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## Workplace Acoustics: Simple Steps to Improve Productivity

**T**he workplace is trending quickly toward fewer assigned stations, lower panel heights and higher occupant densities. The average square feet used per employee is down significantly and many companies are setting goals to reduce space requirements by as much as 50 percent.

These trends provide great advantages in cost, flexibility and collaboration. However, these changes also increase conversational distractions for those working in the space. When employees are distracted, they are less productive, make more errors and are less satisfied in their work. The Wall Street Journal recently cited a study that found that once distracted, it can take 23 minutes for the average worker to regain concentration on a task.

How can a design team satisfy the changing needs of their clients while protecting employee productivity? Answer: ACOUSTICS.

Typical Class A and Class B commercial buildings have very low ambient background noise. This quiet environment allows any spoken word to be understood at great distance. Without panel systems or office walls, there is little to stop the content of conversations from being heard throughout the work space.

When the conversations multiply with dozens of employees in an area, the problem mushrooms into a nonfunctional clutter of noise and distraction. Symptoms of this problem can be seen in every office. Employees begin isolating themselves with headphones or



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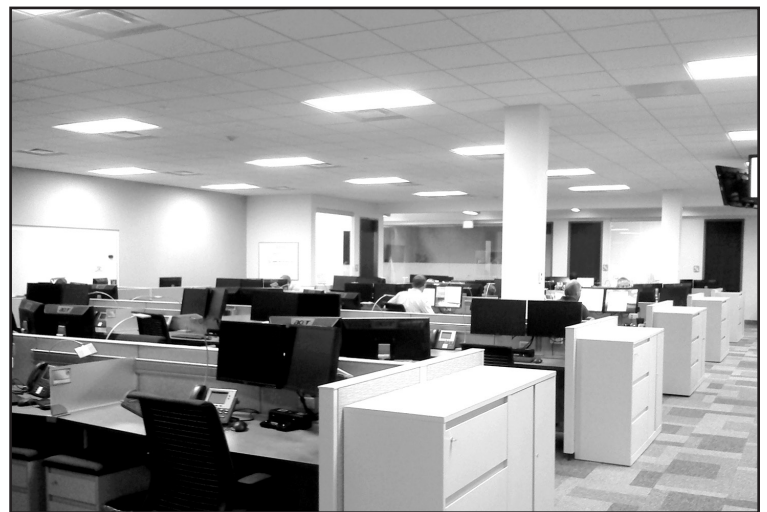
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relocating to quiet corners of the space. This defeats one of the key goals of the space, which is to provide a collaborative environment in which employees interact.

It also leads to a workforce that is dissatisfied. The comment boards on workplace blogs are full of stories about employees' struggles to complete their work in an inhospitable acoustical environment.

With a few simple choices during the planning process, the open workplace can be a very productive environment.

Using a high-performing acoustical ceiling tile with a Noise Reduction Coefficient (NRC) rating of 75 or higher will absorb a significant amount of sound in the space. The NRC rating measures the percentage of sound energy that is absorbed by a material and kept from



*Acoustics improve open workplace environments.*

bouncing back into the space. (A word of caution: High NRC ceiling tiles should not be used in areas with loud HVAC components, or over offices and conference rooms. In these areas, mineral board tiles are required to act as a lid to contain sound.)

With a good ceiling in place, the addition of sound masking to the space brings significant improvement. It introduces a soft, uniform background sound into the workplace. The sound is very precisely shaped to cover nearby conversations. Most people describe it as similar to soft rushing air. A sound masking system is comprised of a network of speakers that are located above the ceiling or suspended from an exposed structure. When commissioned properly, occupants of the space are unable to determine the source of the sound.

In a wide open environment, a well-tuned sound masking system will reduce the distance at which conversations can be understood.

This is measured as the Radius of Distraction.

In most offices, the radius of distraction is approximately 30 to 60 feet. Within that radius, employees are distracted by all of the nearby conversations. With the addition of sound masking, that radius is reduced to 10 to 15 feet. This improvement allows employees to collaborate freely, yet their collaboration does not distract the population who surrounds them.

Workplace leaders are responding to pressure to improve productivity and reduce costs. Current workplace trends certainly reduce costs. And planning for a high-performing acoustical workplace allows productivity goals to be met in a more comfortable environment.

*\*Editor's Note: ADI Workplace Acoustics provides AIA CEU Accredited educational programs at no cost to design and construction industry professionals.*