

BUILDING the **FUTURE** **TOGETHER**



Please wear you mask
during all session

BEST PRACTICES FOR IAQ

TODAY'S PRESENTERS

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WHAT IS IAQ?

The background features a complex isometric architectural drawing of a building's interior, showing various rooms, corridors, and structural elements. The drawing is rendered in a light, semi-transparent style. A color gradient transitions from a deep blue on the left side to a vibrant red on the right side, creating a modern and technical aesthetic.

WHAT IT'S NOT

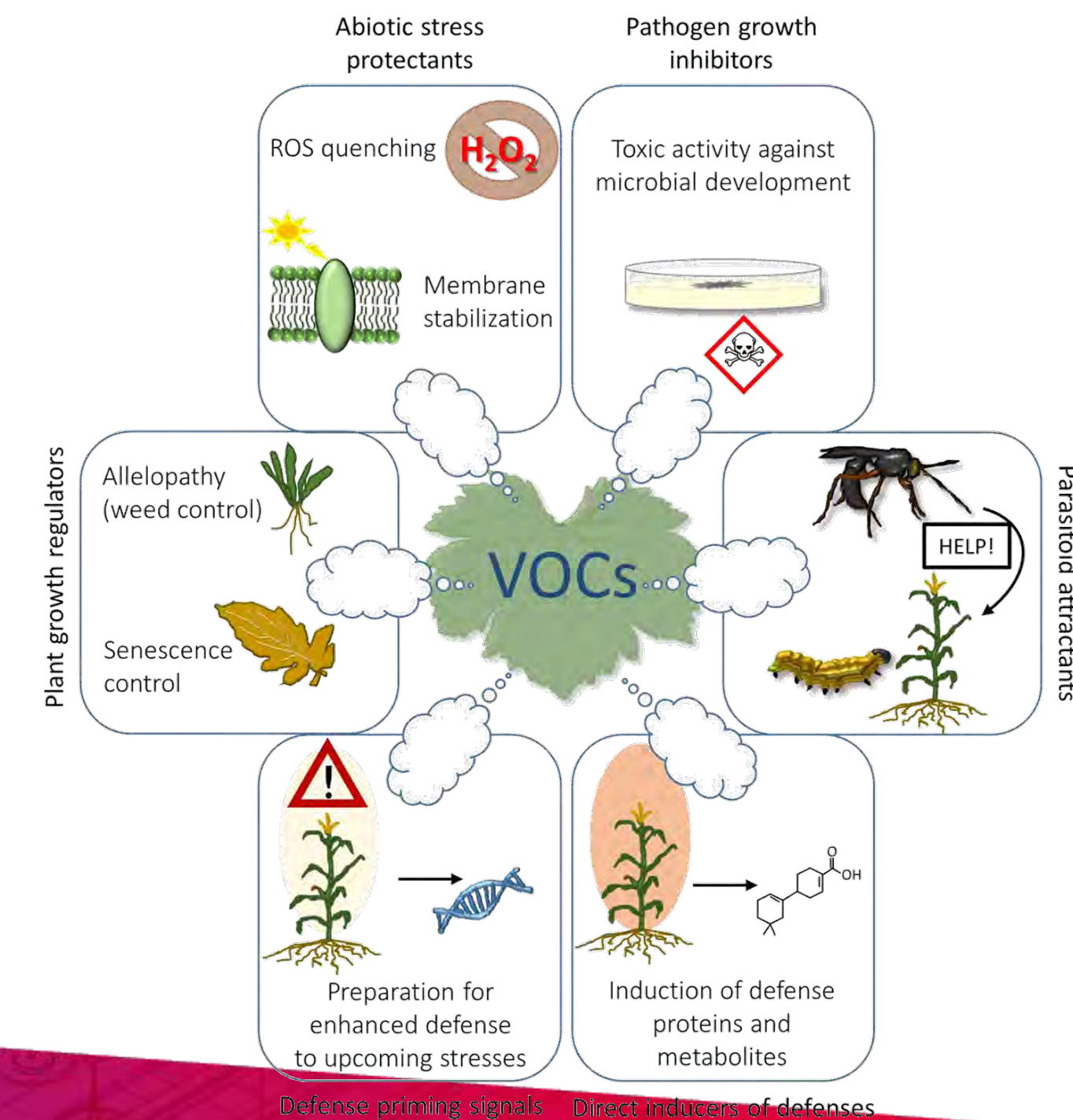
- Mold detection
- VOC analysis
- Asbestos inspection/remediation



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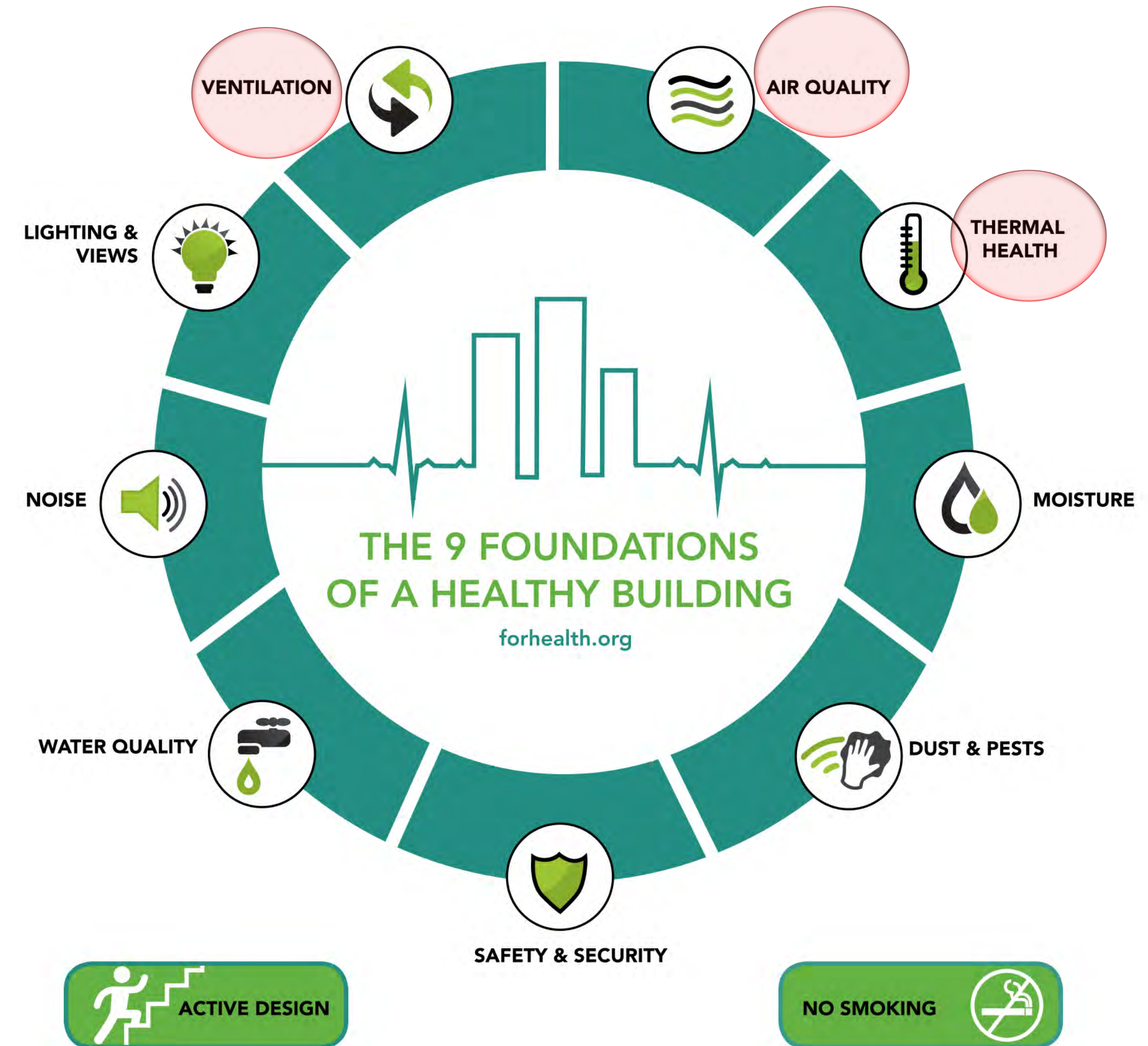
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TODAY'S FOCUS

- Harvard School of Public Health – 9 Foundations of a Healthy Building
- 3 Focus Areas:
 - Ventilation
 - Air Quality
 - Thermal Health
- 80% of IAQ issues addressed by adequate ventilation



BASIS OF PROGRAM

White Paper

1. Filtration
2. Ventilation and Exhaust
3. Economizer
4. Demand Control Ventilation
5. Air Distribution and Building Pressurization
6. General Maintenance
7. Operational Controls
8. CO₂ Monitoring
9. HVAC Assessment Report

<p>State building codes generally specify minimum ventilation rates based on building occupancy type which are often based on the national ASHRAE standard "62.1-2019 Ventilation for Acceptable Indoor Air Quality". In California, the Building Energy Efficiency Standards requires minimum ventilation rates for classrooms, for which the current rates have been in place since 1992.¹ In California, The California Education Code requires school districts to maintain schools in good repair, including HVAC systems that are functional, supply adequate ventilation</p> <p>¹ See Cal. Code Regs., tit. 24, Part 6, Section 120.1 and Table 120.1-A (Minimum Ventilation Rates).</p>	<p>ASHRAE 62.1-2019</p> <p>2-400-2009-0609, et al. (as amended)</p>	<p>Table 120.1-A</p> <p>Minimum Ventilation Rates</p>	<p>Testing assumptions, Energy include: Ventilation</p>	<p>Room Air Change Rate (RAC) based on room volume</p> <p>Room Air Change Rate (RAC) based on room volume</p> <p>Room Air Change Rate (RAC) based on room volume</p>	<p>Room Air Change Rate (RAC) based on room volume</p> <p>Room Air Change Rate (RAC) based on room volume</p> <p>Room Air Change Rate (RAC) based on room volume</p>	<p>Room Air Change Rate (RAC) based on room volume</p> <p>Room Air Change Rate (RAC) based on room volume</p> <p>Room Air Change Rate (RAC) based on room volume</p>	<p>Room Air Change Rate (RAC) based on room volume</p> <p>Room Air Change Rate (RAC) based on room volume</p> <p>Room Air Change Rate (RAC) based on room volume</p>	<p>Room Air Change Rate (RAC) based on room volume</p> <p>Room Air Change Rate (RAC) based on room volume</p> <p>Room Air Change Rate (RAC) based on room volume</p>	<p>Room Air Change Rate (RAC) based on room volume</p> <p>Room Air Change Rate (RAC) based on room volume</p> <p>Room Air Change Rate (RAC) based on room volume</p>
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The background features a complex isometric technical drawing of a mechanical assembly, rendered in a light blue color. The drawing includes various components such as gears, shafts, and housing parts, all arranged in a perspective view. The overall aesthetic is clean and professional, typical of engineering or industrial design presentations.

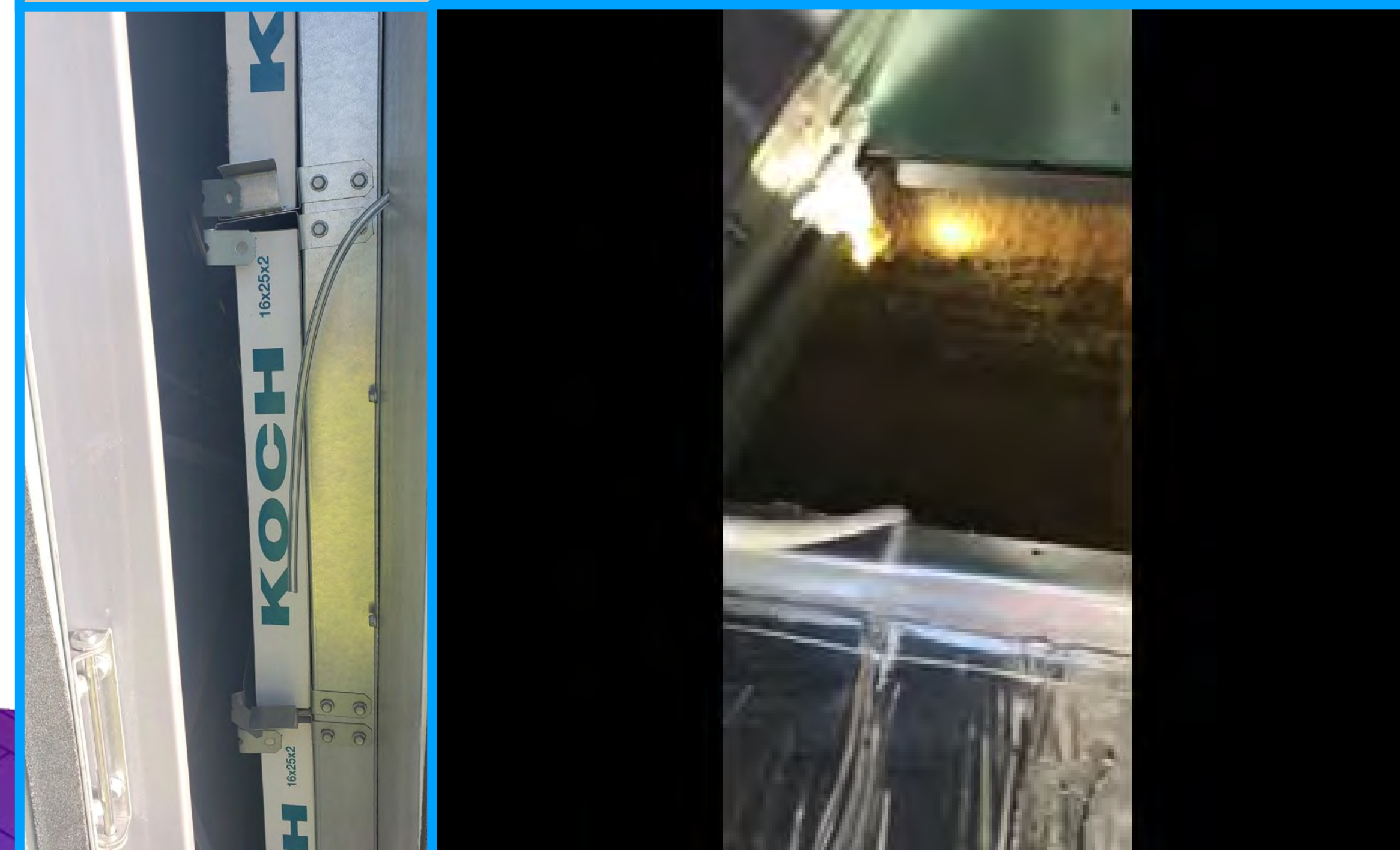
EXAMPLES OF PROJECTS

NEW MEXICO AREA

Current & Upcoming Projects

- Presbyterian Hospitals – Rust Medical Center
 - IAQ is vital for OR areas – outdoor air ventilation is what provides the operating rooms to maintain a positive pressure with respect to the surrounding hospital areas
 - This project saw significant issues due to an inadequately sized humidifier in order to provide the OR with required 20-60%RH in the peak dry winter where the outside air humidity down as low as 8%
- Rio Rancho Public Schools IAQ Upgrades
 - Project has not yet awarded due to funding hold ups
 - Scope is to evaluate every single HVAC system in the district to see if schools are meeting ASHRAE 62 standards
 - Evaluation will include complete system profile of the unit to determine IAQ: total volume air readings, outdoor air volume readings, static pressure profile of the units, electrical operating data
 - Once evaluation is completed a list of deficiencies and corrections will need to be given to owner that will then be remedied by mechanical and service contractors

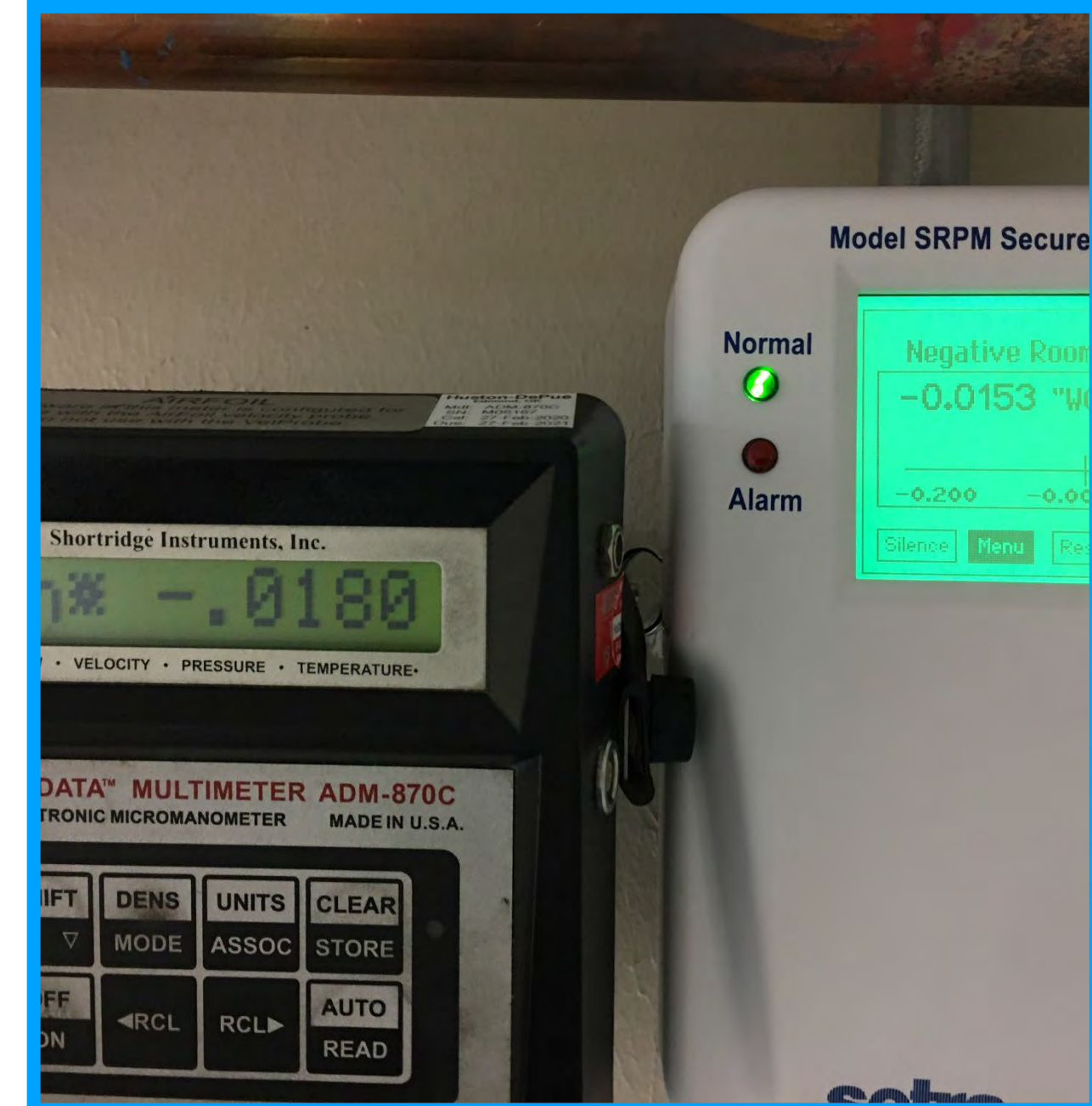
Examples of deficiencies: undersized unit that cannot handle the upgrade to MERV-13 filters, economizer damper has no adjustment or linkage broken, economizer missing entirely and not installed (no fresh air being served)



NEW MEXICO AREA

COVID-19 IAQ Implications

- VAMC – Albuquerque, NM
 - Conversion of patient rooms to negatively pressurized COVID Isolation rooms
 - ASHRAE 170 Standards for isolation room require 2 ACH Min OSA, 12 Total ACH, Exhaust ducted directly to outdoors
 - Verification of clean (MERV-13 at minimum) filters
 - Conversion back TBD
- Gibson Medical Center
 - Conversion of patient rooms to negatively pressurized COVID Isolation rooms
 - Entire building converted to isolation rooms for COVID patients



NEW JERSEY AREA


- ✓ Completed Projects
- Ongoing Projects
- Upcoming Projects
 - Lessons Learned...
 - Other Possible Opportunities?
 - ❖ Particulate Testing



PROGRAM EXAMPLE

Actor's Equity Association (AEA) – Theater Operators

- AEA incorporated in rider
- Contractors and Theater Operators confused
- AEA/NEMIC created specification and outlined program intent
- AEA introduced to Theater Operators
- Theater Operators engaged with contractors
- Reports and remediations shared with AEA
- Theaters began reopening around the country

The background is a complex isometric technical drawing of a mechanical assembly, rendered in white lines on a blue-to-red gradient background. The drawing shows various components like gears, shafts, and housing parts, all oriented in a 3D perspective.

WHO CAN DO THIS WORK?

POTENTIAL IAQ CONTRACTORS

- TAB companies
- Service companies
- Mechanical/Duct Install companies



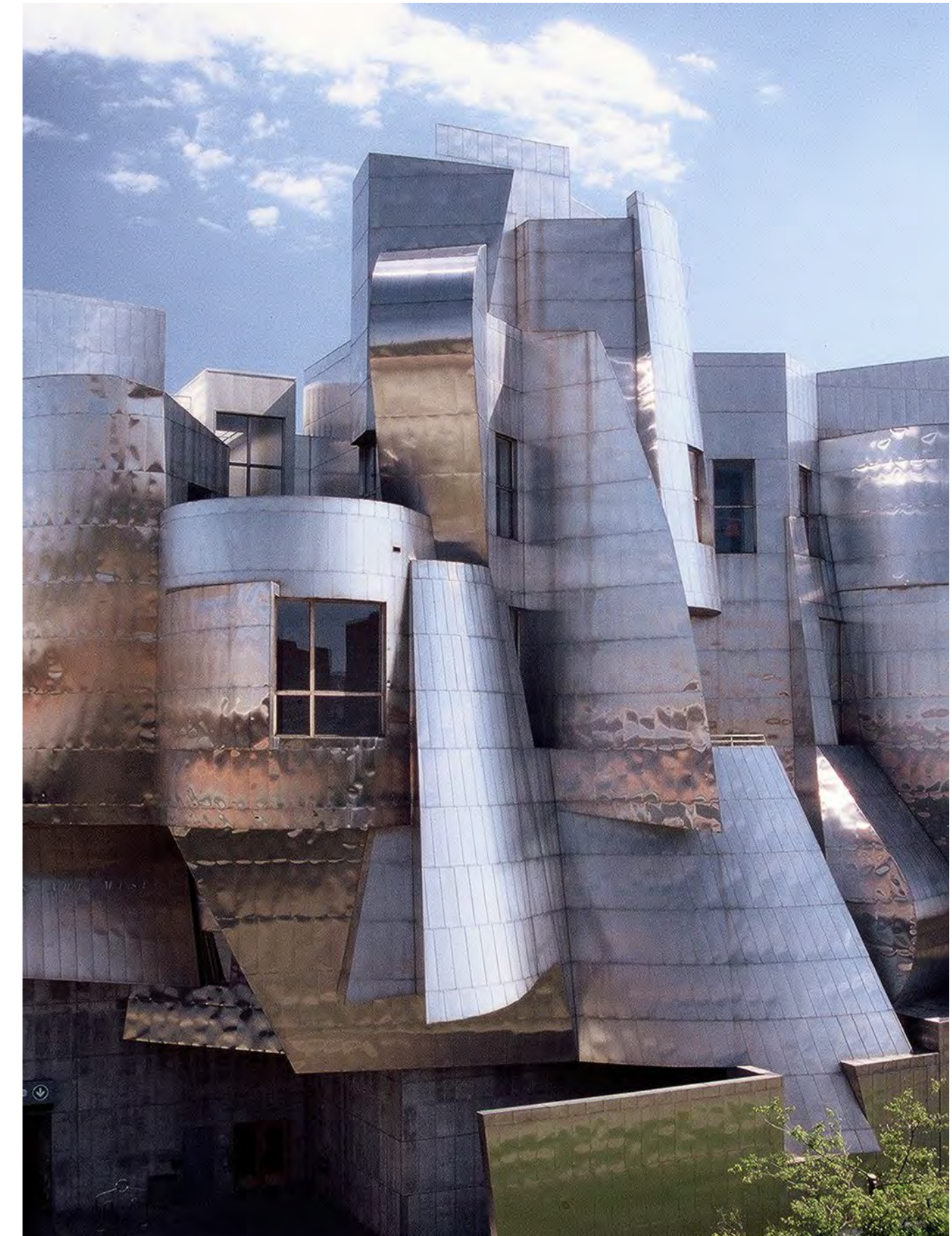
The background of the image is a technical drawing or blueprint, rendered in a light blue color. It features a complex grid of lines and various geometric shapes, including rectangles, circles, and lines representing mechanical parts or architectural plans. The drawing is oriented diagonally, creating a sense of depth and perspective. The overall color scheme is a gradient from dark blue on the left to a lighter, almost white blue on the right.

HOW TO GET STARTED IN
YOUR AREA....

IMPLEMENTATION ADVISORY GROUPS

- Engage SMACNA, SMART, Funds – identify key members
- Work with lobbyist/political director to determine path forward
- Work as a team to draft legislation or ordinance
- Develop game plan and talking points
- Engage SME's for presentations and/or testimony

First Steps...



IMPLEMENTATION ADVISORY GROUPS

- Create implementation plan
- Continue monitoring agency adoption of program/policy
- Work together to coordinate training of workforce
- Coordinate continuing presentations/training of inspectors, enforcement, etc.
- Engage SME's for presentations or training

The hard part...





AVAILABLE RESOURCES

NEMI – VENTILATION VERIFICATION WEBPAGE

<https://www.nemionline.org/ventilation-verification/>

- Supervisor Training
- Webinar Videos (English and Spanish)
- UC Davis/NEMI Videos – Ventilation and Filtration
- Sample Test Sheets
- Sample Methods of Procedure
- White Papers
- Sample Specifications

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Ventilation Verification

What is Ventilation Verification?

Ventilation Verification is a physical assessment of the existing Heating, Ventilation, and Air Conditioning (HVAC) infrastructure. The assessment is performed by a skilled, trained, and certified technician. The resulting assessment report allows design professionals to make recommendations for adjustments, repairs, upgrades, or replacements with reduced assumptions. School districts and building owners can then make educated decisions on the proposed improvements.

The following resources are available to anyone interested in learning more about keeping students and building occupants safe.

Watch on YouTube

THE IMPORTANCE OF VENTILATION IN SCHOOLS

COURSES RESOURCES CONTRACTOR MATERIALS

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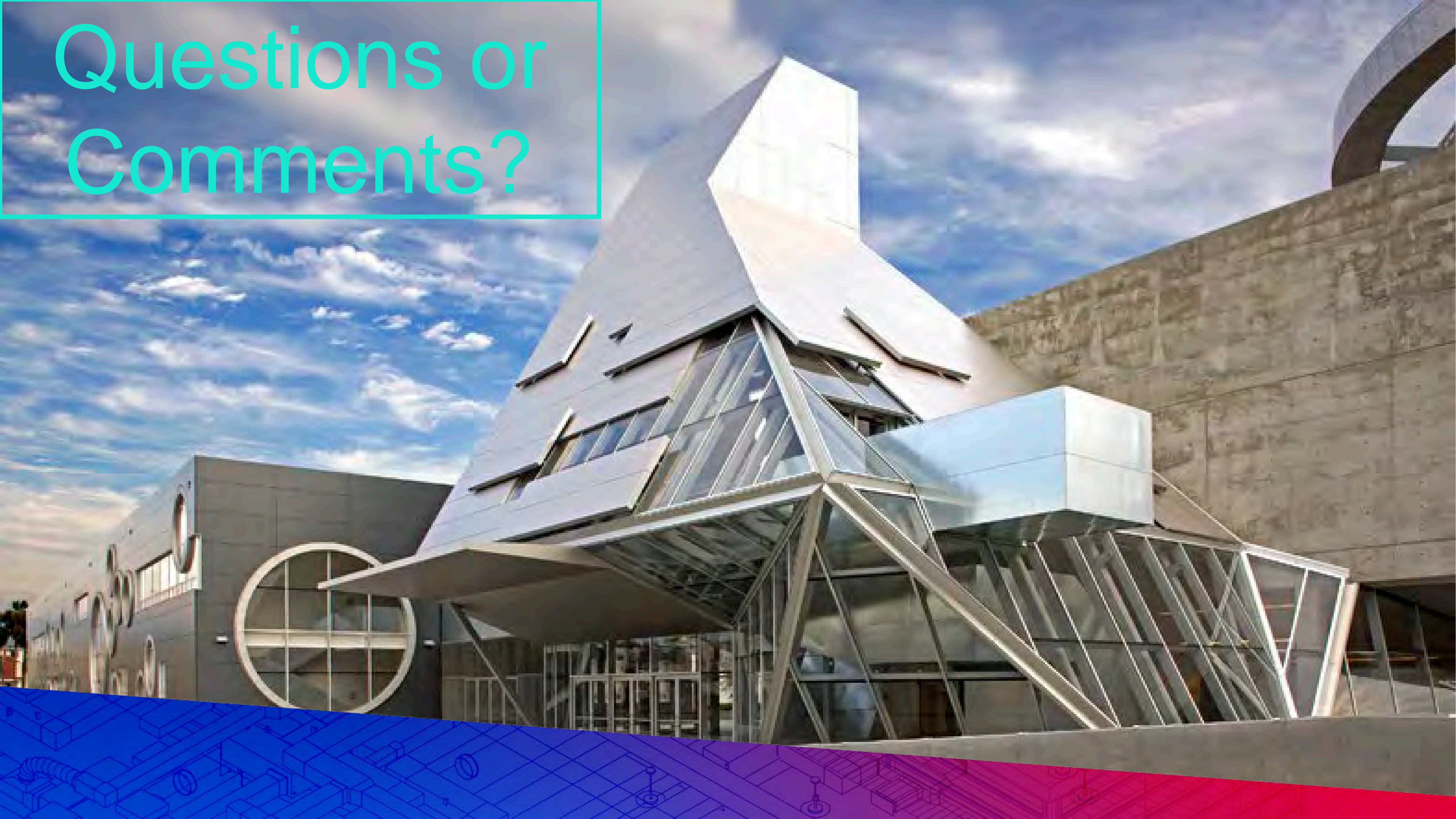
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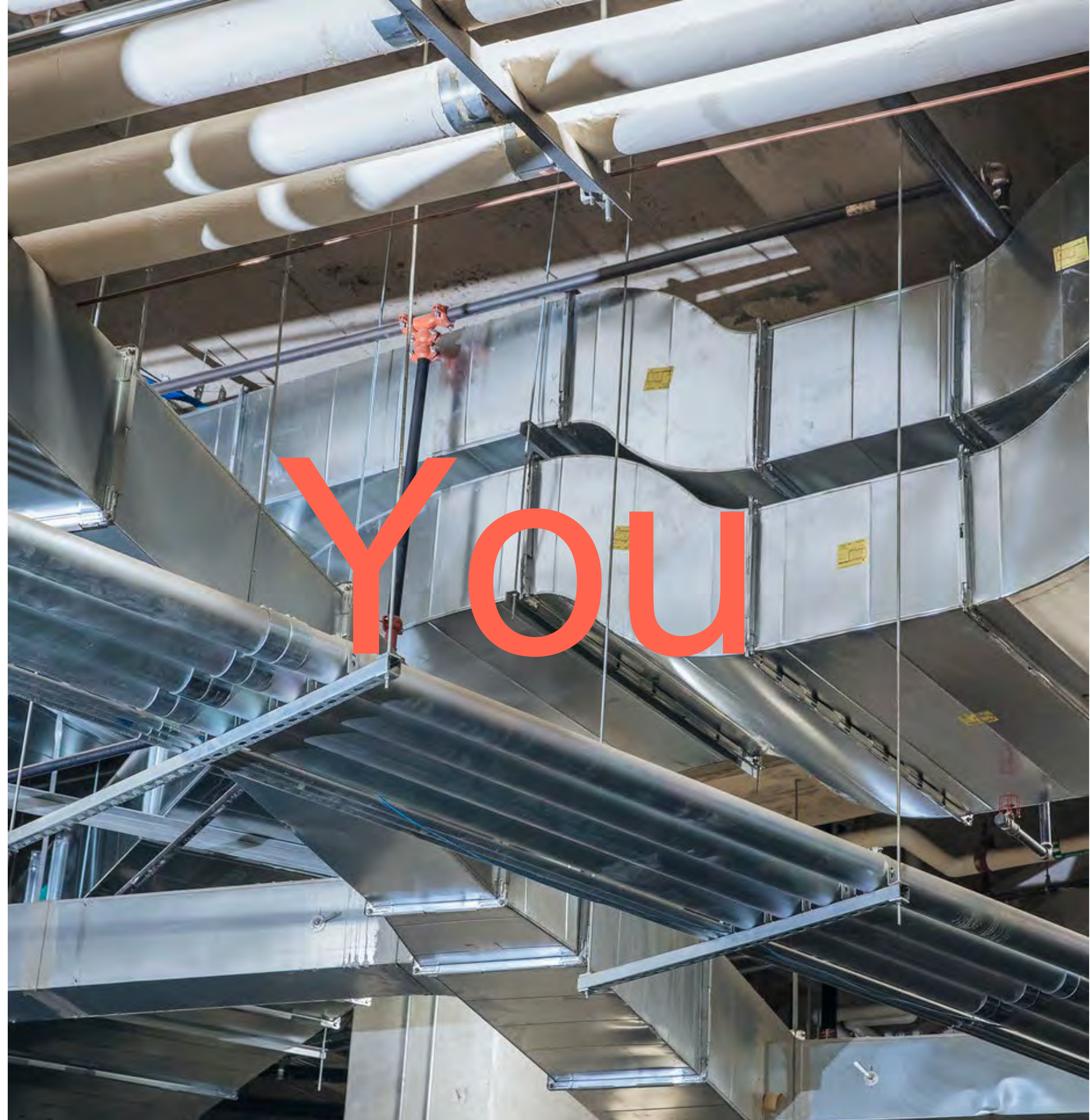
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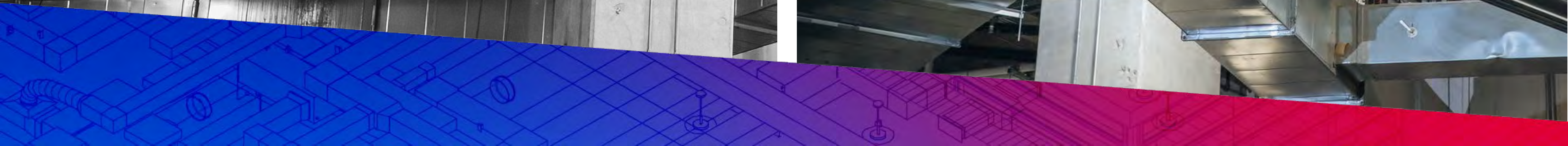
Questions or
Comments?





Thank

You



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PLEASE REMEMBER TO FILL OUT YOUR BREAKOUT
SURVEY ON THE APP

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