

# A Business Case for Proactive HVAC Maintenance

| **Creating the right climate for operational success**





# 01

## Introduction

**As occupants begin to return to buildings, expectations for safe, comfortable, and efficient facilities are higher than ever before.**

Gone are the days when a HVAC system malfunction would be overlooked as a minor mishap. Now, HVAC downtime means immediate distrust in your facility's ability to provide a safe and comfortable environment for occupants. For 2021 and beyond, proactive capital maintenance is key when it comes to long-term facility success. In fact, regular HVAC maintenance is reported to reduce the risk of costly breakdowns by as much as 95%, avoiding pitfalls like unpredictable costs, occupant dissatisfaction, and more.<sup>1</sup>

# 02 The Cost of Inaction

**Run-to-fail operations inevitably lead to emergency repairs that come with big price tags.**

Over time, reactive operations incur higher costs, depreciate assets, increase utility spend and shorten HVAC machine lifespan. The risk of unpredictable costs can be mitigated with strategies for stability, like preventative maintenance and the installation of high-efficiency equipment. Without consistent maintenance, HVAC systems have the potential to use upwards of 40% of the total electricity consumed in any building.<sup>2</sup> While a run-to-fail operation may seem less expensive in the short term, the risks greatly outweigh the benefits when it comes to opting out of proactive maintenance services.





### ODOR

**56%** of Americans say they would assume a facility is not clean if it has a foul odor.<sup>7</sup>



### TEMPERATURE

Research conducted by Cornell University found that employees working at **77 degrees** Fahrenheit had fewer typing errors and notably higher productivity rates than those working at **68 degrees**.<sup>8</sup>



### ILLNESS

Research cited by World Green Building Council links improved ventilation with up to **11%** increases in productivity and **35%** decreases in short-term sick leave.<sup>9</sup>



### NOISE

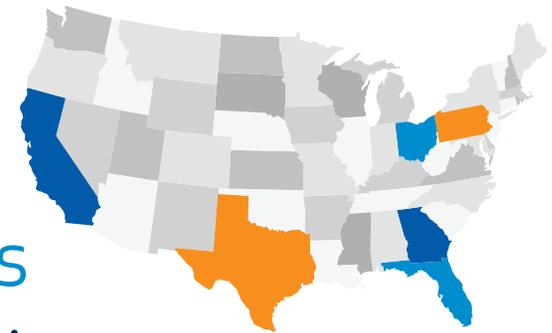
An unmaintained HVAC system can produce distracting noises, like machine hissing or clanking, adding yet another barrier to optimal employee productivity. In fact, a study found that noise distraction cost workers as much as **86 minutes** per day in lost productivity, with HVAC noise noted as one of the two primary noise distractions.<sup>10</sup>

# 03

## Satisfied Occupants Lead to Client Success

**On a list of the top five priorities for facility managers, building image ranks noticeably higher than hygiene (ensuring that facilities are clean, healthy, and safe).**<sup>4</sup>

However, when it comes to occupant satisfaction, unseen indoor environmental factors are often the most noticeable. Mold, pollen, dust, and smog are all contaminants that can negatively affect occupants in the long term if not filtered correctly. In a recent study titled “A Paradigm Shift to Combat Indoor Respiratory Infection” published in the journal Science, researchers called for a change in how citizens and government officials think about indoor air quality (IAQ).<sup>5</sup> Similarly, a joint study conducted by Harvard University and Syracuse University found that when ventilation was doubled in an office environment, employee cognitive performance increased by more than 100%. Other occupant benefits included 30% fewer headaches, reduced respiratory problems, and a boost in overall performance. The benefits even followed occupants home, with increased sleep quality.<sup>6</sup>



# 04

## From Proactive Plan to Proven Results

**How clients across the country upgraded their HVAC system and, in turn, their business**

### CENTER COMMONS MRI PITTSBURG, PA

-  **Challenge:** Revenue lost to equipment breakdowns, increasing operational costs, and unreliable, aging infrastructure
-  **Solution:** Guaranteed Lifetime Protection program provided fixed cost solutions covering all parts, emergency services, and complete replacement
-  **Results:** Increased revenue and decreased energy cost

### CITY OF FREMONT, OHIO FREMONT, OH

-  **Challenge:** Chiller and boiler failure, infrastructure needs for residents
-  **Solution:** HVAC replacements and retrofits for six facilities helped create savings to fund water meter upgrade
-  **Results:** \$12 million in energy and operating cost savings from HVAC, lighting, and other upgrades

### ANHEUSER-BUSCH, INC. CARTERSVILLE, GA

-  **Challenge:** Excessive costs and capital expenses from labor and breakdowns
-  **Solution:** Preventative maintenance and updated control system
-  **Results:** Total budget control and significant reduction of administrative costs

### U.S. GENERAL SERVICES ADMINISTRATION LOS ANGELES, CA

-  **Challenge:** Technological upgrades (battery backups) needed alternative funding
-  **Solution:** An additional phase of HVAC and control system upgrades
-  **Results:** Deep energy retrofit reduced energy use by 50%

### EL PASO INDEPENDENT SCHOOL DISTRICT EL PASO, TX

-  **Challenge:** Lack of funding to fix aging infrastructure
-  **Solution:** HVAC upgrades paid for through an Energy Performance Contract
-  **Results:** \$14.8 million guaranteed savings in energy and operating costs from HVAC, lighting upgrades, and more

### BRANDSMART SOUTH FLORIDA

-  **Challenge:** Enriching shopping environments while decreasing carbon footprint and energy costs
-  **Solution:** HVAC systems upgraded for multiple locations through leveraging PACE (Property Assessed Clean Energy) program
-  **Results:** Saving \$2 million a year through HVAC, controls, and lighting upgrades with proactive maintenance



Talk to the team behind these success stories at **866.624.1520** or visit **[ABM.com/HVAC](https://www.abm.com/HVAC)**

**Sources:**

- 1 HVAC Preventive Maintenance is Essential (6 Reasons Why) - Indoor Air Quality Association
- 2 The Importance of Efficient HVAC Systems - Refrigeration School, Inc. (RSI)
- 3 7 Benefits of Preventative HVAC Maintenance | City Heating and Air Conditioning (cityheatandair.com)
- 4 Five Key Priorities of Facility Managers (cleanlink.com)
- 5 Experts Urge Air Quality Standards as Safeguard Against Coronavirus - The New York Times (nytimes.com)
- 6 How to improve indoor air quality and productivity | Camfil
- 7 Odor Control & Perception of Cleanliness in Your Facility - AeroWest
- 8 What Is the Ideal Office Temperature for Productivity? - PGI Blog
- 9 Poor Ventilation Limits Productivity | Storee Construction Co
- 10 5 Ways to Reduce HVAC Noise in an Open Office Space (aristair.com)

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