

DAUPHIN

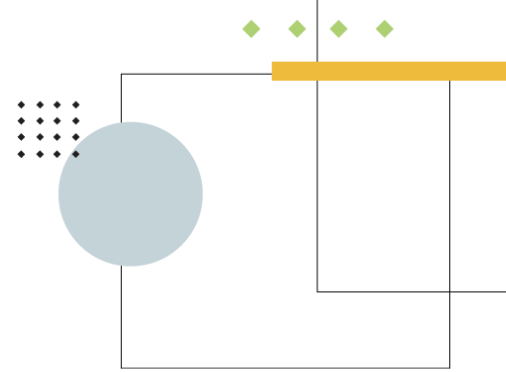
HumanDesign® Group



Sustainability & Well-being:

A Symbiotic Affair

Redesigning the way we
work, interact, and live



Overview

"If we think of the building as a human body, we will have a more holistic approach to projects. If we think of sustainability as a theme that is not separate from design, it will include a series of aspects linked to interiors [...] and how they can be placed at the service of their users. The project should also continue in the usage phase, to adapt it [...] to the changes taking place in people and in their ways of working."

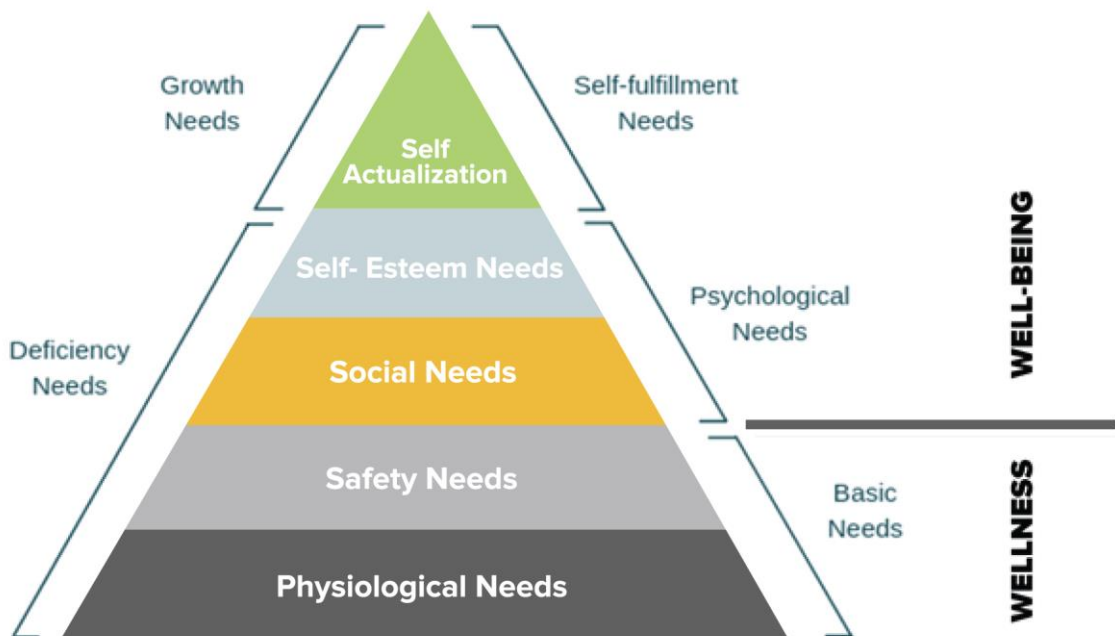
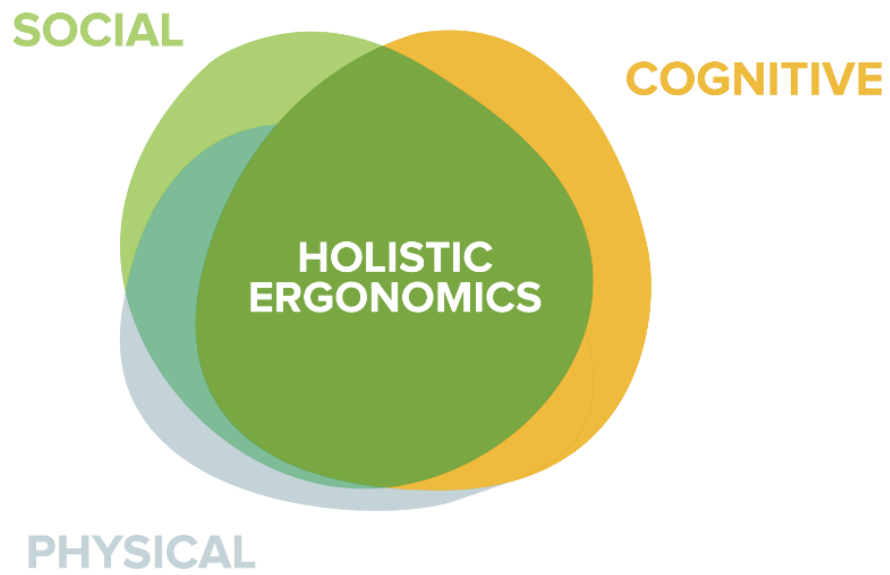
Michele Rossi

Until now, office buildings and their occupants have been juxtaposed: environments that may help get the job done but that don't mirror the complex needs we have as human beings. *"Often what's missing is a proper focus on the employee experience."*- OC Tanner, creating a holistic workplace culture through well-being and recognition.

Advocating for human well-being is not only a question of ethics; it is essential to office productivity and our overall happiness. Now it is more important than ever to implement the tools and resources available to strategically enhance the well-being of all humans, wherever they may be.

Concerning the working environment—where we can spend up to a third of our lives—fostering well-being at work has become an essential category within company cultures, helping businesses attract and retain top talent because the working relationship goes beyond a mere exchange of services for money. *"But there's more to the story. A holistic approach to employee well-being can improve employee engagement, productivity, and morale."* Matt Straz, *4 Important Ways to Look at Employee Wellbeing Holistically*.

At Dauphin HumanDesign Group, we embrace Holistic Ergonomics—of physical, cognitive, and social-emotional well-being—as a framework to envision, prototype, iterate and fabricate solutions that have human needs at the epicenter of the creation process, a process grounded in Maslow's Hierarchy of Needs.



SOURCE: Maslow, A., & Lewis, K. J. (1987). Maslow's hierarchy of needs. Salenger Incorporated, 14(17), 987-990.

The 7 Principles of Well-being at Work

When employees aren't performing up to standard, have you ever considered that it may be their working environment that is not conducive to good work and health? According to [this article](#), seven key factors have an effect on our well-being at work:

- FLEXIBILITY: Job design, including having some control over how you work
- PRODUCTIVITY: Overtime and number of hours worked
- SOCIABILITY: Social support
- PEOPLE CENTERED: Unbalanced home and work commitments
- JUSTICE: Perceived fairness at work
- FINANCIAL: Economic insecurity
- HEALTH: Insurance and healthcare

Our mental health could be enhanced by working as it comprises a sense of duty and all-important social interaction. The environment in which we work has the potential to both improve our mental state and negatively impact it. The real question is, *how* exactly can we look out for our employees and incorporate the seven principles of work well-being into our company culture? Design in 2022 has the answers.

The company of the future cares—it nurtures humanity and takes responsibility for its employee's well-being by playing an active role in their mental, physical, and emotional health in line with their needs. Then, it reaps the benefits: increased productivity, top talent retention, and cost savings teamed with improved performance hence increased revenue.

Design is fundamental in this aspect—lighting, temperature, layout, ergonomics, and furnishings all feature highly from a practical standpoint, promoting our physical and psychological well-being.



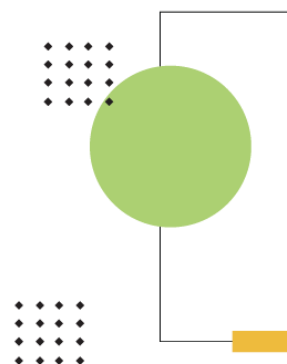
The Psychology of Workplace Well-being

For better or worse, the workplace and its ambiance affect our mental and physical **well-being**. Our lives are busier than ever before, and we are in constant demand, both professionally and personally, which is bound to pay a toll on our overall health. Companies have begun to address issues such as mental health stigma and offer wellness packages to alleviate a growing problem in our society.

On the surface, we have a series of factors that are generally associated with comfort: noise levels, temperature, air quality, and lighting all fight for our attention in the workplace, forcing us into overstimulation and the knock-on adverse effects of this—poor sleep, poor concentration, lowered focus, increased propensity to accidents, and many more—conditions that are rarely associated with feeling good.

After stating the obvious, there are a few atypical theories that may be worthy of consideration:

- The subtleties of a more "homey" office are likely to make us feel more secure and, therefore, more content
- Neuroarchitecture as a branch of architecture—[this particular study](#) registered more positive neural responses to curved lines in rooms over linear-style forms. While the study was more concerned with the type of affective response to specific lines—and does not discuss how they affect us—it argues that curved forms are more naturally occurring than linear ones
- Workplaces designed to foster social interaction may positively affect our psychological well-being than those created with a more labor-intensive outlook, as [this study](#) suggests





SUSTAINABILITY

Arbejdsglæde

The natural overlap between sustainable design and human well-being could be explained by *arbejdsglæde*, a Danish word that translates similarly to 'job satisfaction.' The Scandinavian concept is rooted in much more than contentment at work. An abundance of wood and other natural materials in the workplace helps us emulate the great outdoors in interior spaces, bringing us closer to nature, and making us feel good at work.

Using carbon-efficient materials to bring nature inside hosts a series of vantage points for human health. Aside from the biophilic properties of this practice, which we will go into later, natural features like wood in design promote sustainability. [Mass timber is making a comeback](#), and, contrary to popular belief, the demand for timber products can mean less deforestation—a win for the sustainability movement.

Stagnant, industrialized design is no longer relevant. In 2018, the construction industry accounted for [39% of energy and process-related carbon emissions](#), of which 11% was for materials such as steel, cement, and glass. Slowly but surely, we are beginning to grasp the scale of the problem that mass-producing artificial materials have caused for our planet and our health. We are now making strides to counteract these effects.





How Are Sustainable Buildings Linked With Human Well-being?

The quality of our built environment affects how we feel, behave, and even our propensity to physical illness.

Artificial Lighting

Artificial light shifts our circadian rhythm, impacting the quantities of melatonin we produce; this can translate into poor quality of sleep, which affects concentration, memory, productivity, and mood, and puts us at a greater risk of accidents, obesity, and a weakened immune system. Natural light harmonizes with our circadian rhythm and serves the sustainability agenda.

Concrete Surroundings

While not innately detrimental to human health as a finished product, studies have shown that a more natural environment has an increased calming effect on humans than artificially produced materials. Ulrich's environmental psychology (1986) and Stress Reduction Theory (SRT) assert that unconscious, cognitive processes of evolutionary origin influence affective responses to environments. Hence, sustainable materials take a significant lead over artificial materials for human well-being.

Acoustics

Sustainable construction frequently features open-plan offices that leverage natural light and use fewer materials, but the acoustic performance in sustainable buildings is often overlooked. Noise pollution is frequent in open-plan offices and can trigger a response in our amygdala, causing it to over-produce cortisol, a stress hormone. Soft, natural-fiber furnishings and mass timber features can attenuate noise.

Temperature

Although thermal comfort is a subjective sensation, buildings explicitly designed to harness the power of the local climate can reduce dependence on HVAC systems, increase air quality fundamental to human health, and conform to sustainability standards. This type of construction is referred to as a 'passive house,' one that organically integrates solar heat and wind or breezes in summer.



Air Quality

In reducing our dependence on HVAC systems, we can adhere to energy-related sustainable practices and reduce the number of Volatile Organic Compounds (VOCs) found in many refrigerants that HVAC systems use. Poor air quality is linked to several human ailments, not specific to respiratory discomforts, such as slow cognition, eye irritation, and infections, to name a few.

10 Tips For Sustainable Office Design

Whether you're revamping an existing building or flexing your architectural skills with a new build, Dauphin has comprised *The Ten Commandments of Eco-Friendly Design*. Even though these commandments don't guarantee a zero-carbon building, they can help you achieve a more sustainable office.

1. Opt for natural features and furnishings over plastic, concrete, steel, and glass
2. Source materials locally where possible to avoid transportation footprint
3. Reduce opaque partitions to increase natural light
4. Add plants to the decor for their carbon-sequestering and acoustic properties
5. Use automatic faucets and light sensors rather than switches
6. Choose durable, timeless furnishings to avoid throwaway consumerism
7. Retrofit where possible
8. Insulate the building well
9. Install solar panels for water heating and electricity
10. Use renewable energy for broader uses

As far as sustainable furniture is concerned, many options are available. Dauphin's Indeed task chair, a new product for 2022, features eco-friendly upholstery—like the Tonal cover fabric, 99% made of recycled PET bottles—making it a viable option for modern-day offices.



Join us at NeoCon 2022 to check out Indeed!

High-backed chairs are not only ergonomic, providing us with physical support contributory to our well-being, but they also lift our psychological well-being. Bill Browning, a pioneer in biophilic design and founding partner of the sustainability research and consulting firm Terrapin Bright Green, based in New York City, votes for high-backed chairs, as they are but one product that offers “a representational experience of nature.” In other words, we feel protected when our backs are covered.

However, materials are not the only consideration for sustainable design. Sustainability needs to encompass the lifespan of a building - from the start of the process, moving away from self-indulgent design towards a more holistic, human-centered design phase, and then the construction itself. But we can go even further—ensuring the final product can remain sustainable for the duration of its working life—and its ‘death.’

PASSIVE BUILDINGS

Building with sustainable materials can go a long way in enhancing human health, but genuinely sustainable design must last for the lifespan of a building.

Passive constructions are more relevant than ever. Effective architecture embedded in a deep knowledge of the local climate can guarantee sustainability for a long time by reducing the need for conventional heating and cooling systems in the long term. Main windows should be oriented towards the equator to maximize passive solar gain, singular or cross-ventilation enhanced by the stack effect, external wall color taken into account, and other factors that allow for an authentic passive house, or *Passivhaus*.

People + Sustainability = Social Responsibility

Sustainability needs to be rooted in human-centric design, encompassing company culture and pragmatic aspects such as materials and furniture. Nurturing sustainable company culture means going above and beyond to incorporate the humanistic facet into our daily activities and processes.

Dauphin's Ecolab initiative does just that: out-of-the-box ideas that transform the norm of business operations into ecologically-progressive practices. To integrate sustainable practices into the company culture and actively engage in socially responsible practices, the first step has been to produce eco-friendly promotional materials, repurposed, recycled, or fair-trade certified. This includes trendy bracelets, glasses, and valuable bags in different designs and sizes.

Instead of typical paper flyers for marketing purposes and other branded goodies, Dauphin liaised with partners in the Dominican Republic that repurpose discarded glass bottles into reusable promotional materials. In addition, employees at the US subsidiary are invited to bring their discarded glass bottles to Dauphin's Boonton office so that the creative production team can repurpose them, transforming them into beautiful collectibles. The colleagues will receive a unique collectible piece as a keepsake in exchange.



"Together, we are stronger and can greatly impact our company culture and community at large," said Angela Smith, Sales Support Specialist, explaining the underlying idea behind the sustainability initiative.

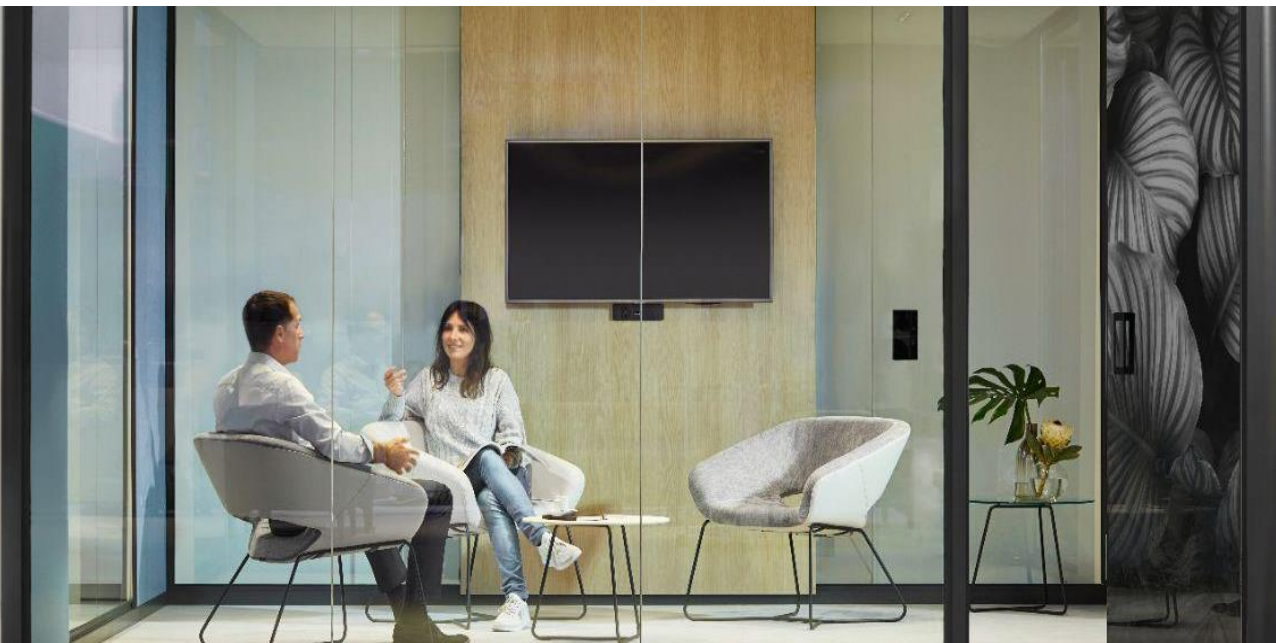
The Ecolab initiative dives into the equality pool with a splash, disrupting unsustainable norms and providing opportunities for historically underrepresented collectives with a simple yet effective idea. It begs the question: how many more opportunities are we missing to build truly equitable businesses?

Change starts with an idea. *"To make a change, you must be: willing to commit, willing to change, willing to have an open mind, and willing to take action!"* - Tae Yun Kim. In short, adaptability is a crucial driver of change.

Can Adaptation Be Sustainable?

The workplace is ever-changing. As recent years have proven, adaptability is more than a nice to have if we are to thrive in the face of adversity. Our space needs can alter from one day to the next as the humanistic needs of our teams oscillate, so adaptable and sustainable furniture has become a worthwhile investment.

Imagine an office that could be assembled and used in a specific situation and then disassembled and used elsewhere to help companies avoid discarding building materials and wasting money and resources.



The Bosse Cube is an example of a product that circumscribes our need for sustainable construction. A new style of meeting room offering privacy is now possible from a sustainability perspective. These pod-like structures can be assembled quickly and easily, as you can see in [this video](#) of Bosselino, an easy to assemble, plug-and-play, telephone pod.

Not only sustainable, but this style of meeting room unveils a plethora of added advantages for human well-being. The temperature can be set according to the user's needs, maintaining the air quality. Noise reduction also stands out as a core benefit, helping to reduce employee stress and distraction and increase productivity. Rather than a structural design tip, the idea here is to keep an air of calm surrounding the office space. Bosse Room-in-Room is a seamless solution in this aspect.

BIOPHILIA

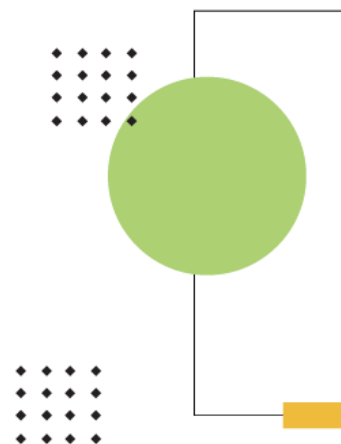
Closely linked to sustainability is humans' affinity innately and genetically toward nature. This phenomenon is known as biophilia - our innate desire to be close to the natural world. We cater to both sustainably-minded companies and biophilic practices using raw materials and leveraging natural light in our proposals.

How Biophilia Affects Human Health

- Improves Cognitive Function
- Lowers cortisol
- Enhances mood
- Heightens creativity
- Reduces anxiety-related disorders
- Reduces blood pressure
- Improves memory

Biophilia and sustainability go hand-in-hand.

There is an attractive side benefit, financially speaking, which comes from integrating aspects of biophilia into our offices. Not only can we save on energy consumption—natural lighting, increased air quality from reduced dependence on HVAC systems,



and the carbon-sequestering properties of materials like wood can bring down costs. But offices with biophilic properties also contribute to higher overall productivity and lower absenteeism. Where payroll is one of the most significant company expenses, embracing biophilia is a worthwhile endeavor.

Hospital Window

Remember the story about two men sharing a room in a hospital, both seriously ill? One of the men was well enough to sit up by the window for a short period each day; the other could only lie still and listen to the man looking out of the window describing the beautiful view:

"It's marvelous, there are parks full of trees, the sun is shining... children are playing. There's a lake. You can see the ducks swimming and how spring is blossoming..."

Soon after, the man who would spend his time describing the natural scenery to his roommate passed away, leaving the nurse to explain to the man lying down:

"Your roommate was blind; there is nothing outside this window, just other buildings; perhaps he described those things to encourage you."

Wood is one of the core materials with biophilic properties.

"The natural grain patterns and textures, the natural aroma, and the warm colors contribute to reducing stress responses, lowering blood pressure, and improving overall mood," says Gary McNay, AIA, LEED AP BD+C, ILFI Ambassador, academic planning and design at EYP, Atlanta.

What's So Good About Wood?

Sound absorption, temperature control, humidity control, hypoallergenic properties, recyclable, multisensory, pliable, carbon-sequestering, comfortable.

GREEN is the new BREATHE

Why Is Biophilia Relevant In Office Design?

If in any way, our health and well-being are impaired, it becomes challenging to perform at our peak cognitive level. At work, where it is often necessary to put our best foot forward, optimum cognitive performance is a fair, bare minimum demand, both from the employer and employee's perspective. With the *why* covered, we can now delve into the *how* →

Outdoor Offices

“Today the well-being of employees is a major priority, through buildings with more access to the outside, on a more human scale, rather than the traditional office towers. The indoor-outdoor relationship has become a basic necessity. The design of green areas has to be approached from the outset: from the choice of layout to that of materials, to a zero-waste approach, through which we try to grant new life to every object, reducing the disposal of existing things to a minimum.” (Cazzaniga, 2020)

Outdoor offices are a simple but effective way of ensuring our employees have the opportunity to interact with nature; this trend is fast gaining traction in the design and architectural field. Moving away from the startling image of our teams clicking away at computers in fields under the rain, you may find there are some ways to move your office outdoors. Or at least part of it.



[Cempa Alfresco](#) is a seating range that can withstand the test of time - and the weather. A roof terrace or balcony with space to take a restorative break can do wonders for the psyche, that need for a

breath of fresh air fulfilled. Even better, if that area is awash with plants and nature —what is there to stop you from having a bird feeder in your outdoor office space?

Ways You Can Take Part of Your Office Outside

Outdoor Meetings

The stagnant conference room, anything but productive, holds a psychological significance. We associate it with hierarchical entities, a type of us-versus-them room. Taking meetings outdoors in a neutral environment can unleash creative and collaborative potential, which could be that radical shift in paradigm that your office so needs.

The Work Café

The office is more than a space for your team to come in and deliver work. The office environment needs to cater to all of our human needs if we are to attract and retain top talent—and, more morally, ensure the people around us are happy. Why send them away at lunchtime or encourage desk eating when for such a reasonable cost, you can incorporate a type of outdoor office lounge for employees to enjoy?

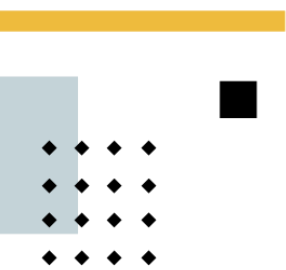
Desk eating

Daniel H. Pink, author of the best-selling book '*When*,' found evidence suggesting that those who get away from their desks at lunchtime feel better upon their return. According to Pink, "the non-desk lunchers were better able to contend with workplace stress and showed less exhaustion and greater vigor not just during the remainder of the day but also a full one year later."

Breaks

[Breaks are a fundamental part of our day for maintaining peak cognitive performance.](#)

Moving away from the desk, preferably outdoors, and even better if it is in a green area, are sure-fire ways to make the break count. If your office has this space available for its employees, they are more likely to feel that sense of *arbejdsglæde*.



Converging Outdoors and Indoors

Understandably, relocating your office outdoors is not always possible, even for parts of it, or times of the day. In this case, the next best thing involves bringing the outdoors in, rather than vice-versa. Here, there are no excuses because there are a few straightforward and cost-effective ways to do this and more necessary changes you can make if the budget allows.

Instant Improvements

- Pot plants
- Wall art featuring natural scenes
- Cushions and other fabrics emulating nature
- Moving desks to sunny or breezy spots
- Low-key background music

Long Term Improvements

- When it's time to change office furniture, opt for mass timber designs for indoor spaces
- Indoor water features are exciting in areas with a natural low humidity
- 'Nest' offices - a healthy compromise between open-plan and private booths
- Curvature in structures - leaves, trees, and rivers are rarely perfectly straight
- Living walls
- Artificial turf
- Use of recycled components

A Note About Plants

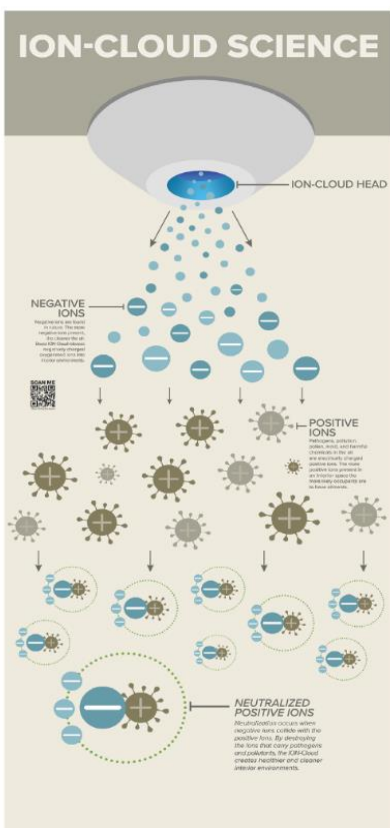
While some plant chemicals are beneficial to health when ingested (How is that office café menu coming along?), some of the phytochemicals that plants contain can benefit our health by breathing them in - another reason to pepper your office with plants. When plants and humans share their space, the exchange of gasses is particularly harmonious, especially during the hours of natural light when plants absorb carbon dioxide and release oxygen into the air.

Plants also help to purify the air. Clean air can help sharpen focus, and improve attentiveness and overall health, making them a great addition to the office decor. Furthermore, they help with the all-important sound absorption, particularly ones that have a dynamic surface area.

But, what about smaller spaces, such as enclosed meeting rooms or cubicles?

The [Bosse Ion Cloud](#) is an air purifier that grants the workspace similar effects.

By releasing negative ions that attach to positively charged particles in the air, it can help inactivate viruses, neutralize bacteria and render pollen, dust, fungal spores and smoke particles harmless.



IMPROVE HEALTH & WELLNESS

IMPROVE OVERALL HEALTH
Negative ions alleviate allergies, promote healing, increase blood flow, and aid in building a stronger immune system.

CLEAN AIR & CLEAR MIND
Clearer air boosts cognitive performance and the ability to focus.

MISS FEWER WORK DAYS
By eliminating pathogens from interior spaces and strengthening the immune system, illnesses are less likely to be transmitted.

HAPPIER & MORE PRODUCTIVE
Negative ions have a positive effect on our mood by increasing serotonin levels. This contributes to an increased sense of wellbeing and helps to improve employee job performance.

INSPIRED BY NATURE

BOSSE ION CLOUD

BEST of year WINNER 2021

[NYC by DESIGN Award](#)

Conclusions

Well-being at work is permeating company culture the world over. But as we begin to delve into the benefits that an acute focus on well-being provides—as much for the company as for the individuals running the show—we realize that current well-being initiatives at work are lacking. Too often, the initiatives are focussed on offering healthy snacks in the staff room and paid gym memberships.

If we are to turn the dynamic on its head, we need to consider well-being in a more academic, controlled way. This means measuring how well those well-being strategies put in place do benefit our teams' well-being. We cannot say we advocate for mental health, then deny staff the opportunity to retreat when everything gets too overwhelming.

Similarly, we should offer and maintain incentives for adherence to well-being initiatives in the long term, rather than a flashy 'sales' offer of a gym membership. If we think about employee well-being as a long-term goal, we need something sustainable. And, on the topic of sustainability, it is here where sustainable policies and design come together to create a symbiotic affair for the long run.

Bosse

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T!O:
TREND OFFICE

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SOURCES

Ambius, **How Plants Reduce Noise Levels Indoors**, *Ambius*, Retrieved from <https://www.ambius.com/learn/benefits-of-our-services/how-plants-reduce-noise/#:~:text=Plants%20absorb%20sound&text=One%20way%20is%20through%20sound,to%20their%20dynamic%20surface%20area>

Calisi and Stout (2015), **Stop Noise from Ruining your Open Office**, *Harvard Business Review*, Retrieved from <https://hbr.org/2015/03/stop-noise-from-ruining-your-open-office/#:~:text=Hard%20surfaces%20do%20a%20poor,t%20evolve%20beautiful%2C%20modern%20design.>

O.C.Tanner. (2022). Creating a holistic workplace culture through well-being and recognition. Retrieved from: https://www.octanner.com/insights/articles/2018/9/12/creating_a_holistic_.html#:~:text=Often%20what%E2%80%99s%20missing%20is%20a%20proper%20focus%20on,love%2C%20is%20with%20effective%20Recognition%20and%20Wellbeing%20solutions

Cazzaniga (2020), **The Bond Between Sustainability and Well-Being**, (interview), *Arper*, Retrieved from <https://www.arper.com/ww/en/magazine/arper-lab/that-bond-between-sustainability-and-wellbeing#IIMicheleRossi,ParkAssociati>

Clark (2022), **The inextricable link between decoration and mental wellbeing**, *House & Garden*, Retrieved from <https://www.houseandgarden.co.uk/article/interiors-and-wellbeing>

Clifton (2021), **Noise pollution is killing your productivity: what can you do about it?** *Metrikus*, Retrieved from <https://www.metrikus.io/blog/noise-pollution-is-killing-your-productivity-what-can-you-do-about-it>

Horwitz-Bennett (2020), **Natural Materials in Biophilic Design**, *Continuing Education Center*, Retrieved from <https://continuingeducation.bnppmedia.com/courses/certainteed-architectural/natural-materials-in-biophilic-design/1/>

Huang et al (2020), **Trees, grass, or concrete? The effects of different types of environments on stress reduction**. *Landscape and Urban Planning Volume 193*, January 2020. Retrieved from <https://www.sciencedirect.com/science/article/pii/S016920461831449X>

IEA (2019), **Global Status Report for Buildings and Construction 2019**, *IEA*, Paris <https://www.iea.org/reports/global-status-report-for-buildings-and-construction-2019>

Italica (2020), **Psychology of Interior Design: how furniture affects your mood?**
Italica, Retrieved from
<https://italica.com/psychology-of-interior-design-how-furniture-affects-your-mood/>

Pizzini (2020), **10 Examples of Eco-friendly Offices That Will Instantly Astound You**,
Ecobnb, Retrieved from
<https://ecobnb.com/blog/2020/02/ecofriendly-offices/>

Straz (2015), **4 Important Ways To Look At Employee Well-Being ‘Holistically’**,
Entrepreneur, Retrieved from
<https://www.entrepreneur.com/article/253787#:~:text=%204%20Important%20Ways%20to%20Look%20at%20Employee,burnout%20are%20rampant%20in%20the%20workplace...%20More%20>