IFMA™ Boston Chapter
International Facility Management Association

"Ugh, It's Noisy in Here!"

Strategies for Managing the Biggest Complaints that Plague Open Offices

An IFMA Boston White Paper

Introduction

For better or worse, open office plans aren't going anywhere.

According to *The Chicago Tribune*, "In 2017, about 70 percent of U.S. offices had low or no partitions." And Capterra states "80% of offices use open office plans."

Despite the prevalence of open offices, the polarizing debate over their pros and cons has persisted since the beginning. In the pro column: increased collaboration and creativity. In the con column: too much noise and a lack of privacy.

The debate reached a fever pitch in the summer of 2018, thanks to headlines proclaiming open offices a disaster. These headlines were based on findings from a study titled "The impact of the 'open' workspace on human collaboration," which was published in the world-renowned British journal, *Philosophical Transactions of the Royal Society B*.

After the study's release, *The Washington Post* boldly declared "Open Office Plans Are As Bad as You Thought" and said the study offered evidence that the promise of increased collaboration was false: "The noise causes people to put on headphones and tune out. The lack of privacy prompts others to work from home when they can. And the sense of being in a fishbowl means many choose email over a desk-side chat."

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IFMA Boston conducted a survey among its members in early 2019, and the results reflect these figures, with the majority of respondents saying that at least some portion of their organization resides within an open office setting.

Forbes followed with its own article titled "The Open Office Revolution Has Gone Too Far." The piece included a Q&A with one of the study's co-authors, Associate Professor Ethan Bernstein. When asked what he hoped the biggest takeaway would be, Bernstein responded, "Many managers and executives seem to believe that open offices will both lower costs and improve interactions. My hope is that this research throws a bucket of ice water on the idea that there's no tradeoff—that you will naturally both save in real estate costs and get more collaboration from this kind of design."

On the other side of the debate, *Fast Company* published "An architect's defense of open plan offices" where the author pointed to an "essential flaw" in Bernstein's research: "The study only tested how much collaboration happens in poorly designed and extreme open plan offices with absolutely no walls or partitions. But the vast majority of offices used by leading organizations that are categorized as 'open plan' have collaboration spaces and dedicated areas for private conversation."

Prior to the study's publication, the *Harvard Business Review* appeared prescient with its article "How to Make Sure People Won't Hate Your New Open Office Plan." At IFMA Boston, we believe HBR's position is a sensible one, which is why the goal of this white paper isn't to debate the pros and cons of open office plans, but rather to provide practical solutions regarding the two biggest complaints FMs will likely hear from employees: "It's so noisy" and "I have no privacy."

Within, you'll find strategies for avoiding and/or managing noise and privacy concerns (both in new construction and existing spaces), best practices when planning an open space and preparing employees for the transition, and a real-life example from the perspective of an FM who's been there, done that.

Define what *your* organization means by the word "open."

One of the biggest issues plaguing the open office concept is the name itself, specifically the word "open." When employees hear "open office plan," many immediately bristle, thanks to media hype, YouTube parodies, and anecdotal horror stories from friends and colleagues.

Yet not all open spaces have to automatically mean vast, echo-filled chambers filled with endless distractions and decreased privacy—*provided* they're envisioned, designed, and executed thoughtfully and the occupants have realistic expectations regarding what their work life will be like in the space.

To accomplish this, everyone from company leadership to architects to FMs should answer the following question before any new construction begins: *What kind of work is happening in this workplace?*

In other words, what kind of office is it? How much interaction does there need to be between employees? For example, are you dealing with a call center where everybody is on the phone? Or do people only interact with their computer monitors? Or is it more of a studio environment where people are working on the same project that their neighbors are working on, and, thus, there's quite a lot of interaction between employees? Or is there a combination—different types of work happening in the space at the same time?

Consider the goals of the space as well. Maybe you have departments with natural synergy between them (think marketing and sales), so having people from these departments work in nearby "neighborhoods" might foster more collaboration. Or maybe your organization has various needs: group work where certain people need to be in close proximity to each other, and "deep work," where employees need more isolation from clusters of activity.

Benjamin Markham, director of architectural acoustics at Acentech, says, "If you understand the nature of the work that's going on, then that can clue you into some of the planning efforts needed: how can we create acoustic neighborhoods within the office that are best suited to those different kinds of work? In some office places, you may have many of these different work styles going on and you can give employees a certain amount of choice. For certain things, you go over here. For other sorts of things, you go over there, and that works well for certain kinds of office environments. In others, that is not part of the culture. Everybody has their own desk. They sit in a spot and they do the same sorts of work all of the time, and that's fine, too. Then, we can plan according to that set of goals and reality."

Markham says not all open plan offices need to be designed in the same way, nor should they be. He is also quick to point out that there is no such thing as a one-size-fits-all solution.

Remind employees that not all noise is bad noise.

Facilities managers already know this, but it's important to prepare the people who'll be entering the open office plan that noise itself isn't inherently bad.

Even if people came from a closed office environment, they still encountered a certain amount of "noise" in their private offices: mechanical equipment (e.g., HVAC units going on and off), office equipment (e.g., backup drives, printers), and even people noise (e.g., voices outside the closed door, laughter down the hallway, traffic noise outside the window).

In fact, studies suggest background noise might even be *necessary* to help people get work done, something many of us witness when we encounter folks tapping away on their laptops at local coffee shops.

The Harvard Business Review delves into this phenomenon in "Why You Can Focus in a Coffee Shop But Not in Your Open Office." Turns out, noise itself isn't the issue, but rather the *type* of noise.

The article says, "In fact, some level of office banter in the background might actually benefit our ability to do creative tasks, provided we don't get drawn into the conversation. Instead of total silence, the ideal work environment for creative work has a little bit of background noise. That's why you might focus really well in a noisy coffee shop, but barely be able to concentrate in a noisy office."

HBR goes on to note that a study published in the *Journal of Consumer Research* "found that the right level of ambient noise triggers our minds to think more creatively."

However, this article from *New Scientist* promotes another theory regarding why people accomplish work sitting in a busy cafe: "It might be that it's the other people working hard at their laptops in a coffee shop that are responsible for your improved performance. A recent study suggests that mental effort is contagious – simply being around people who are working hard is enough to make us work harder ourselves."

Given that the research itself has different theories, this makes things even more challenging for architects, engineers, and FMs. Still, the goal shouldn't be to create a space that's devoid of noise, but rather one that has the right amount. A tall order, but an achievable one, *if* you turn to the right resource—like an acoustic specialist.

Bob Persechini is the vice president/group leader of NV5's Boston office. NV5 is a leading provider of professional and technical engineering and consulting solutions for a number of market sectors, including commercial, residential, and healthcare.

Persechini concurs with bringing a specialist into the fold, saying, "Having an acoustical consultant involved in the project up front is key because of the types of materials that the architect needs to specify. You may need some materials that are absorbing sound instead of reflecting sound. And they'll also give criteria for the HVAC acoustics that need to be adhered to."

Think less in terms of privacy and more in terms of freedom from distraction.

Often when people say they need privacy, what they really mean is they need a space where they can think clearly and dig into their work. "You can hear other things going on in your office," Markham says, "but it's not at a point where it becomes a nuisance or a distraction from your work."

In order to achieve this balance, consider three critical elements.

1 **Physical location and layout.**
How close are people in the office? What is their physical relationship to each other? Distance is one factor, but so is the geometry of the office itself. Is there furniture in the way? Is there nothing between one employee and the next row of workers in the office plan? Don't be afraid to experiment with the layout if something isn't working.

And if absolute silence is necessary or you need areas for people to have private conversations, then it makes sense to have dedicated places for these purposes.

Stephanie Lafontaine, a professional engineer who heads the HVAC department for NV5's Boston office, says, "I definitely recommend phone booths, phone rooms, and/or small two- or three-person rooms so that if a private conversation needs to happen, everyone on the floor doesn't need to hear it. One thing that I've found in some buildings is that along the core area with elevators and mechanical rooms can be noisy. So a lot of times, pantries or copy rooms or other enclosed spaces are located around the core of the building so that you have that extra gap between the noises coming from the core and your open work station areas."

2 **The quantity and location of sound absorbing, sound diffusing, and sound reflecting materials.**
In other words, what are the finishes in the space? Where are they located? Think shelving, bookcases, and light fixtures with sound-absorbing properties.

Even something as simple as workstation partitions can have a huge effect, according to Joanne M. Trask, who is the manager of workplace services at Partners HealthCare. In 2016, Partners moved fourteen administrative offices into one location: a 790,000 square foot facility in Somerville designed with an open office concept. The office is now home to 4,000 employees.

Trask says, "Consider the height of the workstation panels, ensuring there are some acoustic absorbing panels built into the workstations and surrounding areas."

And never treat the ceiling as an afterthought. As Markham points out, "The ceiling is an incredibly important surface. If the ceiling is low and hard, then you're going to get a strong sound reflection off of that ceiling surface and that's going to carry the sound of my voice throughout the open plan—or much further. If, on the other hand, the ceiling is high or is highly sound absorptive, then the acoustics of the space behave differently. It's an important design tool that we can control in the sense of: What is the ceiling? What are the materials making up the ceiling? How high is the ceiling? That sort of thing."

3 The background sound in the office (and the wonders of electronic sound masking).

When it comes to background sound in the office, Markham says this refers to the continuous steady state underlying ambient background sound.

Markham explains, "In an office that has no forced air—maybe it relies on natural ventilation or maybe it relies on radiant heating or some other means of providing heating and cooling that is not blowing air around—then probably it's very quiet. There's very low background sound in that kind of environment, and if there's *no* background sound, then you are much more likely to hear something from somewhere else in the office because there's nothing there to cover it up. The sounds of the office aren't competing with anything.

"If, on the other hand, you are in an office that has a forced air HVAC system and it happens to be 95 degrees outside, then that HVAC system is going to be blaring away and that air is going to be rushing around. It's going to be creating a certain amount of background sound and that background sound is going to cover up—or 'mask'—the other sounds in the office that might otherwise be distracting. This is where the world of electronic sound masking comes in."

Also called white noise systems, electronic sound masking uses loudspeakers to broadcast a steady state of background sound in the office. The FM can have control over the background sound level without having to rely on the HVAC system, which may cycle on and off or may not be very loud to begin with.

The electronic sound masking system is designed so that there's a steady, uniform, constant background sound that will mask over other speech and, as such, increase freedom from distraction and/or increase a sense of privacy.

Markham says, "Hopefully, if it's designed well and if it's installed well and it's adjusted properly, then it's 'tuned,' if you will, just right so that you get enough background sound to provide that masking, but not any more sound than you need or want."

3DListening® from Acentech

Headquartered in Cambridge, Mass., Acentech provides consulting regarding issues related to acoustics, sound, and noise control, as well as associated technologies like AV, IT, and security.

3DListening® (3DL) is Acentech's version of "auralization." Auralization is akin to visualization, but for the ears instead of the eyes.

It's important to note that an auralization is *not* a recording. It's a rendering of a space that doesn't yet exist, and with this rendering, you can get a sense of how design decisions will affect how that workplace will sound.

For example, you can listen to a rendering of a workplace with a nine-foot ceiling that is exposed concrete and listen to what it might sound like when somebody's on the phone in that environment. Then, in the same rendering, you can change the ceiling's height and listen to the difference.

So you're not relying on a qualitative description of how Acentech consultants expect the space to sound, but, rather, *you* can hear it for yourself, thanks to 3DL, and say, "Okay. That makes sense. I can understand, for example, why we need to put in this type of ceiling."

Learn more at www.acentech.com.

Good news: it *is* possible to improve existing open spaces.

OK, so you can't do *certain* things, like change the ceiling height, for example. But many of the strategies that apply to new construction can be applied to existing spaces.

Regarding physical layout, you can adjust the location of furnishings and the addition of (and height of) workstation partitions. Markham says, "You can change how you're using the space. For example, you can create more distance between office workers who really should be separated from one another or introduce strategically located office furniture—a bookshelf that can serve as an acoustic barrier between one zone and another zone—or whatever the case may be."

You can also address the finishes in the space. It is possible, with some effort, to renovate the finishes in an office so that they are more conducive to the work environment that you want to create. You can also introduce electronic sound masking in a space that doesn't already have it.

Stephanie Lafontaine from NV5 says, "For the most part, whether it's new construction or an existing building, the physics behind sound is the same. The sound is going to transmit throughout spaces in the same manner unless there are sound absorbing materials or white noise systems to offset the sound that's being generated in the space. So either way, it needs to be treated the same."

A Real-Life Example at Work: Draper

Rick Flanagan is the director of facilities at Draper, a non-profit engineering innovation company headquartered in Cambridge, Mass. The Cambridge campus, built in the 1970s, currently houses around 1600 employees and is a total of 450,000 square feet.

Flanagan describes what the layout was like in 2015, before the transition to an open office environment: "It's a horseshoe shaped building. So if you picture a horseshoe, it has three different cores, and around each core were hard walled window offices and the center of each core was hard wall laboratory space." (Each core is 25,000 square feet.)

The Open Office's Relationship to Closed Areas

Markham says one of the biggest mistakes he encounters is that the people planning the open office overlook the open office's *relationship* to closed areas, such as huddle rooms and conference rooms. As a result, these closed areas aren't built from a perspective of blocking out sound.

"For example, maybe they have sliding glass doors that don't seal particularly well. Maybe the walls don't go all the way up to the deck," Markham says. "For whatever reason, sound is just not well blocked by the construction that created the closed room, and three feet away, on the other side of a walkway, is somebody's desk right outside the door to that conference room."

This can obviously result in complaints regarding noise and lack of privacy. But Markham says there are ways to address the problem. "You could build a better conference room. You could provide sound masking in the open plan. You can redo your layout so that you don't have a person sitting at a desk three feet from a conference room door. Or you could do some combination of those three things—whatever best suits your particular office space and acoustical goals."

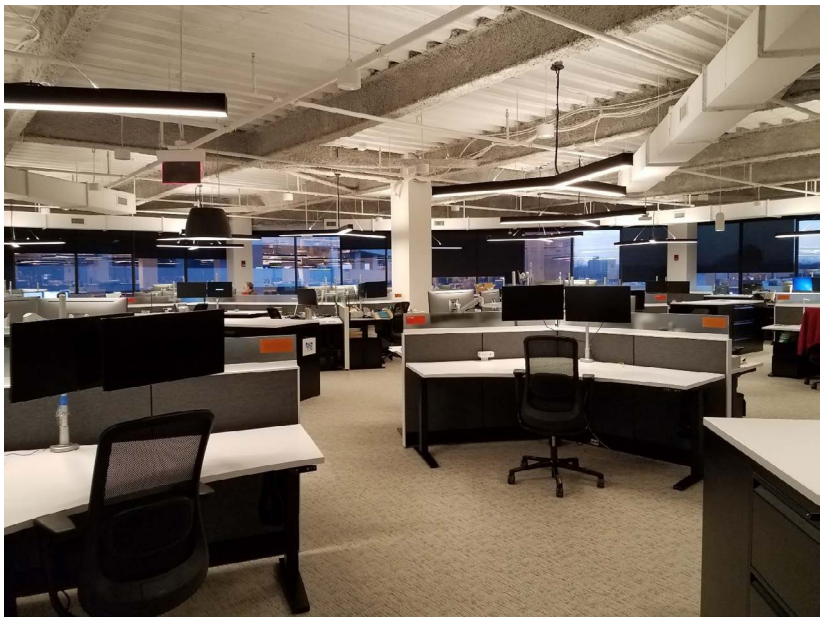
The problem with this layout? There was no visibility into or out of the laboratory spaces. And people were isolated in individual offices. So the company had many brilliant minds (Draper's engineers are from top schools, like MIT), but most of them were essentially "siloed." Still, many workers—software engineers in particular—were notorious for craving solitude to do their work.

What to do? How to bridge this gap in a way that encouraged collaboration while respecting some people's need for their own private space?

Thanks to a new CEO, Dr. Kaigham (Ken) J. Gabriel, who'd seen success in open offices in places like Google, Draper began a program to create open space—one that would address the visibility issue, with the goal being to help foster collaboration and those "accidental" meetings that often result in ideas that lead to big breakthroughs. At the same time, the build-out would also keep in mind the need for quiet spaces.

Those involved in the planning did their homework and due diligence, which included touring other organizations that were in the process of an open-plan buildout or had recently transitioned in order to learn what worked or didn't work.

For its own transition to open space, Draper focused first on its business offices on the seventh floor. Flanagan says, "We did a complete core shell renovation. We moved the folks from that floor off-site for six months while completely gutting the floor. We replaced all the infrastructure and then created space for about 130 people in open pinwheel seats. We call them pinwheels because it's a 120-degree work surface for each individual and they're connected at a central point. Each has a third of a pie, if you will. And those are spread throughout the floor in various configurations."



Flanagan says they're all sit-to-stand desks, which people have embraced. (Many people start their day standing, but end their day sitting.) The new configuration has increased the natural light and visibility into one another's work. "By virtue of the shape of our building in a horseshoe, we don't have one, big open football field cubicle type space," Flanagan says. "It's a series of neighborhoods, which makes it ideal for the open space."

Since that first build-out, Draper has completed several other open space configurations with the most recent launching in January 2019. Two of those have included engineering labs. Flanagan says, "Instead of isolating all the electronics engineers in one space and software engineers in another and bio-engineers in a third, by having them pass through open areas or interact in break rooms or in our cafeteria space, people that are working on very different things can find many things in common that lead to great discoveries."

But what about the need for deep work—something that is common among engineers? Flanagan says that for every open office area, Draper has numerous "focus rooms." These are non-reservable rooms, usually 50 to 75 square feet, with a couple of chairs. People can have private phones calls or hold small meetings. There are larger conference rooms as well. Flanagan adds, "There are enough focus room and conference room seats for everybody who resides on a floor to be away from their desks and in an alternate seat, if needed."

Flanagan acknowledges that not everyone loved the spaces when they first walked in because change is never easy. Using a "90-day rule," however, has helped most people adjust and settle in. "When we occupy a new floor, we have what's called a 90-day rule," Flanagan explains. "So for 90 days, any complaints or issues that people have . . . are added to a central list of things people would like

to see changed. And for seven renovations now, at the end of 90 days, probably 95% of those issues have resolved themselves [on their own]. People have adjusted or the problem goes away."

One issue that took some initial experimentation was with the electronic sound masking system. Flanagan says, "It's a pretty simple system. It effectively sounds like airflow. But the biggest thing we learned is to turn it on and don't touch it. On the first floor [we renovated], on weekends it would get shut down and then sometimes it wasn't turned on first thing Monday morning. It really makes a dramatic difference in terms of deadening noise, especially across an open space. So basically now, we set it before we occupy the floor and we don't touch it once we do occupy it."

In addition to the "people" floors, Draper also transformed another area into collaborative space. Flanagan says, "In the middle of the horseshoe used to be a big, open air courtyard. Being in New England, the courtyard was vacant 10 of 12 months. And that over the last two years into an atrium that is, again, all about collaboration. And now it's a very vibrant, very lively area. People have meetings in there, work on their own, or just sit in there and have personal conversations, so it's turned into a great space. It's also connected the two farthest points of the horseshoe which cuts the transit time from one end of the building to the other by about half."

Is your organization moving towards an open office plan? Follow these best practices.

It's a truth universally acknowledged that if people move to an open office environment, at least some of them will grumble about it—and it's the FMs who typically have to deal with these complaints.

But *how* much grumbling you encounter—well, that *is* within your control, at least somewhat. Here are some best practices for minimizing complaints and mitigating sound and privacy issues.

1. Make sure the goals of the open office setting align with the way the people occupying the space actually work. Keep in mind that this will likely require that you cater to—and, as a result, design *for*—different types of workers within a single space. This might involve a combination of acoustical "neighborhoods," single-person workstations, and focus rooms/huddle rooms and conference rooms.

2. Advocate for functionality first, aesthetics second. Architects are understandably focused on beauty and aesthetics in addition to function. A hot design trend right now is the industrial look with its open ceilings—meaning everything is exposed and, as such, can increase the noise factor dramatically due to things like fans and other mechanical equipment. If your architect or leadership team is leaning towards this design, ask if it serves the office environment in a positive way. If yes, make sure everyone understands the sound implications and that a plan exists to diminish the noise resulting from things like fans and other mechanical units.

3. Engage senior leaders and management early on to get their complete buy-in during the initial stages of consideration. As Joanne M. Trask from Partners HealthCare says, "It's hard for a middle manager to complain when senior leadership is also sitting in a workstation/cube."

4. Communicate, communicate, communicate. Create a detailed communication plan, one that serves as a living, breathing document. Make sure it provides a consistent narrative to everyone affected by the transition to the open space. This is especially important if you're merging multiple departments or various locations into one space.

Keep in mind that different people/departments will have different needs and requests. IT will have different concerns from accounting, and the folks in accounting will have different questions than the people in the graphic design department, and so forth. (And don't underestimate seemingly "trivial" items, like agreeing on the brand of coffee that will be available in the break rooms!)

Anticipate questions and develop answers that have been reviewed, debated, and approved internally. Keep the communication plan up to date and easily accessible (via a company intranet, for example). And provide people with as much "warning" as possible. A move from one location to another—and a move from closed offices to an open space—is a big deal. Communicating details as far out as six months isn't unheard of.

5. Contract an acoustical consultant from the start. If you want to truly avoid problems with noise and privacy issues, it makes sense to work with people who are experts in acoustics.

6. Give careful thought to closed areas. Consider small rooms, like huddle rooms or phone booths, with doors and floor-to-ceiling walls for employees to use (ad hoc) for tasks, such as lengthy phone calls or "deep" work. In addition, determine an appropriate number of varying sized reservable conference rooms. Finally, make sure these closed spaces are constructed with care (and from the point of view that they should block out noise).

7. Don't overlook seemingly simple things, like the height of the workstation panels. Make sure there are acoustic absorbing panels built into the workstations and surrounding areas. Again, a good acoustical consultant can guide you on the number you'll need, material types, and appropriate heights.

8. Research and invest in a sound masking system. Your acoustical consultant can certainly provide insight, but if you decide to go it alone, do your due diligence: research different systems and talk to colleagues regarding what they use in similar configurations.

9. Set expectations with employees. The *Harvard Business Review* says to "convey the vision beforehand" so you can help employees identify the space as theirs and feel connected. Acknowledge that change is never easy. If the person is coming from a closed office environment, they should expect a certain amount of noise in the new open-air environment—that it *will* be different and they will need time to adjust. Encourage employees to "make the space their own."

Stephanie Lafontaine from NV5 says, "It's important to communicate with the employees sitting in the space that it's not the same as the cube farms that used to be everywhere throughout a building. Having some noise in the space is to be expected. If people know they're going into a space that's a little bit different from what they're used to, they might be a little bit more willing to accept it, versus expecting the same things and getting a completely different situation."

10. Have a way to resolve real issues. No matter how well you prepare people for the move to an open office environment, you will hear complaints. This is normal. But you should still make sure you have a plan for fielding complaints so that you can address legitimate problems.

Trask says, "As a rule, people don't like change and have varied levels of sensitivity. Listen to all comments and complaints carefully to determine the true issue and keep your responses consistent and high level."

11. Release an occupant handbook/etiquette guide for the new open office space. Trask says an occupant handbook or office etiquette document can be useful for all employees to reference.

12. Get creative if sound issues persist. Try changing the layout, tweaking the sound masking system, or adjusting/renovating the finishes.

13. Know that there will always be critics, but also know that people will adjust over time. Flanagan says, "You just have to give people a chance . . . change is difficult. There are certainly times when people need quiet time, but to collaborate with others can be much more powerful and effective."

Need more insights and ideas regarding your organization's open office plan?

Talk to your IFMA Boston cohorts. Attend an upcoming event, get involved with a committee, and/or check out available resources on our website.

IFMA™ Boston Chapter
International Facility Management Association

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Established in 1984, the International Facility Management Association's Boston Chapter is a non-profit, incorporated association dedicated to serving the facility management profession. IFMA Boston strives to enhance the recognition and integrity of the profession, while providing facility professionals with the services and information they need to advance their careers. The International organization provides education, research, publications, events, and alliances with other related associations and organizations.

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