



Four Ways to Reduce Office Noise

Office design isn't what it used to be.

Desk partitions are disappearing, cubicles are long gone and employees are sharing office space and desks in a bid to foster collaboration.

A recent study on Malaysian office design by Arita Hanim Awang and Zuraini Denan also suggested that the rise of this office design is also being led by lower cost and convenience.

Inspired by the likes of headquarters from Google and Facebook, there is now a plethora of open office environments rolled out across the globe.

Carol Keogh, president and CEO of ESI Ergonomic Solutions has observed the benefits of this design strategy particularly in "providing collaborative areas or small group meeting space where people can hold meetings, conversations or private phone calls."

While the design has worked wonders for some organisations, helping to connect employees and increase productivity particularly in team environments, the other end of the scale has been a little noisy.

This has prompted the next challenge in office design: acoustics.

More employees are complaining of a lack of privacy and are now seeking distraction-free spaces to conduct work tasks that require a deeper concentration.

However it's not just a case of putting the desk partitions back up. There's actually more of us in today's workplace, according to Keogh.

“Today companies are increasingly doing more with less space - i.e. more people and more noise,” she said.

“The introduction of panel systems/cubicles back in the 60s was a big help with office acoustics. For years the panels themselves alleviated many sources of office noise through their acoustic absorbing properties.

“The trend toward more open office environments along with the introduction of space-saving benching systems has made acoustics an issue of concern again.”

The impact of poor acoustics and excess noise on productivity has many employers concerned. ESI surveyed close to 2,000 millennials on their office environment.

“One significant concern was the ability to control distractions and noise levels,” said Keogh. “Some people are able to work productively in an environment with acoustical or visual distractions, while others need quiet space with minimal distractions.”

UK firms CBS Office Interior Design notes on its website that “since people have the bandwidth to process 1.6 conversations at any one time their brain processes information surrounding them and, as a result productivity and concentration may drop by as much as 71%”.

But before we divide up the desks or allocate each employee a set of noise cancelling headphones, here are five other steps offices are taking to deal with the issue of noise.

1. Sound Masking

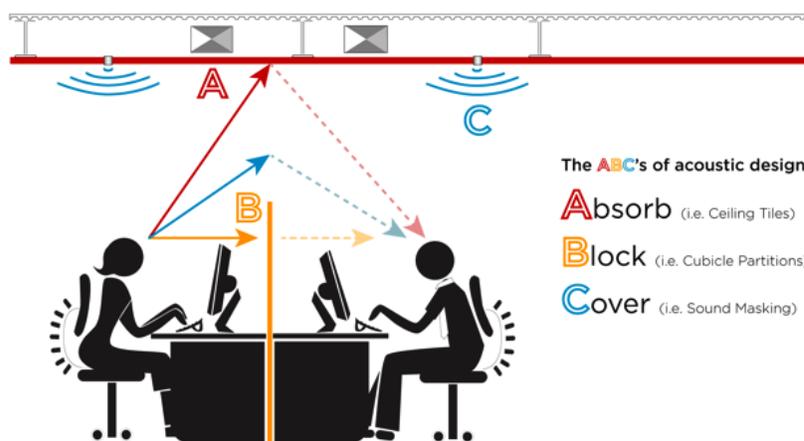
Sound masking – increasing background noise – is gaining momentum in office design. Keogh believes it can make conversations less likely to be heard and less bothersome.

Australian company Soundmask has a series of sound generators, equalizers and even acoustic discs that can balance out sound. Some solutions can adapt to

different zones in the space and even change frequencies in accordance with human speech.

The company was behind sound masking solutions at the AMP Financial Services head office in Docklands. AMP found that some areas were too quiet and others were too noisy.

Being an insurance company and dealing with speech privacy, it was a real concern for the organisation, so rather than using panel and tile acoustic treatments, Soundmask installed a zone distributor allowing the client to “zone” different spaces, customizing the level of sound masking in each space and smoothing the overall sound quality.



The ABCs of office acoustics

The company installed a similar system at its Hamilton Call Centre in Ontario, Canada. According to Soundmask, the zone distributor allowed “trainers to turn the masking down during training sessions where speech intelligibility is required, and turn the masking up when agents are using the training room as a call centre.”

A 2015 study explored “natural” sounds (flowing water) as an alternative to conventional masking sounds, suggesting natural noises have the ability to meet standards and criteria for speech privacy while enhancing cognitive functioning and concentration, and improving overall worker satisfaction.

“If you're close to someone, you can understand them. But once you move farther away, their speech is obscured by the masking signal,” said Jonas Braasch, an acoustician and musicologist at the Rensselaer Polytechnic Institute in New York and one of the study's authors, in a statement.

“The mountain stream sound possessed enough randomness that it did not become a distraction,” fellow study author Alana DeLoach said. “This is a key attribute of a successful masking signal.”

The researchers also highlight the benefits of natural sounds in hospitals to improve the moods of patients.

2. Plant Acoustics

Is there anything nature can't do? In the case of office design, plants can help improve air quality, productivity, employee health and well-being, plus drown out a little noise.

According to Ambius, plants are commonly used to reduce noise pollution along highways and interstates and indoor spaces are leaning on this very concept.

“Plants in the workplace change room acoustics by reducing reverberation time,” the company's website reads. “Plants placed in areas with hard surfaces such as hard wood floors, concrete and marble walls, will effectively absorb noises which can be distracting and hurt employee productivity.”

Cass Brooke, a journalist on *Cohabitaire*, suggests the general rule for noise reducing plantation is one plant for every 100 square feet.



A plant wall for acoustics

CBS Office Interior Design suggests a few plants that are ideal for indoor spaces.

“According to Mike Lothian, research manager for tropical plants, strategic use of the right plants especially in large rooms such as reception rooms and entrance halls, can ensure that some sound is absorbed rather than reflected,” the company states.

“Further research by Peter Costa and other scientists has revealed that plants such as the Madagascan dragon tree, Kentia palms, peace lily and the weeping figs are the plants that work best as sound barriers.”

3. Design for Task

As is usually the case in design, customisation will deliver the best results.

“Organisations that provide a mix of different environments to accommodate diverse work needs will have the most productive, happy work force,” explained Keogh. “With the ongoing war on talent, employers have to provide an environment where people feel comfortable or employees will go elsewhere. “

ESI has an expansion committee made up of people from various departments and levels within its organization, which looks at what best suits workers at the company. While ESI is opting to go with an open plan, they still want to give employees options.

“We will still have some panels to separate workstations, but we have lowered the panel height to allow more natural light to flow through the building,” Keogh said.

4. Employee Direction

ESI is giving employees the ability to make personal choices within their own workstations.

“For example, we designed the workstations so each employee can decide which direction they face – left, right, or centre,” Keogh said. “Giving people choices and flexibility with how they work goes a long way in helping them feel comfortable and productive.”

Architecture firm KieranTimberlake's new office in Philadelphia, nicknamed *The Sandbox*, explores this notion further.

The firm has opted for open office but the layout is not static.

"Everything is movable," Stephen Kieran told *Architect*.

Similar to Google Garage, where all furniture is moveable, KieranTimberlake's office furniture (desks, cabinets, chairs, tables) are all on wheels and can be locked into place with a foot pedal. Power and data is accessible by a grid of outlets in a raised floor.

However, the company also has a variety of open space meeting rooms for private meetings.

Giving employees options on where they work within the office space allows them to find their "sweet spot" for working and productivity. It prompts another opportunity. If one area is too noisy, staff can just wheel themselves over to a quiet corner of the office.

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