Sound Advice Can You Keep It Down?

The Noisy Debate Over Open Offices

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The new offices at Arnold Worldwide in Boston are divided into "neighborhood" workspaces but don't contain private offices.

With intimate views of I-93 ramps, commuter rail

switchyards and the Boston Sand & Gravel plant, the \$125-million headquarters of EF Education First at first looks like a prime candidate for noise-abating building designs.

But consultants designing the 300,000-square-foot East Cambridge office building placed as much emphasis on shielding employees from their colleagues' chatter as they did damping down the roar of traffic a few feet from their windows.

Loudspeakers pipe a steady soundtrack of white noise throughout the offices, providing a waterfall-like backdrop that masks the sound of co-workers' voices.

"You make people feel more private and less distracted, because you're covering up the conversations you would not have heard if we had full walls aroundour offices," said Jeff Fullerton, a director for Cambridge-based Acentech. "It's becoming more critical as the barriers between people are going down." EF Education First's new offices were designed without any private offices, an increasingly common arrangement among creative firms. As communal workplaces become mainstream, architects are taking a closer look at how to balance the benefits of collaboration and concentration.

The new offices of ad agency Arnold Worldwide at Boston's Downtown Crossing represent one approach.

The company has over 600 employees who work at open desks without partitions in the Burnham building at Boston's Downtown Crossing, a renovated 102-year-old structure and former Filene's department store. There are no private offices. Everyone from interns to top-level executives sits at 5-foot-wide desks – at least when they're not meeting with co-workers.

Watertown-based architects Sasaki Assoc. designed the Arnold offices with the organizing principle of separating private and group workspaces. All of the communal work areas, including closed meeting rooms and phone booths for private calls, are located in the center of the floors. Individual work stations are pushed out to the perimeter.

"If you're at the point where technology around sound-masking has to be the solution, then you haven't started in the right place to begin with," said Victor Vizgaitis, a principal at Sasaki. "The solution has to start way up front in the layout and the thinking behind how you handle space."

Another key element of the Arnold offices is providing a variety of smaller "neighborhood" workspaces, minimizing the number of employees working in the same room.

"You're never clustered in a room with 100 people, and that automatically controls the noise so you don't let it get to the stadium level," he said. "You make sure people have alternative ways to go."

Arnold requested exposed concrete floors in a majority of the building, but carpeting was installed in the individual work station areas to mask footfalls.



Loudspeakers pipe white noise into the offices of EF Education First in Cambridge to mask the background noise from co-workers' conversations.

Industrial Noise Levels

The popularity of industrial-inspired workspaces with exposed ceilings and utilities adds another potential layer of din. Noise-absorbing drop ceilings are one strategy to reduce echoes from the environment.

Acentech collaborated with Boston-based Wilson Architects to minimize exterior noise from the highway, rail yard and gravel plant with installation of laminated interior-glazed windows.

Acentech was spun off in 1991 as a separate company from the acoustic consulting division of Cambridge-based BBN Technologies, which was then known as Bolt, Beranek and Newman. It has collaborated with developers on various noise abatement projects in Greater Boston, including the new 230,000-square-foot University of Massachusetts-Lowell student center that opened in September. The complex includes a floor-to-ceiling wooden latticework, known as "The Lantern,"

designed to diffuse sound.

The cost of noise abatement is a concern to developers, with noise insulation ranging from as little as \$2 per square foot for basic tectum paneling to \$100 per square foot for perforated wood veneers, such as those used at Harvard Business School's Tata Hall.

The science of noise abatement can be counterintuitive. Adding artificial noise can drown out other distractions and make it easier to get work done. Cubicles and partitions, useful as visual blinders, do little to control audible distractions and sometimes encourage louder conversations.

"When people are more aware of the space and see they have neighbors sitting 6 to 8 feet away, people tend to self-modulate themselves," Vizgaitis said. "Not everybody. Some people aren't able to control it."

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