

ESI - Environmental Systems, Inc. - Employee health, comfort and productivity

Challenge

Environmental Systems, Inc. (ESI) provides services and technology in the areas of building control and automation through advanced software applications, energy management, building systems integration and security. These services improve occupant comfort and reduce energy consumption and operating costs. The company's LEED Platinum-certified headquarters is located in Brookfield, Wisconsin.

One of ESI's objectives is to optimize the comfort, health and safety of building occupants which may result in increased productivity. While designing their headquarters building, ESI put in place many features to achieve a superior employee experience, and thus increase employee comfort and safety.

One of the challenges they faced in assessing whether they had in fact improved employee office satisfaction and thus increased productivity was in determining what the appropriate metrics to be tracking are.

Strategy

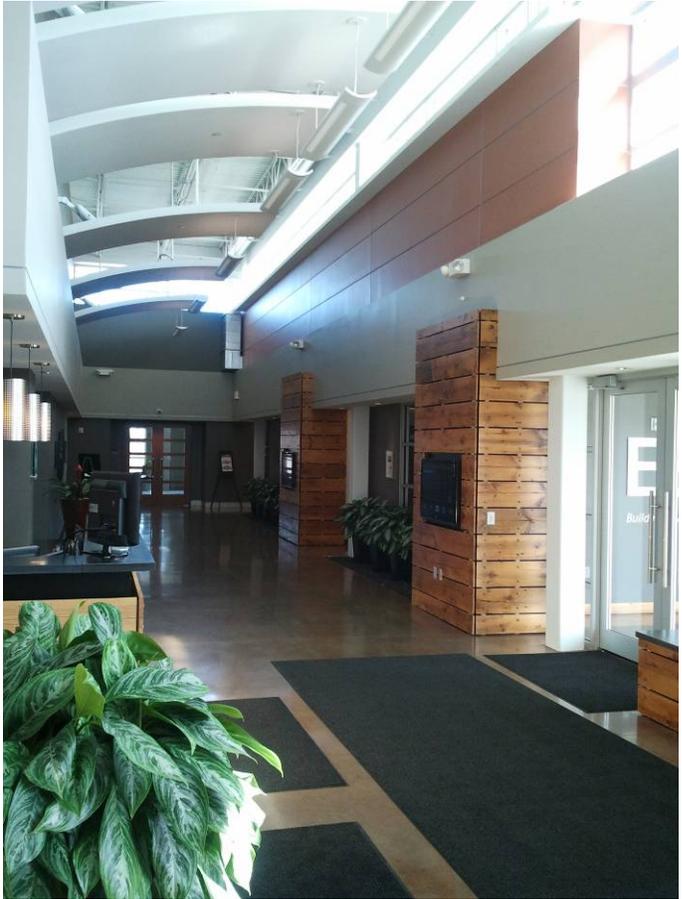
ESI's office building is part of Brookfield's Gateway Commerce Center, and was built in partnership with Hunzinger Construction, Sustainable Building Solutions and Stephen Perry Smith Architects. The Gateway West Sustainable I office building, completed in December of 2009, was constructed with many features designed to maximize occupant health and comfort:

- **Natural light:** 100% of work areas in the building are served by some amount of natural light, optimized by the strategic layout of the office, ample windows, and passive light harvesters. The lighting system makes automatic adjustments - using feedback from light sensors placed throughout the building - to maintain a 25 foot-candle lighted environment.
- **Air Quality:** Air is filtered by a MERV 15 filter, which keeps out allergens, pollens, most bacteria and airborne mold spores. ESI changes the air often, bringing in five times more outside air than is required by local building code. The quality of the air is closely monitored, and is automatically adjusted if various levels (CO₂, humidity, etc.) get out of the desired range.
- **Climate control:** Air temperature in the building is maintained at 72° year-round (reaching slightly higher temperatures in the summer). This is in line with Class A office buildings, only ESI uses much less energy to maintain these temperatures.
- **Space management:** The office is arranged in an open-office layout. The employee work spaces are divided by partitions, the top sections of which are made of glass, which allows light to be shared all throughout the work area.
- **Acoustics:** Since ESI is arranged in an open-office layout, maintaining a low-noise working environment presented a very real concern. To address this, management installed a sound masking system which uses white noise to cover up unwanted conversation noise. Management also made efforts to create behavioral change among employees (not using speaker phone, listening to music only with headphones, etc.) to decrease distracting ambient noise.

Results

Although it has been difficult for ESI to identify quantitative productivity measurements, they have identified some factors to determine the benefits of the focus on employee health and comfort.

- Employee feedback: One of the most important considerations for ESI is collecting feedback from its employees to make sure that they are satisfied with the work environment. In 2011, after 14 months of occupying the space, a survey of features of the office environment, from air quality to ambient temperature to office cleanliness was conducted. The results were overwhelmingly positive, with 90% of employees selecting “Very satisfied” or “Satisfied” for all categories. Some areas for improvement were identified, however, and management acted on those suggestions (e.g., modification of some air movement patterns to respond to comments about temperatures, changing the location of recycling and waste containers, etc.).
- Employee sick days: Despite a lack of hard numbers, ESI management affirms that there is an overall feeling that employees maintain a higher level of health, and there is no indication that any airborne toxins are present in the building contributing to illness or absence.
- Employee retention: A high retention rate can indicate overall job satisfaction, and building comfort is certainly one contributing factor (along with other factors such as wages, benefits, internal culture, etc.). ESI maintains a very high employee retention rate.



ESI's entrance and front hallway

Numerous studies have shown that there is a strong connection between Indoor Environmental Quality (IEQ) and workplace productivity. Similarly, extensive research has shown that schoolchildren experience improved learning with increased natural daylighting. ESI has made considerable effort toward advanced IEQ, which undoubtedly contributes to the health, comfort and, in the end, productivity of employees. Moreover, ESI has implemented these superior IEQ features while at the same time achieving superior building energy performance. The Gateway West Sustainable I office building achieved LEED Platinum certification and was named the top rated Energy Star building in Wisconsin in 2010.

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