



**The American  
Institute  
of Architects**

**framery**

SERIOUS ABOUT HAPPINESS

Welcome to  
AIA Continuous  
Education Service

# Creating Activity Zones in an Office

**Course Topic:  
Distractions in a modern office**

AIA Number: 38831411

## Course information

<b>Learning objectives</b>	<ul style="list-style-type: none"><li>• Understand why it is important to protect ourselves from distractions at workplace</li><li>• Learn some of the ways to utilize acoustic spaces</li></ul>
<b>Instructional delivery methods</b>	On-demand print course (Article + online quiz)/Total 1 hour
<b>Approved LUs and type</b>	LU HSW (= 1LU)
<b>AIA CES program approval expiration date</b>	December 31st, 2021
<b>Prerequisites</b>	None
<b>Advance learner preparation</b>	None
<b>Program level</b>	Introductory
<b>Program description</b>	Throughout modern offices, people are frequently distracted by several factors. Those distractions are resulting in a variety of recurring problems in the workspace, such as employee concentration, well-being and mental health. This course provides the fundamental knowledge including the importance of distraction-free workspaces and the tools to achieve optimal acoustic environments.

### **AIA CES Provider statement**

Framery Oy is a registered provider of AIA-approved continuing education under Provider Number 38831411. All registered AIA CES Providers must comply with the AIA Standards for Continuing Education Programs. Any questions or concerns about this provider or this learning program may be sent to AIA CES (cessupport@aia.org or (800) AIA 3837, Option 3).

This learning program is registered with AIA CES for continuing professional education. As such, it does not include content that may be deemed or construed to be an approval or endorsement by the AIA of any material of construction or any method or manner of handling, using, distributing, or dealing in any material or product.

AIA continuing education credit has been reviewed and approved by AIA CES. Learners must complete the entire learning program to receive continuing education credit. AIA continuing education Learning Units earned upon completion of this course will be reported to AIA CES for AIA members. Certificates of Completion for both AIA members and non-AIA members are available upon request.

## **Procedure to complete this course:**

1. Please read the full article on the following pages.
2. **Take online quiz (summative assessment) from the google form.**  
[https://docs.google.com/forms/d/e/1FAIpQLSe5Qo-dxIVActJvG5ACrpaffY8vBO\\_kf6gnzqtq5khSpX7flw/viewform?vc=0&c=0&w=1](https://docs.google.com/forms/d/e/1FAIpQLSe5Qo-dxIVActJvG5ACrpaffY8vBO_kf6gnzqtq5khSpX7flw/viewform?vc=0&c=0&w=1)
3. You need to get at least 70% to pass the course.\*
4. After you pass the quiz, the attendance record will be reported to AIA administration. Later you get 1 learning unit.

\*You are permitted to retake this assessment after a failed attempt.

# Distractions in modern offices

Our working life is becoming increasingly complex. In this development, our work environments should be a balancing element during work days. However, in many cases distractions in many forms are an inconvenience that harms our ability to focus on work. The average person is distracted every 40 seconds while working on a computer. ([source](#)) And it takes more than 20 minutes to refocus ([source](#)).

In this course you will learn about the importance of distraction-free workspaces and the tools that ensure workspaces provide employees with the best possible acoustic environments.

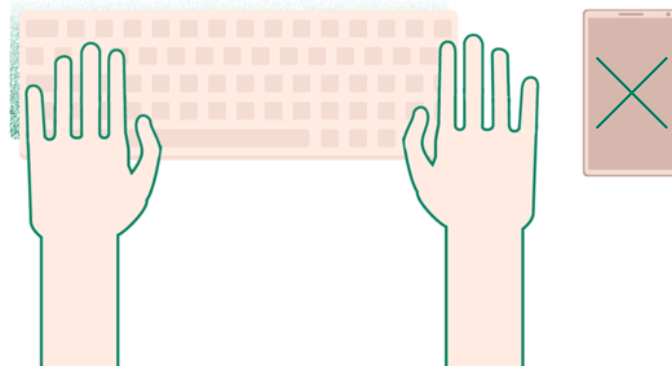
## 1. Reasons to consider distractions and noise

When designing buildings and workspaces, it is imperative to consider who are the people working inside the premises. The majority of people work in offices. Office work, also known as knowledge work, has its special requirements for physical workspaces. Knowledge workers think for a living, and it is the challenge for designers and architects to create spaces for thinking and other creative activities.

With deep thinking and creativity at its core, knowledge work requires long spans of uninterrupted time. Therefore, it is important that we consider the work conditions for thinking activities: if we can't focus on our work, it decreases the chances for quality collaboration. On the other hand, it's unrealistic to think one can be creative for eight hours straight and in today's collaborative work, only few people work without a team or a project. Knowledge work requires a variety of spaces: spaces for thinking, relaxing and co-creation, just to name a few.

However, in each and every work environment, you can find the most common stress factors – distractions. Distractions come in many forms:

- Someone walks suddenly behind your back and you startle
- People quite near you are having a conversation and you hear them mentioning a project you're working on, gripping at your curiosity about what's going on
- The door bangs and your loudest coworker greets everyone at the top of her voice
- A notification beep from a smartphone app pierces through your concentration
- To block the noise and distraction from the flow of people, you put your headphones on and listen to some music, which can be a distraction in and of itself



Distractions, noise, the hustle and bustle of people flow, and a lack of privacy are the most common factors that cause stress in the work environment. This is significant. After work hours, we should have enough mental energy for our free time and responsibilities. Workspaces are expected to and need to support our wellbeing and ensure that during the work hours we have the right conditions for quality work and that after work hours we still have enough energy.

We require more silence and calmness in our working life since the noise has an impact on our health. Noise reduces our resistance and studies have shown that it adds to the risk of cardiovascular diseases. Constant interruptions make us tired and even impair the functions of our short-term memory. According to research, if your work is highly collaborative, your need for silence is even higher\*\*.

**Over  
50%**  
of people have a hard time  
concentrating in open-plan offices

**It takes  
20 min**  
to regain your focus after  
a small distraction

## 1.1 Noise – not just about the decibels

Noise is the biggest problem in modern offices, bringing with it many downsides. It distracts us, harms our ability to focus and makes our brains tired. As knowledge workers think for a living, office noise is a real problem and it's a real problem worth solving.

Noise is a largely misunderstood concept. Most efforts to control noise are targeted towards keeping sound pressure in a given environment under unhealthy levels. This is very important, as exposure to high noise levels can have significant physiological and psychological effects. Effects of noise to cognitive performance of office workers are deservedly gaining more and more attention as well, with open plan offices being labeled as being uncondusive to productive knowledge work. However, there's room for nuance, especially in discussions about noise in the workplace.

First of all, noise is experienced subjectively. One person may enjoy working in a coffee shop with a little background buzz, while for another, it may be impossible to concentrate and complete any tasks in that kind of environment. We humans vary a lot when it comes to how sensitive we are to noise. People tolerate varying degrees of noise, but this is only partly related to noise levels measured in decibels. In general, a third of people are sensitive to noise and distractions and get easily distracted.



***“When it comes to our happiness, it is essential to have periods of silence and calm along the work day.”***

In addition to some sounds being more distracting than others because of their physical characteristics like frequency, amplitude and complexity, the level of distractibility of a sound differs between people and is also dependent on a person’s physical and psychological state. It turns out that information carried by sound plays a major part as well.

Often ambient background noise or poor interior acoustics are blamed when a work environment gets in the way of productivity. It may be surprising, but in an office with very low noise levels and carefully designed acoustics, concentration can still prove challenging because of a quiet phone call or conversation between colleagues a few desks away.

Research suggests that distractions in open plan offices are mostly the result of background speech that is irrelevant to the listener. Also, regardless of how loud the background chatter is, it’s usually a distraction if it’s audible enough to understand. In a quiet office, for a discussion to be inaudible, it either has to take place halfway across the space or in another room. This is the noise problem of open plan offices.

Uncertainty about what really matters in office acoustics is also reflected in the methods used to measure acoustic performance of work environments. For example, the level of sound insulation of an acoustic element is typically expressed using a unit called Sound Reduction Index (R or  $R_w$ ). It’s a good way to describe the ability of a single component, for example a wall, to reduce sound passing through it.

Sound Reduction Index is less than helpful though if it’s used to describe the effectiveness of, let’s say, a desk partition, since sound is more than capable of passing around it. Sound Reduction Index does an inadequate job of describing the sound insulation of closed spaces as well because those are always combinations of various components, such as walls, doors, ventilation channels, etc. You wouldn’t trust a roof to keep out water if you only knew that a single tile does.

There's a lot happening in the development of less distracting work environments. More user-centered office concepts, like the activity-based office, are being adopted. Products like phone booths and small acoustic pods, that not only eliminate noise but also provide much needed social cues in workplaces are becoming more common.

New standards that offer improved ways to measure and communicate acoustic performance are also under development. One example of this is a [standard](#) (ISO/DIS 23351) being developed by Turku University of Applied Sciences for testing the sound insulation of furniture ensembles, such as closed and semi-closed spaces.

## 1.2 Our brain in the office

Modern offices with too many people working in the same area create a lot of noise from conversations, ad-hoc discussions and phone calls. These **conversational distractions** are the worst things in an office environment for our brains. This matters, as our attention is the most powerful resource we have in order to complete our day-to-day tasks.

Let's dig deeper into how distractions affect our brains.



Work environment stress can be seen in our brains. When there's a sudden noise or movement in the background, the "alarm system" in the brain switches on, informing us that something is happening. Even if the something is just harmless talking nearby, the brain informs us. Especially harming is the talking from which you can distinguish words, when you're concentrating on reading or writing. This is because the same part of the brain is responsible for hearing, reading and writing functions. The brain has no capacity to deal with audible talk, in addition to reading and writing.

Our brains respond naturally to anything that is pleasurable, threatening or novel (Sood & Jones 2013). The brain scans the environment continually and when a distraction occurs, the brain system alerts the awareness that attention is required. The brain system is activated and alert even though we consciously understand we do not need to care about the stimulus in question. Knowingly transforming the attention from stimulus to another is stressful. It is a waste of energy to fight against noise.

## Info box: 52:17 rule

- Multitasking does not exist. Our brains can only focus on one thing at a time. When we multitask, we are actually jumping our attention from one point of focus to another. This is called context switching and it is the unhealthiest for our productivity and problem-solving, leaving us feeling exhausted.
- The best antidote for multitasking is designing periods of focus and rest to our workdays. Productive work is a combination of focus and rest. In one study, it was found that deeply focusing on work for 52 minutes and then having a 17-minute break was highly effective. Take care of your attention muscle – protect yourself against distractions.

### 1.3 Knowledge work and distractions

Humans are not immune to environmental factors, such as to disturbances, to people and to their feelings, the feeling of hurry and to the functionality and aesthetics of the work space. Therefore, it's extremely important to consider employees when improving the workspace. Today's knowledge work is **cognitively demanding**, so from this perspective it's also essential that the workspaces support fluent and creative work.

The tasks of knowledge work include thinking, problem-solving, creative combining of information, meetings and the understanding of feelings of others. These are tasks which challenge the workspaces. Even if digital tools make it easy to do work *anywhere*, it should be questioned whether we should *work anywhere*. We should work where it is convenient and where we can flourish. Humans can't flourish just anywhere, and different people require different requirements in order to work fluently

The reality is that workspaces in all corners of the world are failing to fulfill the needs of knowledge work. Research shows that we as humans require a variety of workspaces. One recent study on work productivity found that knowledge workers require work spaces that stimulate openness and collaboration, in addition to enclosed settings to focus on tasks. Effectively focusing on tasks, getting things done and being productive is highly motivating. According to the progress principle (Amabile & Kramer 2011), making progress in meaningful work **boosts our emotions and motivates us**. The more frequently we experience a sense of progress, the more likely we are at being creative in the long run. We should create workspaces that enable us to have these frequent experiences of progress.





## Workplace effectiveness and well-being go hand-in-hand

Therefore, we must consider the users, in this case being the knowledge workers.

Studies on the best workspaces in the world have revealed that the best ones are designed in a human-centric way. In other words, there is no one-size-fits all concept that can be copied from one organization to another. Instead, the best workspaces are designed with careful attention to the employees and their needs. This is important, as at the heart of the workspace stress is the mismatch between an employee and his or her work environment.

A good employee-workspace match is worth striving for. According to research, we have two psychological needs that explain how satisfied we are with our workspaces. Our workspaces should meet our needs for **privacy** and **relatedness**. We need to feel that we are part of a larger group, yet we also need a sense of privacy when needed. The human-centric workspace design aims to answer to these needs. The starting point of the design process is that we are different in many ways. Besides the obvious differences in work tasks and mobility profiles, we are also different in other ways, such as how sensitive we are to distractions and noise.

## 2. Solutions to distractions

As we have learned, current office spaces are full of unnecessary distractions and noise. The goal of workspace development for knowledge workers is to have spaces for individual focused work – a possibility of a calm workspace.

### 2.1 ABC model on acoustics

A rule of thumb for noise control is the ABC acoustics model, short for the **A**bsorb-**B**lock-**C**over model. Office acoustics are tricky, but with the ABC model you learn some basics. ABC is about the physical construction elements in the office in order to create optimal acoustic office space.

#### **ABSORB**

Absorbing is about minimizing reflections and capturing sound waves with absorptive materials. Sound reflects from hard surfaces such as glass, metal and concrete. Materials that absorb help with this. Using wall and ceiling panels and carpeted floors decrease the reflections. In this phase the goal is not to absorb everything, but to find an optimum. If there is too much absorption, the user experience is uncomfortable.

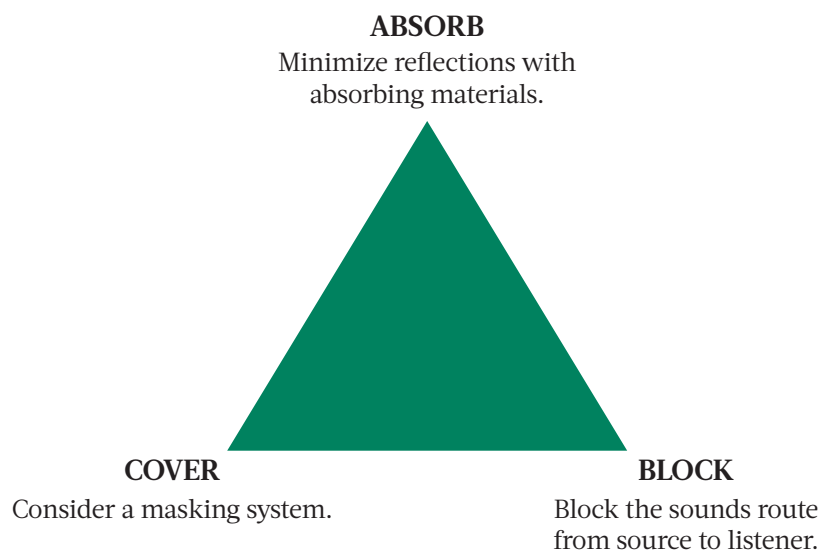
#### **BLOCK**

This is mostly about the conversational distractions, mentioned previously. Blocking means the use of vertical sound barriers (such as panels) that block the route from sound source to the listener. This helps users to focus on work at their workstations, as sound barriers block sound waves from traveling in the office space.

#### **COVER**

Again, a space with zero sounds is not what we are looking for. Sometimes sound masking systems are used to create random but comfortable background noise, which makes conversations less likely to be heard.

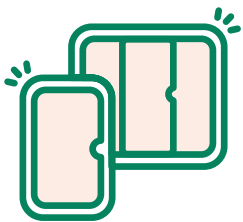
Following is a visual showing the ABC basics



## 2.2 Phone booths and small acoustic spaces

To improve acoustic conditions in offices, and especially in open areas, it is recommended to use phone booths and small acoustic spaces. These meeting pods and phone booths **absorb** and **block** noise, but their main function is to **decrease** the conversational noise. When employees use pods for making calls or for participating in video conferences, they have the privacy for themselves, preventing any disturbing of their colleagues. Larger meeting pods are a good place for confidential meetings, brainstorming sessions and important one-on-one discussions without disturbing the whole office – or the office being a disruption.

Acoustic pod placement within offices is also a social cue. Pods are meant to be placed close to people, where the pods will act as a social cue. In doing so, ad-hoc meetings are welcomed and making phone calls from inside are endorsed. People should be encouraged to meet spontaneously and make the most of these meetings. Sudden, unexpected discussions are highly efficient as we generally take time only as long as needed in these situations.



Small meetings are simple to arrange with acoustic pods. It is recommended to focus on the quality of small meetings and provide comfortable and convenient spaces that are correctly positioned. Meeting quality can be improved by focusing on the substance of the meeting, agreeing not to use phones and keeping the meeting time short. When there is a small gathering, acoustic pods help people to be naturally more present and active as well.

An ideal and practical solution is to provide the tools and places where people can concentrate and work more efficiently. The pods help in creating different kinds of workspaces and zones at the office, based on the activity needs. With these tools, people's ability to focus will be improved and the number of distractions in the offices reduced. It's easier and more pleasurable to get things done.

## 2.3 Activity zones

Offices of today are increasingly being modernized and updated to activity-based offices. These take into consideration the variety of work activity needs that users have, ranging from focusing on working alone and together, a diversity of collaboration and recharging. This distinction for different zones at the workspace has its background in science.

Studies have shown that there are indeed two psychological needs that explain satisfaction within most offices – a need for interacting with others and a need for privacy. A well-functioning office will have a steady balance of concentration spaces and collaboration spaces.

Few people are able to collaborate eight hours a day. Uninterrupted time is also required in order to get things done and recover from the socializing and noise around them at the office. When it comes to work stress and productivity, quiet work spaces are vital.

Research confirms that personal productivity drops when there are distractions at the office. It's been recommended that open plan offices should be complemented with many, easily accessible quiet workspaces. This is about answering the needs for privacy and concentration.

**81%**  
**of all meetings in open plan offices**  
**are between 4 people or less.**

A study focusing on high and low satisfaction rates in activity-based offices found that offering enclosed spaces for focused work proved helpful.

This finding was even validated by another research group, which found that the need for privacy strongly predicts the level of satisfaction among the workforce in activity-based offices, stating the following:

“To enhance satisfaction with activity-based working environments in practice, it seems of utmost importance to increase experienced levels of privacy. Activity settings that are intended to be used for concentration work deserve special attention, as these should be sufficiently available and tailored to specific person-related and job-related needs.”

In addition to concentration spaces, there is also a clear need for collaboration spaces. These are spaces like informal areas, functional meeting rooms and inspiring open work areas, all of which answer our human need of belonging.

## Which zones are relevant in your work?

### Main activity zones



**FOCUS**  
Concentrating 100% on the job and making sure that there are only wanted distractions.



**COLLABORATE**  
Co-creating, ad-hoc meetings and creative encounters, setting the scene for innovations that are the key to success.

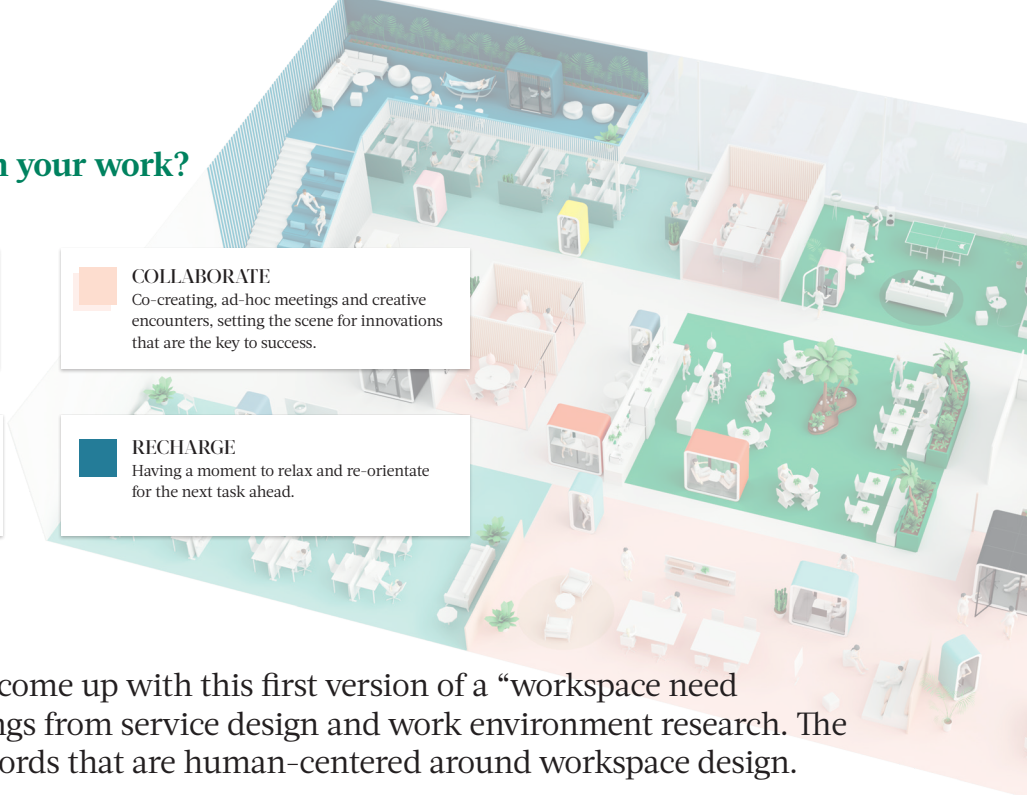
### Sub activity zones



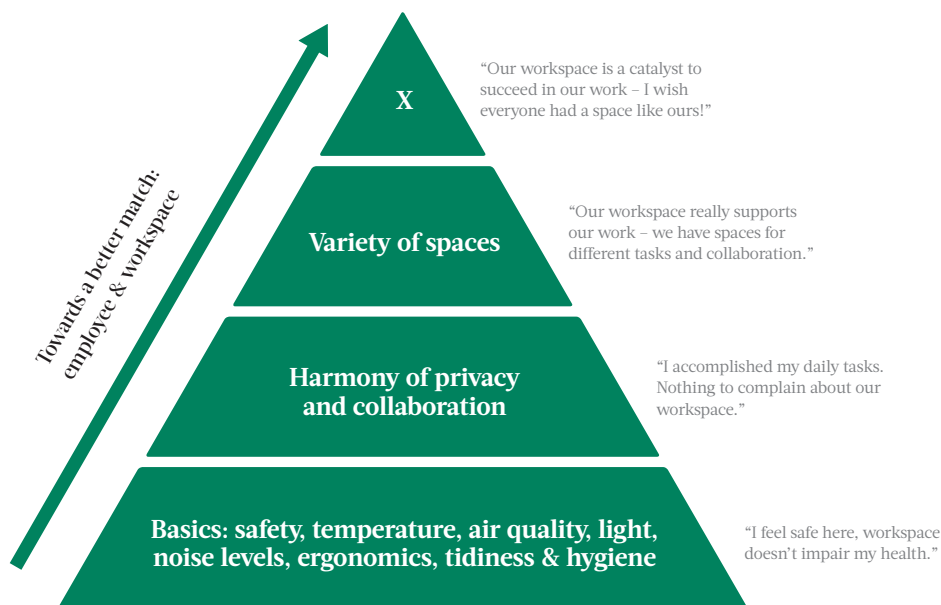
**PLAY**  
Informal collaboration and exchange of ideas, blurring the line between work and play.



**RECHARGE**  
Having a moment to relax and re-orientate for the next task ahead.



Our workspace research has come up with this first version of a “workspace need hierarchy” – to sum up findings from service design and work environment research. The purpose of this was to find words that are human-centered around workspace design.



The idea goes as follows. As in the traditional Maslow’s needs hierarchy, in this pyramid the lowest levels must be fulfilled before you can enter the next. And you can go to the next level by gaining more insights about your employees and their needs through the work days. The goal is to create a workspace, that does not only enable working alone and meetings, but is a platform for experiences, learning and accomplishments. The ground level consists of the basic building blocks of any work space: safety, temperature and noise level to mention some of them.

The second level is about finding the right balance for working alone and together. In different companies this might mean different workspace settings. For example, academic work requires the ability for laser-like focus, while marketing teams may need inspiring spaces for collaboration. Research points to the direction that meetings are between fewer people than before, so a variety of meeting spaces is a big plus.

## Conclusion

Distractions are tricky. If we try to eliminate all distraction in the work environment there will be no communication. Without communication there will be no organization working towards the same goal. Therefore, getting rid of distractions is not the answer. Rather, learning to manage those distractions properly is the answer. Some of the “distractions” are highly useful for the organization, such as sharing ideas and spontaneous collaboration. These positive interactions turn into distractions when it takes place in the wrong workspace or if the timing is bad. So, eliminating all interactions and distractions is not the way to go.

Improving workspaces is a design process. It is necessary to consider individuals and teams, when planning workspaces. In practice this is about getting to know individuals – what stresses them, what brings them joy and what spaces they need in order to be fluent at work.

Because work environment stress is about interplay of the work environment and individuals, it’s necessary to consider the following:

1. **Minimize** distractions where they need to be minimized. Remember to keep some areas for interactions and good debate, while keeping some areas calm (with acoustic screens and walls, phone booths, library spaces and balance of collaboration and concentration spaces).
2. **Variety.** This is about human-centric workspace design. Find the needs and create spaces for formal and informal collaboration and for larger and smaller groups. Purposeful variety is the key to supporting the variety of people that are working in the same space.
3. **Office etiquette** – it’s also about the ways of working. Decide together about the common house rules – such as which meeting rooms must be reserved in advance and which can be used ad hoc, as the need arises, and which areas are okay with noise.

**This is the end of the article. We hope you've enjoyed it and were able to take something out of it.**

**[You can take the online quiz from here](#)**

If you have any questions, please see the contact details below.

#### Contact info

Company Name: Framery Oy (AIA Number: 38831411)

Contact person: Daiki Yoshikawa

Email address: [daiki.yoshikawa@frameryacoustics.com](mailto:daiki.yoshikawa@frameryacoustics.com)

#### **References**

Achor S, The Happiness Dividend [Internet].Hbr.org. Harvard Business Review, 2011.

Amabile T & Kramer SJ. , The Power of Small Wins [Internet].Hbr.org. Harvard Business Review, 2011.

Office for National Statistics.( 2016 ). Sickness absence in the UK labour market.

\*Gloria M, Gonzales V M, Harris J. No task left behind? Examining the Nature of Fragmented Work, 2005

\*\*Sano stop jatkuvalle mölylle – kolme asiantuntijaa kertoo, miksi se on tärkeää [internet] yle.fi, Yle uutiset, 2018.

Sood, A., & Jones, D. T. (2013). On mind wandering, attention, brain networks, and meditation. *EXPLORE: The Journal of Science and Healing*, 9(3), 136-141.

Basner M, Babisch W, Davis A, Brink M, Clark C, Janssen S & Stansfeld S. Auditory and non-auditory effects of noise on health. *The Lancet*. 2014;383(9925):1325-1332.

Haapakangas A. Subjective reactions to noise in open-plan offices and the effects of noise on cognitive performance – problems and solutions [Ph.D.]. University of Turku; 2018.

When the walls come down – how smart companies are rewriting the rules of the open workplace [Internet]. *Oxfordeconomics.com*. 2018 [cited 16 September 2018]. Available from: <https://www.oxfordeconomics.com/my-oxford/projects/336497>

Bernstein E, Turban S. The impact of the 'open' workspace on human collaboration. *Philosophical Transactions of the Royal Society B* 2018;373 (1753).

Turku University of Applied Sciences is developing a new standard [Internet]. Turku University of Applied Sciences. 2018 [cited 16 September 2018]. Available from: <https://www.tuas.fi/en/services/furniture-ensemble/>

Chadburn, A., Smith, J., & Milan, J. (2017). Productivity drivers of knowledge workers in the central London office environment. *Journal of Corporate Real Estate*, 19(2), 66-79.

Hoendervanger JG, Ernst AF, Albers CJ, Mobach MP, Van Yperen NW (2018) Individual differences in satisfaction with activity-based work environments. *PLoS ONE* 13(3): e0193878.

Haapakangas, A., Hongisto, V., Varjo, J., & Lahtinen, M. (2018). Benefits of quiet workspaces in open-plan offices–Evidence from two office relocations. *Journal of Environmental Psychology*, 56, 63-75.

Brunia, S., De Been, I., & van der Voordt, T. J. (2016). Accommodating new ways of working: lessons from best practices and worst cases. *Journal of corporate real estate*, 18(1), 30-47.

Rapal (2018). Workplace Review. *Global Workplace Insights* 2018. Available: <https://www.rapal.com/optimaze-workplace-review>