

The Role of Biophilic Design in Creating Healthy Workplaces

Why Workplaces Need More Nature

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Images by Interface, Inc

According to the United Nations, over 60 percent of the world's population will be living in urban areas by 2030.¹ Managing these urban environments and ensuring the health and well-being of their inhabitants is one of the biggest challenges of the twenty-first century.

Mass production, service industries, and marketplaces with a thriving workforce are the engines that propel cities forward to achieve growth and prosperity. Driven by technology, this urban labour force is spending more time than ever in office buildings, on average between 40 to 49 hours a week globally,² which is roughly a quarter of every week. With people at the heart of this urban growth, maintaining a happy and healthy workforce is pivotal in creating successful businesses and in turn, resilient, sustainable cities.

With so much time being spent in the working environment, it is unsurprising that business leaders are increasingly focused on ways to promote employee well-being. So how do we create an environment that achieves this?

Creating Drivers of Well-being

Many current approaches to employee well-being focus on "hygiene factors" and removing barriers to individual well-being. This could be anything from relocating a noisy printer to replacing uncomfortable seating. While beneficial, there are still significant opportunities to drive positive improvements in employee well-being, not only by focusing on reducing negative impacts in their environments, but also by creating positive and inspiring spaces.

The recent "Human Spaces Report: The Global Impact of Biophilic Design in the Workplace" found that incorporating natural elements, such as greenery and sunlight, into the workplace can be one of these well-being drivers. After studying 7,600 office workers from 16 countries around the world, the authors of the report found that employees exposed to these natural elements had well-being levels 15 percent higher than those without.

The practice known as biophilic design is a response to the fundamental human need to connect with nature and works to re-establish this natural contact in the built environment. The concept of biophilia was first popularised by Edward O. Wilson in 1984,³ and plenty of research confirms this human preference for the natural, rather than built, environment.⁴ For example, in a 2004 study, when asked to describe their ideal city, people more often chose non-urban characteristics, greenery in particular.⁵

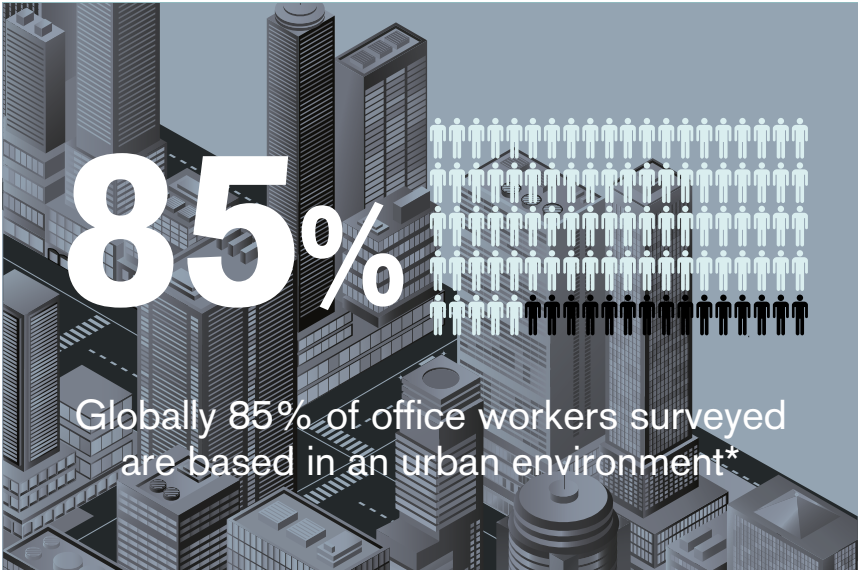
Although it has been proposed that this desire for a connection to nature is the result of an anti-urban bias combined with a romantic view of nature, environmental psychology research tells us that being connected to nature is in fact an adaptive human function that allows for, and assists with, psychological restoration.⁶ This means that within an urbanised environment, bringing in elements that allow direct or indirect nature connections can help us to mentally recover and can provide respite from our day-to-day activities to maintain positive well-being.

The benefits of biophilic design to urban environments have already been recognised by the Biophilic Cities Project. An international research initiative organised by the University of Virginia's School of Architecture, the project's principal aim is to advance the theory and practice of planning for biophilic cities. Demonstrating its global approach, a number of cities around the world, including Birmingham, Singapore, Oslo, and Wellington, are already transforming into biophilic cities.⁷

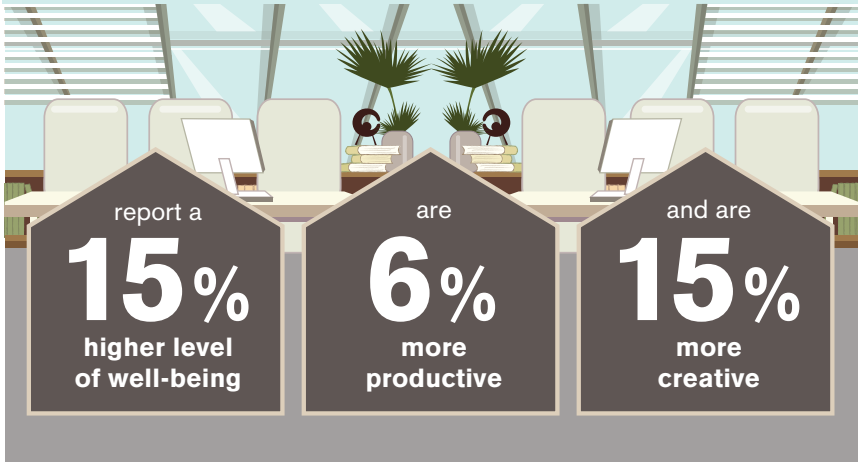
Tackling Presenteeism

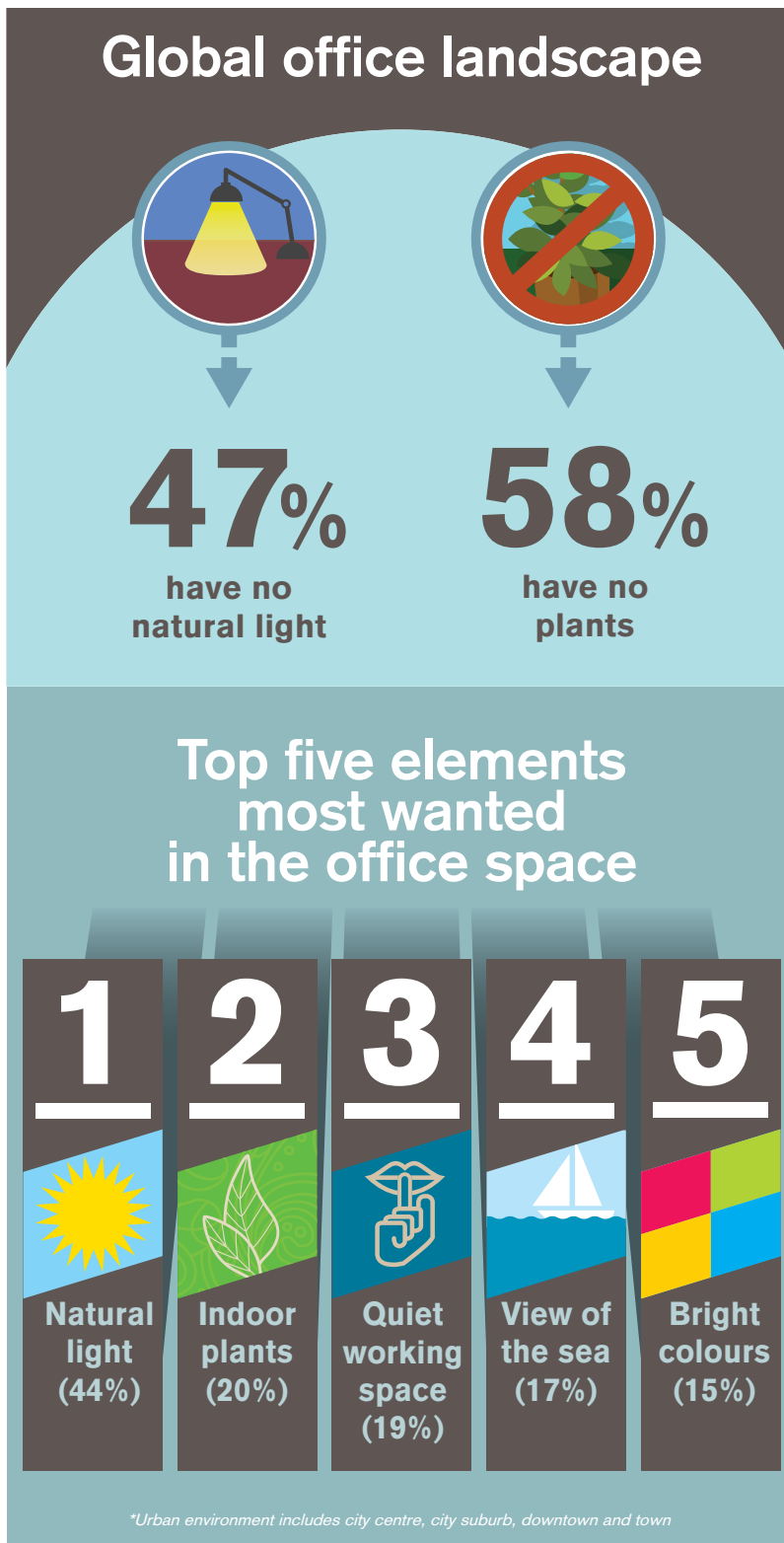
The case for biophilic design in the working environment becomes even more significant in light of a new global well-being problem—presenteeism. Presenteeism is a relatively new area of study. It is defined as both the acts of turning up to work whilst ill and also of displaying low productivity and engagement at work despite being healthy. Although there are no figures to estimate the cost to employers on a global scale,⁸ recent studies predict that presenteeism is costing businesses in the United Kingdom GBP 1 billion and those in the United States more than USD 200 billion per year.⁹

Although the number of sick days fell by 131 million in the United Kingdom in 2013,¹⁰ recent research suggests the drop is down to strict absence rules and increased presenteeism rather than employee well-being.¹¹ Interestingly the report also revealed that American workers have a significantly lower average of 4.9 sick days per year,¹² while those in Asia take just 2.2 days. Again the low absence levels are attributed to



Workers in office environments with natural elements, such as greenery and sunlight





domestic labour market regulation, not healthy workforces. Employees in the United States and Asia have more at stake if they take unscheduled time off work.

These are big figures, and there is potential for presenteeism to reach crisis levels. Increasing the well-being of the workforce may help ensure that those turning up are healthy, focused, and productive. But patching up problems won't be enough. The focus needs to be on making fundamental cultural changes that genuinely improve well-being. This is where biophilic design comes into its own: tapping into employees' innate connection to nature so that they feel psychological and health benefits.

Global Design

The positive impacts of biophilic design can be felt universally. Yet, exactly which elements have the biggest effects can vary on many levels, from geographical location right down to the culture of the individual workplace and organisation.

Research has shown, for example, that in Canada, the provision of greenery in offices, such as live plants, improves well-being.¹³ A study looking at the associations between well-being and nature connectedness among a student population also found that when people were connected to nature in both their internal and external environment, they reported much greater levels of well-being.¹⁴ In France, window views of natural scenes such as greenery, wildlife, and even ocean views have been linked to the greatest levels of well-being among office workers.¹⁵ In fact, urban landscapes, such as roads and buildings

were found to have a negative effect on well-being.¹⁶


Of course it is not practical for all city office buildings to provide views of the ocean and open green spaces. However, reinterpreting these elements through textures, patterns, and colours to create ergonomic, naturally inspired workplaces can also help replicate the well-being benefits.

For example, living walls, encased in a variety of plants from ferns to climbers and shrubs have grown in popularity in urban environments across the world. Not only do they offer a practical solution to incorporating greenery in a limited space, but also they can be used to ease the environmental impact of cities, such as carbon dioxide emissions by keeping building interiors cooler, reducing the need for air conditioning.

A Way Forward

The relationship between individuals and their environment can be a crucial determinant of how they feel, perform, and interact with others. So designing urban spaces that inspire, energise, and support the people who use them is a global imperative. As contact with rural landscapes decreases, the alienation from greenery and living elements will increase, unless the urban environment and the spaces in which we live are adapted.¹⁷

Biophilic design has the potential to not only reduce the negative impact of living and working in cities, but also actually increase the well-being of inhabitants. By prioritising the introduction of natural elements into the work landscape, business leaders can take a significant step towards

protecting the well-being of their workers and ultimately the future sustainability of our urban environments. 

¹ United Nations, "World's population increasingly urban with more than half living in urban areas," July 10, 2014, <http://www.un.org/en/development/desa/news/population/world-urbanization-prospects-2014.html>.

² Cary Cooper, Bill Browning, and Interface, *Human Spaces: The Global Impact of Biophilic Design in the Workplace* (New Global Report, Human Spaces, 2015).

³ Edward O. Wilson, *Biophilia: The human bond with other species* (Cambridge: Harvard University Press, 1984).

⁴ Rachel Kaplan, "The role of nature in the context of the workplace," *Landscape and Urban Planning* 26 (1993): 193-201.

⁵ Joke Luttkik, "The value of trees, water and open space as reflected by house prices in the Netherlands," *Landscape and Urban Planning* 48 (2000): 161-167.

⁶ Agnes van den Berg, Terry Hartig, and Henk Staats, "Preference for nature in urbanized societies: Stress, restoration, and the pursuit of sustainability," *Journal of Social Issues* 63 (2007): 79-96.

⁷ Read more at BiophilicCities' website at <http://biophiliccities.org>.

⁸ Foresight Mental Capital and Wellbeing Project (Final Project Report, The Government Office for Science, London, 2008).

⁹ Michael Klachefsky, *Workplace Possibilities Productivity Insight #3: Understanding Presenteeism* (Portland: Standard Insurance Company, 2012).

¹⁰ PricewaterhouseCoopers, "Rising sick bill is costing UK business £29bn a year—PwC research," July 15, 2013, http://pwc.blogs.com/press_room/2013/07/rising-sick-bill-is-costing-uk-business-29bn-a-year-pwc-research.html.

¹¹ Peter Crush, "Sickness absence falls, but do numbers hide rise in presenteeism?," *People Management Magazine Online*, February 26, 2014, <http://www.cipd.co.uk/pm/peoplemanagement/b/weblog/archive/2014/02/26/sickness-absence-falls-but-do-number-hide-rise-in-presenteeism.aspx>.

¹² PricewaterhouseCoopers, "Rising sick bill."

¹³ Cooper, Browning, and Interface, *Human Spaces*.

¹⁴ Andrew J. Howell, Raelyne L. Dopko, Holli-Anne Passmore, and Karen Buro, "Nature connectedness: Associations with well-being and mindfulness," *Personality and Individual Differences* 51(2011): 166-171.

¹⁵ Cooper, Browning, and Interface, *Human Spaces*.

¹⁶ Ibid.

¹⁷ Rachel Cooper, Elizabeth Burton, and Cary L. Cooper, eds, *Wellbeing and the Environment*, vol. 2 of *Wellbeing: A Complete Reference Guide* (Oxford: Wiley-Blackwell, 2014).