

Green design boosts productivity in many hidden ways within office design.

Air quality, lighting and green spaces have been important factors for not only employee health and wellbeing, but for talent acquisition and retention.

In addition to state of the art communications, ergonomic furniture, and space plans that multi-task, workspaces have become, by design, leaner and greener.

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Findings from the April 2018 <u>World Green Building Council</u> (WGBC) study revealed the far-reaching impact of green building on office health and wellbeing:

- Reduced staff turnover, absenteeism, and presenteeism (physically present but not productive).
- Happier and healthier employees equal higher levels of engagement and productivity.
- Space planning and design that focuses on smart space utilization, flexible work settings and open collaboration encourage more in-person interactions.

Worklife impacts more than just the bottom line. Building a workplace where people can collaborate in a team atmosphere and work, live, play, and learn from one another in a healthy environment creates a deep-rooted success story.





To help your business optimize workspaces and create a healthy, productive environment for employees, leverage these green design solutions into your office:

Acoustics

The biggest issue facing open plan work environments is the reduction of noise and distractions. Automated sound-masking systems, <u>soundscaping systems</u> and indoor water features adjust decibel levels seamlessly without anyone being aware of them.

Open areas and private areas should be designed to minimise sound wave reverberation with 100% sound absorbent ceilings and insulated wall systems.



Adding upholstered furnishings, decorative acoustic wall tiles, carpet in certain areas and creative ceiling solutions can help reduce the sound reverberation created by hard flooring surfaces like tile, wood and laminate.

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Air Quality

Enhanced ventilation systems and the use of low-VOC materials throughout the office space result in high quality indoor air. Air quality sensors and ventilation control systems that blend indoor and outdoor air can maintain good indoor air quality while being mindful of energy costs.

Extensive biophilia and <u>Cradle to Cradle®certified</u>™ materials support good air quality. CO2 levels should be actively managed



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to stay between 500 and 1,000 ppm. Variable ventilation controls linked to CO2 sensors should be installed in high density areas allowing fresh air to be supplied as needed. Variable controls could reduce energy consumption for these units by as much as 25%.

Consider how your team utilizes
the square footage you have. An 11%
reduction in net internal area (NIA)
with a 40% reduction in allocated
desks can be achieved with some
savvy space planning.



Aesthetics & Active Design

Utilizing a blend of <u>re-purposed and new office furniture</u> not only saves you money, it cuts down on the carbon foot print of your business by keeping usable office furniture out of the landfill.

When purchasing new, look for wood products with sustainable forestry certifications to maintain a reduced carbon footprint.

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Mix up the workspace to provide 470 employees a combination of 330 fixed desks and 300 other work settings including treadmill desks, collaboration spaces and acoustically sealed quiet working booths. Did you know that internal e-mails could decrease by as much as 20% by creating more in-person interaction through building design?!

Lighting

Aim for 50-90% of the workspace to receive natural daylight. Where needed, artificial lighting should be provided by LED lights delivering lighting levels between 360 to 500 lux.





Redesigning central stairwells,
and double height lobby spaces
to infuse a space with natural
light can create unique spaces
that reduce the need for artificial
lighting in interior areas.

<u>Circadian lighting strategies</u> can be designed based on the demographic of the office occupants, the latitude and longitude of the office location, and the solar cycle. Energy efficient LED circadian lighting can be used to match external light levels.



Meeting rooms should provide a variety of user-controlled settings to suit different tasks. An LED lighting system, with a power density of less than six watts per square metre, can be automatically controlled with occupancy and daylight sensors.

Solatubes and electrochromic glass can reduce glare and solar heat gain while increasing natural light. Electrochromic (dynamic) glass is an electronically tintable smart glass used for windows, skylights, facades and curtain walls.

Redesigning central stairwells, and double height lobby spaces to infuse a space with natural light can create a unique aesthetic that reduces the need for artificial lighting in interior areas. Recycled reflective flooring can also provide a 20-30% increase in daylight penetration, reducing the need for artificial lighting.

Thermal Comfort

A building design that incorporates a high-performance envelope with low-e double glazing, thermally insulated assemblies and integral shading provided by exterior design features, and balcony elements conspire to develop a highly functional thermal environment.

Curtain walls and low-e tinted glass reduces heat gain and, therefore, cooling needs in warmer climates.

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A zonal HVAC system that allows user control within 3.6 metre grid areas can level out your open office temperature. Meeting spaces can be fitted with integrated software that optimizes temperatures based upon the number of attendees.

If you are in a high rise office, design occupied areas to accommodate
50-70% views of the skyline and city.
Create terraces that open to views of any public green spaces nearby.



Biophilic Views

Be mindful of views of the outdoors as well as creating stunning environments within the interior of your office design.

The extensive use of indoor plant imagery naturally brings nature indoors. Developing a strategy of natural furnishings, native foliage, accessories, and spatial design elements creates the ambience of being in nature.

If you are in a high rise office, design occupied areas to accommodate 50-70% views of the skyline and city. Create terraces within breakout spaces that open to views of any public green spaces nearby.

Art integrated into any space can reflect natural elements, such as forests or fields throughout. Create an atrium in your lobby that is infused with a living wall or indoor greenscape.

Breakrooms have come out of hiding and become rooftop oases with open terraces, seating and even stainless grills so they can multi task for client minglers and company gatherings.

Amenities

Perks for staff and clients should include being well connected to convenient parking and public transit, with easy walks to the nearest bus stops and light rail transportation.

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Depending on where you are located, communal bike paths and ample bike parking, as well as cycle trails and on-site jogging paths may be great additions to provide some productive break time activities to your staff.

In addition to treadmill desks and on-site fitness centers, incorporate clothes changing facilities to encourage active cycling to work, along with multi-use rooms for exercise and yoga classes to ease the tensions of sitting for long periods.

Summary

Research studies show that implementing sustainable design practices — from biophilic design and material usage to smart space utilization — is resulting in healthier, happier, and more productive employees. These benefits aren't just for big companies anymore.

Businesses of all sizes can incorporate simple updates to boost productivity and sustainability. Adding greenery and soft furnishings, finding ways to improve lighting, window access, and air quality can make the biggest impact on any size office.

Our team has great ideas for your green office design!

