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Indoor air quality (IAQ) is the great equalizer – it affects everyone who spends time in your business, but especially your staff. **Staff costs, including salaries and benefits, typically account for about 90% of business operating costs.** As such, businesses today recognize that a healthy, happy workforce is a vital component of success. Companies have invested for years in things like ergonomic workspaces, the latest technology and even free snacks and drinks to keep employees happy, but IAQ remains one of the most crucial yet most overlooked parameters.

### Why is IAQ so Important?

**The problem with indoor air is that it is 2 to 10 times more polluted than outdoor air.** Outdoor pollutants enter a building through open doors, windows, cracks in the foundation and they are also carried inside on shoes and clothing. Once inside, these pollutants can't escape and are recirculated through the HVAC system.

In addition to incoming outdoor pollutants, indoor environments create their own set of contaminants. Direct sources of indoor air pollution include:

- Biological sources such as viruses and bacteria released into the air through exhalations or coughing or mold and mildew accumulating in drain systems and insulation
- Airborne particles such as dust from cloth and fibers or dander from people or animals
- Volatile organic compounds (VOCs) or chemical contaminants that stem from interior products such as the fumes from cleaning solutions or the emissions from office equipment

Poor IAQ is of such a concern that it now has a specific illness linked to it. "Sick building syndrome" causes symptoms like headaches, cough, fever, dizziness, nausea, increased asthma attacks and allergy like symptoms. It's hard to differentiate the symptoms of sick building syndrome from a cold

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### *Employee Absenteeism*

Absent employees create a major financial cost to companies. In the United States, employee absenteeism occurs at 3% in the private sector (62.4 hours per year) and 4% in the public sector (83 hours per year), costing employers \$2,074 and \$2,505 per employee per year, respectively. In large organizations this can add up to millions of dollars. Poor IAQ can increase those costs by increasing sick leave. However, overcoming illnesses and discomfort related to workplace IAQ can result in significant savings.

**There is clear evidence that improving a business environment with better IAQ can reduce absenteeism rates by 15 to 40%<sup>1</sup>.** A Canadian study found that almost one third of employee sick time is attributed to symptoms caused or aggravated by poor IAQ<sup>2</sup>. This is supported by a Massachusetts study that noted 35% less sick leave in offices with good IAQ compared to offices with poor IAQ, resulting in a cost savings of \$400 per employee per year for the business with better quality air<sup>3</sup>. How would saving \$400 per employee affect your yearly budget?

One of the most interesting studies on the effect of IAQ on employees occurred in 2009 in a Michigan business. This study compared employees before and after a move from a conventional office to one with controlled, improved IAQ. After the move, this business noticed a 50% decrease in self-reported asthma, allergies and depression or stress related absenteeism. Yearly absenteeism was reduced by 72 to 120 hours<sup>4</sup>. This means that employees were able to work up to three weeks a year more than they had previously, having a dramatic impact on business productivity.

### *Health Cost Savings*

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**significantly linked to the workplace environment**<sup>5</sup>. Exposure to indoor pollutants can stress the respiratory, immune and nervous systems, increasing the needs and costs of worker medical care. A comprehensive analysis by Carnegie Mellon states that improved IAQ can achieve 0.8 – 1.3% business savings on health costs alone<sup>6</sup>. This may seem like a small percentage, but when calculated against the large number of employee health costs, it can make a sizeable difference in a business' bottom line.

### *Employee Productivity*

If employees are the major source of cost for a business, it makes sense that any investment that can increase employee performance would pay for itself in dividends. **Successful businesses know that a healthy, engaged workforce is an essential component of their profitability.** IAQ has been proven time and again to improve employee performance and productivity.

A meta-analysis of 24 studies found that poor IAQ lowered performance by as much as 10% on measurements such as typing speed and unit output<sup>7</sup>. Indoor air pollutants have also been shown to increase tiredness and decrease decision making skills<sup>8</sup>. A comprehensive analysis by Carnegie Mellon showed 3 – 18% productivity gains when IAQ was improved<sup>6</sup>. But how does this equate to monetary value?

A study by Harvard University examined how improving office IAQ can affect information usage, breadth of approach, strategy and crisis response in employees, all markers of a productive employee. They found that improving IAQ increased worker performance by 8%, equivalent to a \$6,500 increase in productivity each year<sup>9</sup>. When the costs of improving IAQ were factored in, the IAQ improvement produced an ROI of 160% based on worker productivity alone. This falls in line with data from Carnegie Mellon that suggest an average ROI of improved IAQ of at least 120%<sup>7</sup>.

### **A Solution For Every Budget**

At ScentAir, we understand that improving your business IAQ is an investment that needs to deliver a strong return. We are experts at working with al

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