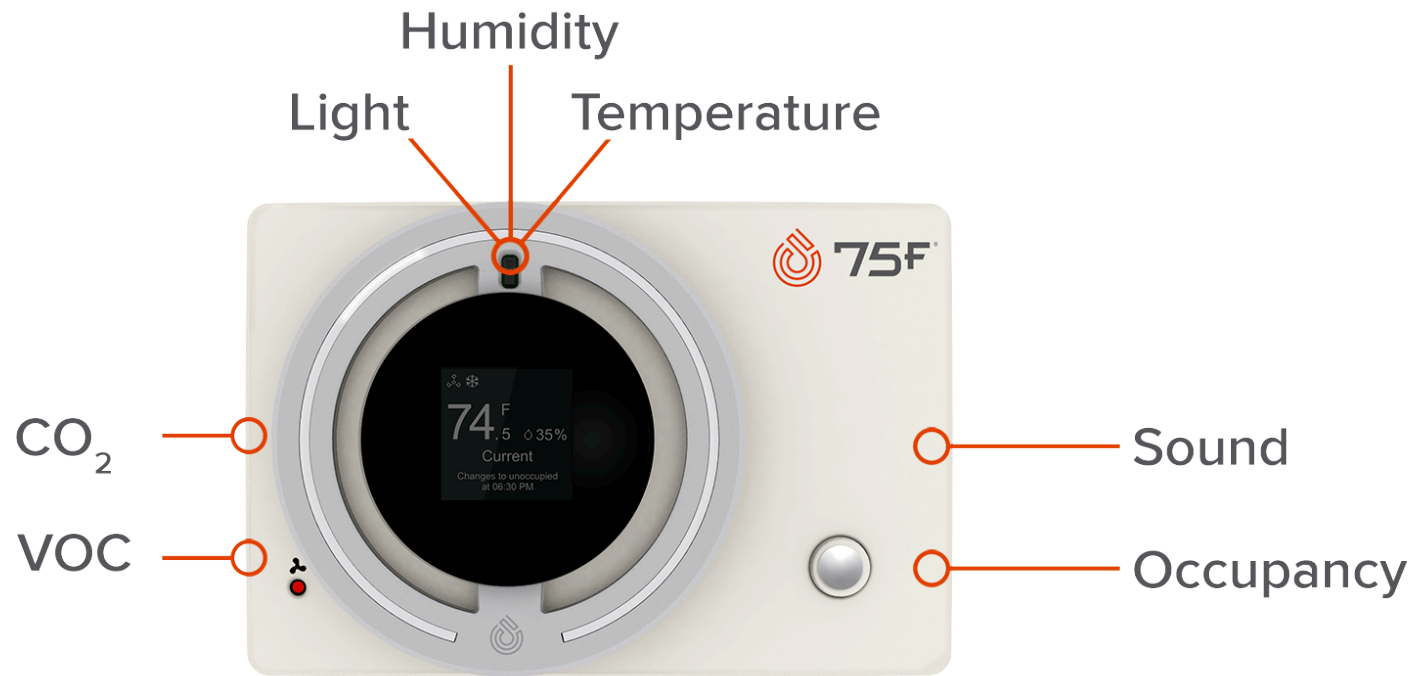
# Epidemic Mode Now (Efficiently), Deep Savings Later

## Outside Air Optimization

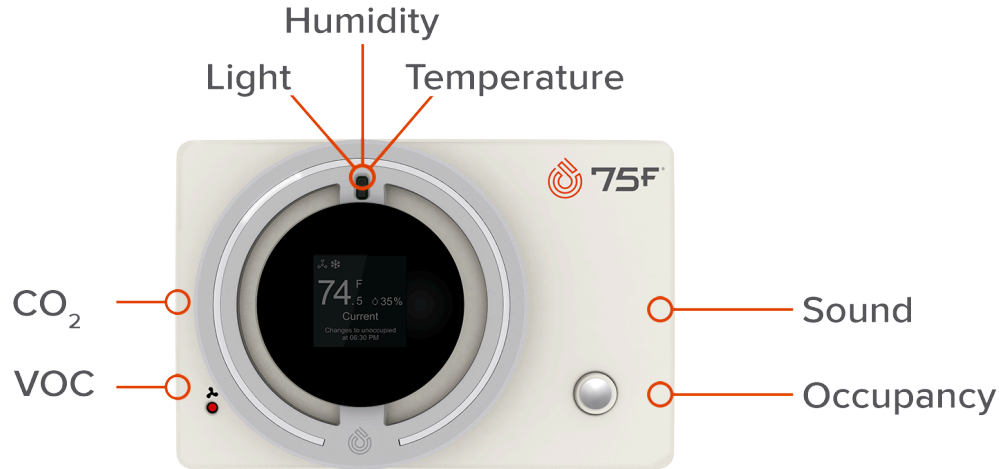
- Provides the outside air control sequences that are key to providing 75F Epidemic Mode: Smart Purge and Enhanced Ventilation – energy efficient ways to follow ASHRAE Guidelines.
- Once Epidemic Mode is no longer needed, we shift priority towards deep energy savings with:
  - Demand Control Ventilation.
  - Comparative Enthalpy Economy.



## 75F Sensing



# 75F IAQ and Wellness Rapid-Results Test Kit



## Streaming IAQ data in 15 minutes

### Selection Pane

#### Select Site

- ☐ Select all
- ☐ Diamond Hill
- ☐ Flipkart ETV
- ☒ Mikros Engineering

#### Zone

- ☐ Select all
- ☒ Main\_Floor\_Smart\_Stat
- ☐ Main\_Zone\_2

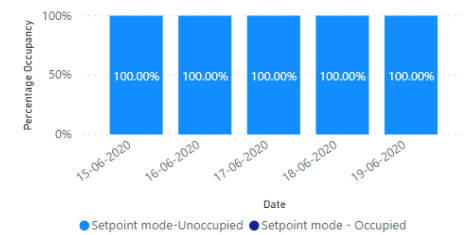
#### Select Date:

6/8/2020 6/29/2020

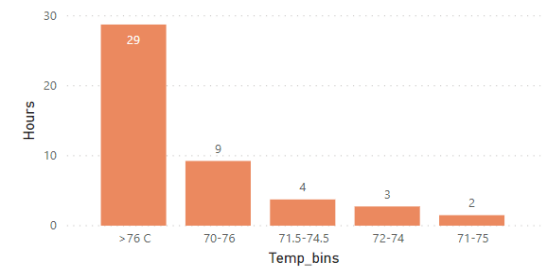


### Indoor Air Quality Monitoring

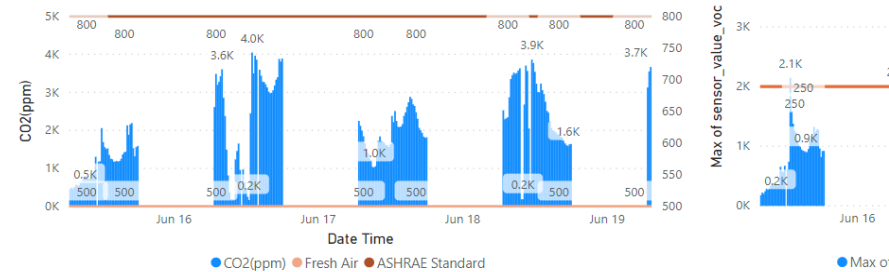
#### Zone occupied duration in Setpoint mode (Minutes)



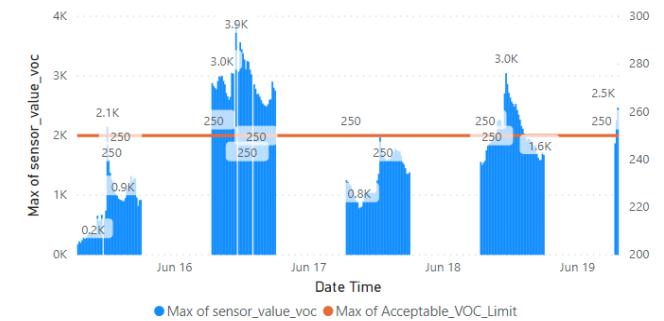
#### Comfort -Temperature based



### CO2 Monitoring



### VOC Monitoring



**Q&A**