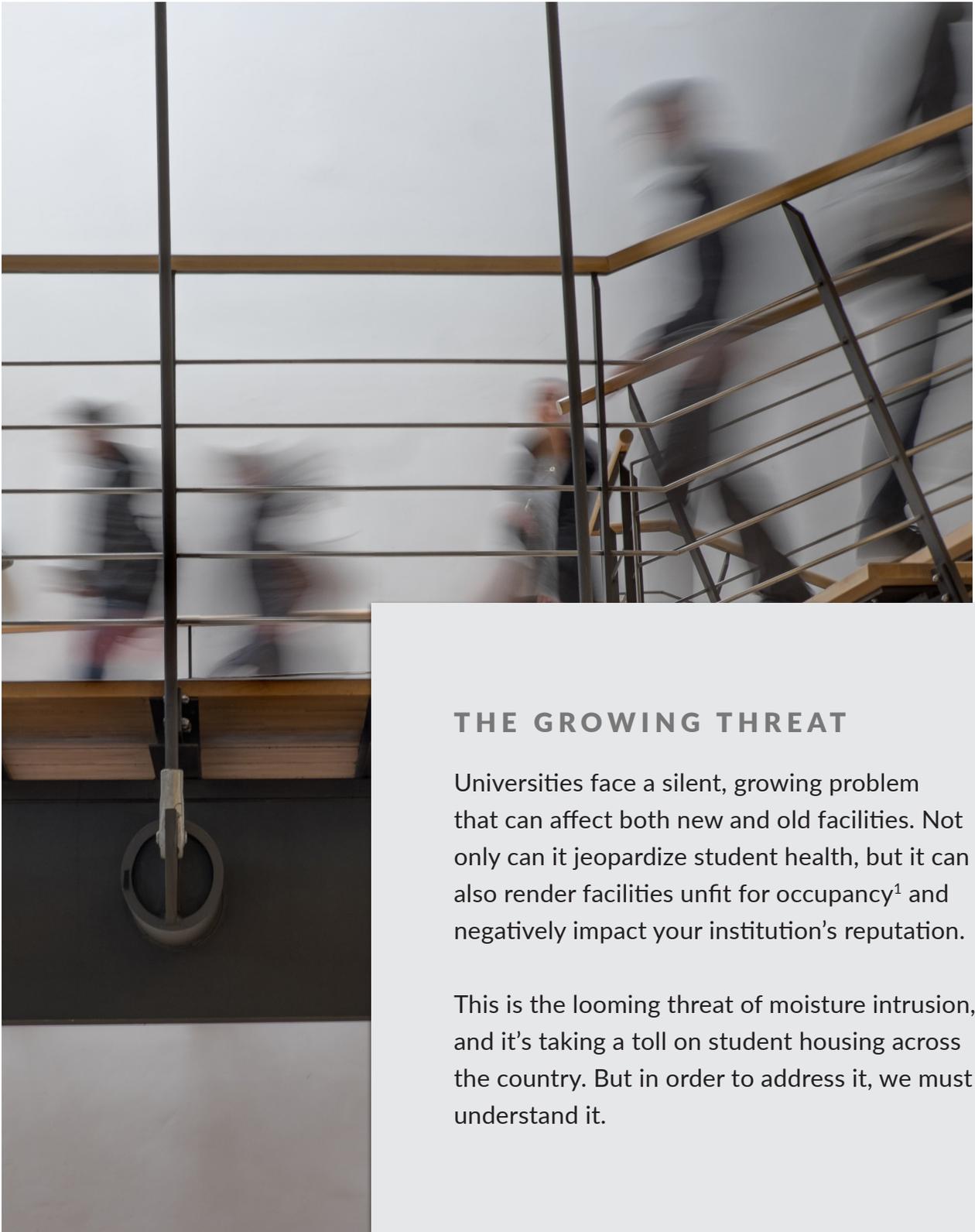


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MOISTURE INTRUSION: THE GROWING THREAT TO STUDENT HOUSING

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THE GROWING THREAT

Universities face a silent, growing problem that can affect both new and old facilities. Not only can it jeopardize student health, but it can also render facilities unfit for occupancy¹ and negatively impact your institution's reputation.

This is the looming threat of moisture intrusion, and it's taking a toll on student housing across the country. But in order to address it, we must understand it.

¹ <https://www.knoxnews.com/story/news/education/2019/09/04/university-of-tennessee-students-report-mold-dust-two-campus-dorms/2208395001/>

What is Moisture Intrusion?

Moisture intrusion occurs when 1) water vapor permeates the building enclosure or 2) is introduced through the building HVAC system and increases interior moisture levels, leading to issues such as high humidity, poor air quality, and potentially mold. Even newer housing stock, built in the past two decades, can have underlying construction issues that put the buildings at risk. Left uncontrolled, moisture takes a serious toll on student health and well-being².

Amid budget considerations and more attractive revenue-generating plans, moisture intrusion control and prevention methods are often low priorities, reserved for an undefined future time when the problem will be addressed. Such avoidance leads to escalated issues due to increased complaints and/or possible lawsuits, not to mention the significant risk of protracted reputational damage. What was once controllable through repairs becomes a public relations nightmare.

Be Proactive and Get Ahead of the Problem

Though moisture intrusion can require additional funding support in order to be resolved, this investment is far better than facing the backlash and serious repercussions that emerge as a result of avoidance. The fact is that many universities suffer from the damaging effects of moisture intrusion long before they realize it. Like bankruptcy, moisture intrusion occurs incrementally over time, increasing in scale until it becomes too acute to be anything other than an urgent, top priority. Your institution will be better served if you assume there is a moisture intrusion problem, rather than assuming there is not.

² <https://www.cbsnews.com/news/adenovirus-death-university-maryland-student-olivia-paregol-parents-speak-out-mold-health-center/>

Addressing moisture intrusion involves the following steps, all geared toward securing your control over facility conditions:

1. Shift to a proactive position

This is especially crucial for aging infrastructure. A proactive strategy is a position of strength, while reactive is forced and limited. An excellent start to a proactive approach is to assess the state of your institution through studies and analyses that evaluate your HVAC systems and building enclosures. If an underlying issue becomes apparent, obtaining the necessary funding for proactive measures will be far easier and at a lower cost.

2. Conduct a focused moisture control analysis

Although it is recommended to perform facility conditions assessments on a 5-10 year basis, there is substantial benefit from a more focused moisture control assessment performed every 3-5 years. Such an analysis can provide valuable, in-depth insight into your building, allowing you to gauge conditions, humidity levels, and the effectiveness of your moisture control measures.

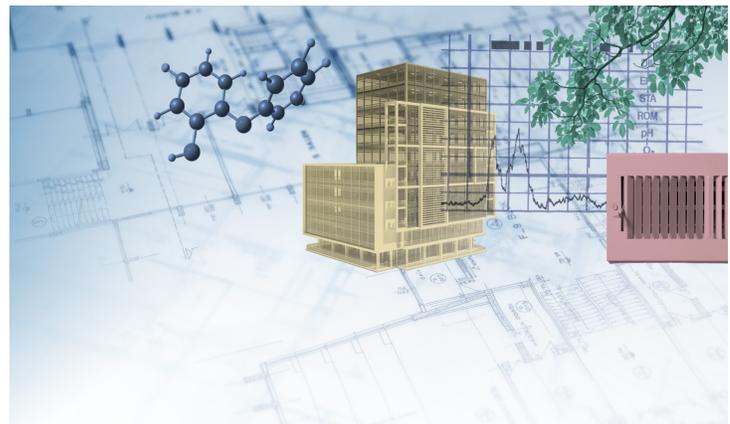
3. Determine the minor versus major investments

Once strengthened by a detailed moisture control assessment, you will gain an understanding of which buildings are in the best and worst shape. From there, you can devise a clear plan of action to improve building conditions and performance over time.

Addressing Severe Issues

If a facility's moisture intrusion levels have reached a critical point, you can still take control of the situation with the right moisture control assessment team in place. A skilled moisture control assessment team should be able to recommend practical, effective solutions that will help mitigate and avoid additional damage as the institution pursues necessary funding. Depending on the size and scale of the affected buildings, this team will piece together recommendations based on the information gathered from pictures, functional tests of building HVAC systems, humidity levels, building pressure tests, etc. They can then present a detailed resolution plan, including anticipated costs.

If these temporary solutions are necessary, they should be seen as Phase 1 of your project. Though exact details will depend upon the circumstances of the affected buildings, this phase will likely include installing a temporary dehumidification system to deal with the moisture immediately.



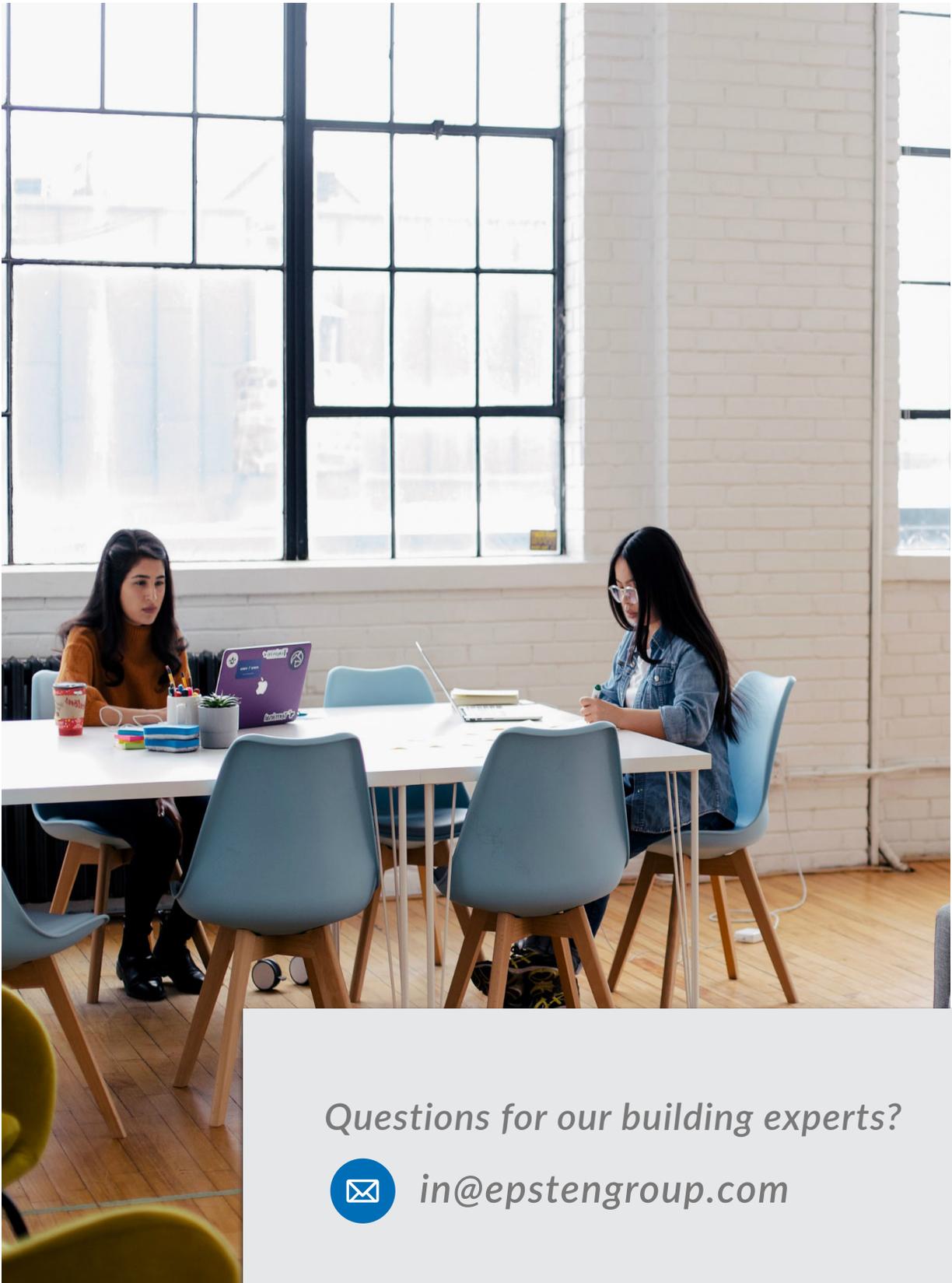
Phase 2 then moves forward with the remainder of the remediation. In this phase, the moisture control assessment team will execute permanent solutions to preserve the building's function. They will address necessary HVAC and building enclosure improvements or repairs to resolve moisture issues permanently. Costs associated with this phase can vary significantly based upon the age and condition of the building, as well as whether or not it stays occupied during the work

Take Action, Regardless of Your Conditions

When it comes to moisture intrusion control, the best approach is a proactive one. The longer you wait to enforce control, the more damage you may ultimately have to face and fix. Avoidance only leads to increased costs and more complicated issues down the road. By realizing the full extent of moisture intrusion within your facilities, you can avoid hemorrhaging thousands of dollars in reactive maintenance per year. By pulling in an expert moisture control assessment team and developing a clear plan of action, you can expect to see cost savings through preventive maintenance and begin to mitigate risks to the university's reputation.

Cases of moisture intrusion are emerging rapidly across the country and show no signs of slowing. Due to numerous factors, such as a lack of centralized air in older construction or extended rainy seasons in various regions, student housing facilities face the need to identify and enforce effective moisture control measures immediately.

Don't let poor air quality negatively impact the quality of life on your campus. Student health and wellness is a priority in order to maintain a stable and attractive reputation. Student complaints can easily go public, which can result in your institution facing a complicated public relations strategy, reduced numbers of applicants, a tarnished image, and even possible litigation costs. With a few thoughtful steps to assess and take control of your moisture levels, you can avoid such unnecessary backlash. Proper moisture intrusion control measures will preserve your institution's appeal and uphold an attractive national reputation.



Questions for our building experts?



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Darren has served as the lead commissioning agent on a wide range of higher education projects, including complex university buildings, research laboratories, and collegiate housing facilities. He's considered an expert in his field and is one of three instructors for the ACG Commissioning Authority Certification preparation workshop. Collectively he's taught more than 20 workshops and takes pride in developing new commissioning providers and guiding them toward certification.



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Mike brings a wealth of experience and knowledge in the commissioning, design, and evaluation of HVAC, DDC, plumbing, fire protection, electrical, and low voltage systems for higher education facilities. As an industry veteran, he has proven expertise and understanding of complex building systems and utilizes his diverse skill set to enhance the performance and viability of all building components.



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