

THE BUSINESS CASE FOR PRODUCTIVE, HIGHER PERFORMING AND HEALTHIER WORKPLACES

BCO AND LCMB WORKSHOP

Executive summary

Recent research demonstrates that workplaces can be optimised for productivity, performance, health and wellbeing.

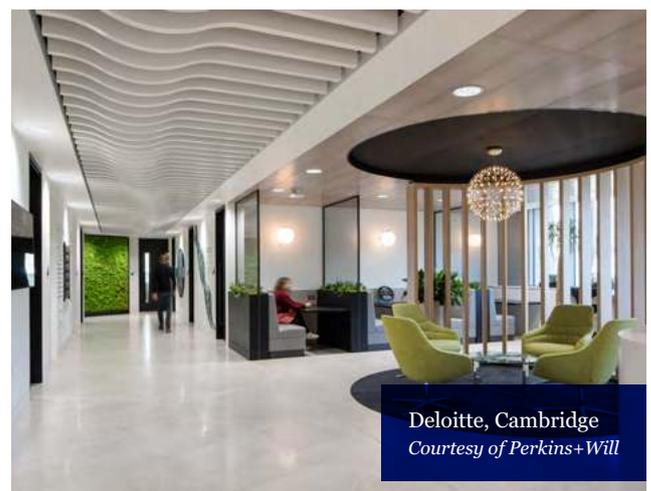
Several reports^{1,2} suggest an annual productivity improvement of 2–3.5%, which is equivalent to between 30% and 75% of the operational cost of organisations' real estate, can be achieved by optimising indoor environmental quality. People's wellbeing is also significantly impacted by the quality of their workspaces.

In 2018, the BCO published the results of the Whole Life Performance Plus project, which was led by LCMB and Oxford Brookes University.³ This was the first research project to quantify the impact of indoor environmental conditions on worker performance and productivity in the real world. The study demonstrated the tangible impact on worker performance of optimising conditions.

With the growing interest in the impact of workplace on employee experience, performance and wellbeing, the BCO and LCMB organised this workshop to overview the current research and knowledge, the business case for actions and to understand from practitioners their experience and what can be done to accelerate the improvement of UK workplaces.

The conclusions from the workshop participants were:

- Creating better awareness and understanding of the impact of workplace on health, wellbeing and productivity will improve the interest, uptake and investment in these areas.
- Human resources (HR) and facilities management (FM) teams have an opportunity to make big organisational impacts by working together.
- Physical changes to the workplace can support and enhance the impact of cultural change programmes.
- Health and wellbeing at work are likely to become much more mainstream issues because of the consumer trend and demand from employees.



- Measuring health, wellbeing and productivity in the workplace is challenging, so adopting simple measurable metrics relevant for each organisation will support the investment case.

Chairman's introduction

Peter Runacres

Senior Project Director, Argent

Argent's place-making role at King's Cross means we have an interest in and an obligation to optimise the workplaces we build for wellbeing, productivity and performance.

Argent was a partner in the Whole life Performance Plus project, working with our tenant Havas, at 3 Pancras Square, and LCMB to review the building and identify how we could optimise it for Havas' employee experience. This work was published by BCO in 2018,^{3, 4} and Argent is continuing to develop and apply the ideas it developed there to the design, construction and post-occupancy evaluation of buildings across the estate.

We aspire to be at the forefront of this area, as we believe it ultimately allows us to deliver better buildings which are more valuable for our tenants and their employees.

We are pleased to contribute to this debate, as we believe there is a big prize for UK PLC, its staff and its customers through ensuring our buildings and workplaces are the best they can be.

This briefing note will help organisations to identify the questions that need to be answered before the barriers and routes to improving health, wellbeing and productivity can be addressed.

We all have the responsibility to optimise our workplaces for our users and the growing body of research from the BCO, BRE and LCMB will help us achieve this goal.



HAVAS, 3 Pancras Square, London
Courtesy of Argent



HAVAS, 3 Pancras Square, London
Courtesy of Argent

Workshop background

On the 25 September 2019, the BCO and LCMB presented a workshop kindly hosted by Argent at their King's Cross development. The workshop was attended by some forty senior figures from corporations, developers, designers and agents (a list of the contributing companies is given at the end of the briefing note).

The workshop examined the business case for productive, higher performing and healthier workplaces. In the first part of the workshop, subject matter experts presented the latest research on workplace wellbeing. This was followed by the participants discussing the research and exploring the barriers they experience to delivering better workplaces.

Part 1: Presentation summaries

Health and wellbeing – a key ingredient for higher productivity

Professor Derek Clements-Croome
Independent Wellbeing Advisor and Emeritus Professor,
Reading University

We live through our senses, stimulated by the environment around us, whether outdoors or indoors. Our existence is enlivened every waking moment by a symphony of stimuli from people, objects, building spaces, task interest and nature.

This rich array of inputs to the mind and body generates the multi-sensory experience which can colour and enrich the environment for people to live and work in. Like in music, where the notes of melodies, harmonies and rhythms magically combine in myriad ways to inspire the mind, multi-sensory design weaves a tapestry and diversity of experience for people to flourish in.

Buildings must relate to the language and wisdom of the body. If they do not, they become isolated in the cool and distant realm of vision. However, when assessing the value of a building, how much attention is given to the quality of the environment inside the building and its effects on the occupants?

The interaction between humans and buildings is more complex than we imagine. In addition to simple reactions that we can measure, there are many sensory and psychological reactions that are difficult to understand and quantify, but we must recognise they happen. This is what might be considered an invisible aesthetic, and together with the visual impact these make up a total sensory aesthetic.

Visual beauty is important, but it is only one aspect of what we mean by aesthetics. We respond to beautiful smells, tastes and sounds, which are invisible.

Health and wellbeing are the roots of productivity and also creativity. They reflect our human energy, which we need every day to work and take decisions effectively. Adopting a health and wellbeing approach is advocated when designing office environments to ensure they are stimulating places for occupants to thrive and flourish.

Achieving these ideals in practice is described in the BCO report *Wellness Matters*,⁵ which includes various assessment approaches such as the WELL Building Standard, Fitwel certification and Flourish.*

A brief history of how we have learnt about the workplace and productivity

John O'Brien
Founding Partner and Managing Director,
LCMB Building Performance Ltd

We've seen overwhelming evidence over the last few years that our workplaces can have a very positive or negative impact on our productivity, performance, health and wellbeing. The gold standard research in this field has proved that:

- better indoor air quality promotes individual productivity⁶
- better individual productivity leads to better organisational results²
- productivity and organisational results can be measured and expressed as a return on investment (ROI)¹
- this holds true in the real world as well as in controlled laboratory environments.³

Before 2017, businesses recognised the link between indoor environmental quality (IEQ) and organisational performance. However, because they were not able to calculate the ROI from improved productivity, businesses had trouble justifying and implementing workplace improvements in the real world.

At the end of 2017, the BCO report *Defining and Measuring Productivity in Offices*¹ described how productivity increases by 2–3% when the workplace environment is improved. The report estimates that the productivity gains are worth 30% of the annual office rent in central London and 75% outside London.

In 2018, the BCO published the results of Whole Life Performance Plus (WLP+),³ a £530,000 three-year study, led by Oxford Brookes University and LCMB Building Performance. The study showed how real world office environments dramatically undermine productivity and performance. When CO₂ levels were lowered to optimum

* Originally published in DJ Clements-Croome, *Creating the Productive Workplace* (Routledge, 2018) and DJ Clements-Croome, *Buildings for People* (Crowood Press, 2020).

levels rather than levels normally found in offices, people's performance in cognitive tests improved substantially:

- test scores improved by 12%
- in one building, people completed the tests 60% faster in lower CO₂ concentrations.

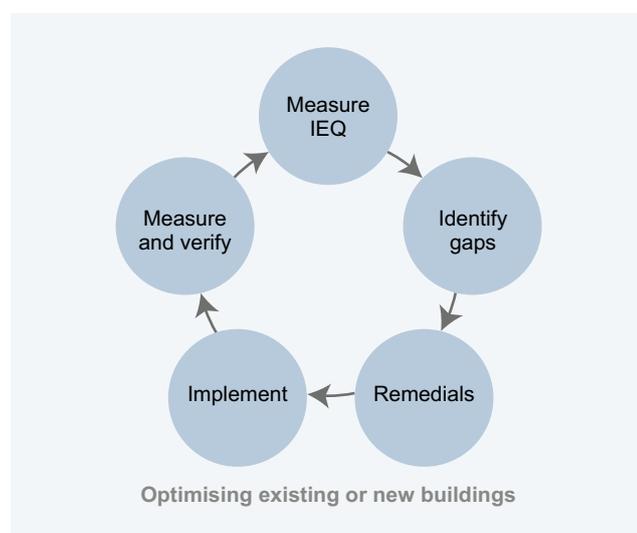
The implications of our ground-breaking study are dramatic. The research shows that, if all UK workplaces were optimised, the UK economy would grow by £40–£70 billion per annum thanks to increased productivity.

Simplifying the steps to improved productivity, that any organisation can follow

Optimising the workplace environment is quite simple, quick and low cost. In fact, it can be cost-negative thanks to the fact that optimised workplaces are energy efficient. Research by Harvard University⁷ shows that organisations that invest workplace wellbeing typically recover between 200 and 350% of their initial investment.

After three years of research, LCMB⁸ has developed a workplace improvement toolkit to quickly capture the performance of workplaces and then identify the steps needed to improve productivity, performance and wellbeing. LCMB is optimising workplaces for several global leaders to capture this source of advantage for their people and organisation.

The BCO's 2019 *Guide to Specification*⁹ suggests that office users should focus on the impact which workplace design and operation have on creativity, productivity, performance and wellbeing. We believe it just makes sense to configure the workplace so that people thrive and perform at their best.



The biophilic office

Dr Ed Suttie

Research Director, BRE

Building owners and facility managers need to know what they can do to improve the wellbeing of occupants within their budget limits. The lack of evidence on the predicted ROI of interventions was one of the motivations for the BRE biophilic office project.¹⁰

The three-year project is building the scientific evidence base for the positive impacts that biophilic design can have on occupant health and wellbeing and the spin-off benefits of better business outcomes.

The study office, and a control office where no refurbishment is planned, have completed an intense baseline monitoring period of one year, logging temperature, humidity, CO₂, volatile organic compounds (VOCs), light levels (artificial and natural) and acoustic qualities. The central component of the research is the gathering of data from the office occupants through periodic questionnaires that follow the four seasons, monthly online tasks and cognitive tests and interviews. This data is supported by physiological tests measuring stress hormone analogues and data from wearable technology (heart rate, activity and sleep pattern).

Three biophilic design refurbishment strategies will soon be deployed in the office building on the BRE Watford campus. The teams will move back in and a further year of data will be gathered on the building and the occupants. This data, combined with an analysis of business and HR data on those teams, will be used to elucidate the long-term impact of the refurbishment on occupant wellbeing.

The aim is to link the findings to the biophilic design strategies and to provide open guidance with the assistance of professional institutions, including the BCO.

Refurbishment does not have to be deep and expensive. Floor coverings, wall paint and lighting have significant biophilic qualities, and making informed choices on these, guided by research evidence, can help create positive, healthier and more energising workplaces from existing office stock.

The biophilic office project started in 2018, and we expect to complete the project and publish our conclusions in 2020.

Part 2: The workshop

A workshop was conducted following the presentations, with attendees from a wide range of organisations and roles. The main points raised are summarised below.

- *People at all levels must better understand health, wellbeing and productivity issues in the workplace in order to capture this source of competitive advantage.*

It is clearly wrong to regard improving the workplace as a cost, as there is now a strong body of research that proves beyond doubt the huge improvement in productivity when the workplace environment is improved, delivering a very large ROI. Workshop participants said there is poor awareness of this topic across most industries. Organisations just scratch the surface, focusing on room temperature rather than understanding newer research about issues such as air quality. Senior management and their teams need a full understanding of the issue to capture the opportunity.

- *There is an opportunity for HR and FM to add more value by working together.*

HR and FM can work together to ensure that workplaces are fully equipped for their employees to thrive. Typically, in most organisations these departments do not actively work together to address the topic. As a result, each function tackles productivity separately, with no cohesion or alignment, missing the opportunity to make a big impact on employee experience and the organisation.

- *A cultural shift will support physical changes to the workplace.*

HR, FM and senior management must create a culture that actively encourages people to use all the features that promote health and wellbeing. Crucially, employees should not fear that visibly taking care of their health and wellbeing is interpreted as slacking off. Senior management should heavily encourage employees to take proper lunch breaks. Too many people skip these and fail to go outside to escape the workplace. In addition, organisations must combat 'technology culture' and get employees to spend time away from devices. Staring at screens all day undermines people's health and wellbeing.

- *Health and wellbeing at work will become a mainstream issue.*

Many organisations now address climate change thanks to consumer and employee pressure. The workshop participants think that workplace (and general) wellbeing is not far behind thanks to wearable technology and fitness trackers, which make people more aware of how long they are sitting down and how many steps they walk each day. The government may take notice and may introduce legislation if we see enough pressure from the electorate.



- *An agreed definition and measurement of health, wellbeing and productivity for the organisation will make all the difference.*

Organisations struggle to measure productivity and typically do not measure employee health and wellbeing. Agreeing some appropriate, simple measures of productivity and wellbeing that an organisation can track over time will allow a baseline to be defined prior to taking improvement actions. These improvement actions can be trialled on a project by project basis to enhance the ROI before being scaled across the organisation.

Takeaway tips

Below are some suggested questions when considering the issue of workplace optimisation for your organisation. The answers to these questions will allow your organisation to understand how much opportunity there is to improve your workplace productivity, performance and wellbeing, and whether external help is required.

- Are our workplaces and built assets likely to underperform if we do not understand this issue?
- Do we know, or have the metrics to understand, how our workplaces are performing against optimum conditions?
- What impact would improving productivity, performance and wellbeing have on our employee experience and organisation?
- Is there a small-scale trial that we could run to prove the concept within our organisation? ■

References

1. BCO (2017) *Defining and Measuring Productivity in Offices*. Available at: http://www.bco.org.uk/Research/Publications/Defining_and_Measuring_Productivity_in_Offices.aspx (accessed 28 October 2019).
2. The Stoddart Review (2016) Available at: <http://stoddartreview.com> (accessed 28 October 2019).
3. BCO (2018) *Improving Productivity in the Workplace. Lessons Learnt and Insights from the Whole Life Performance Plus Project*. Available at: <https://wlpplus.com/wp-content/uploads/Improving-Productivity-in-the-Workplace-Results-of-the-WLP-Project.pdf> (accessed 28 October 2019).
4. BCO (2017) *Whole Life Performance Plus – Defining the Relationship between Indoor Environmental Quality and Workplace Productivity*. Briefing Note. Available at: http://www.bco.org.uk/Research/Publications/Whole_Life_Performance_Plus.aspx (accessed 28 October 2019).
5. BCO (2018) *Wellness Matters: Health and Wellbeing in Offices and What to do About It*. Available at: <http://www.bco.org.uk/HealthWellbeing/WellnessMatters.aspx> (accessed 28 October 2019).
6. World Green Building Council (2014) *Health, Wellbeing & Productivity in Offices. The Next Chapter for Green Building*. Available at: https://www.ukgbc.org/sites/default/files/Health%2520Wellbeing%2520and%2520Productivity%2520in%2520Offices%2520-%2520The%2520next%2520chapter%2520for%2520green%2520building%2520Full%2520Report_0.pdf (accessed 28 October 2019).
7. MacNaughton P, Satish U, Laurent JGC, Flanigan S, Vallarino J, Coull B, Spengler JD and Allen JG (2017) The impact of working in a green certified building on cognitive function and health. *Building and Environment* **114**: 178–186. Available at: <https://www.sciencedirect.com/science/article/pii/S0360132316304723> (accessed 28 October 2019).
8. LCMB (2018) *Our Ultimate Guide to the Productive Workplace*. Available at: <https://www.lcmb.co.uk/productive-workplace-guide-2> (accessed 28 October 2019).
9. BCO (2019) *Guide to Specification. Best Practice for Offices*. Available at: <http://www.bco.org.uk/Research/Publications/BCOGuideToSpec2019.aspx> (accessed 28 October 2019).
10. BRE (2019) *The Biophilic Office*. Available at: <https://www.bregroup.com/services/research/the-biophilic-office> (accessed 28 October 2019).

ABOUT THE BCO

The BCO is the UK's leading forum for the discussion and debate of issues affecting the office sector. Established in 1990, its membership base comprises organisations involved in creating, acquiring or occupying office space, including architects, lawyers, surveyors, financial institutions and public agencies.

The BCO recognises that offices don't just house companies, they hold people and so what goes on inside them is paramount to workplace wellbeing.

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Hibernia REIT Plc	University of Warwick
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This briefing note was prepared for the BCO by the following:

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Professor Derek Clements-Croome, Independent Wellbeing Advisor and Emeritus Professor, Reading University Derek worked in the building design and contracting industry before entering university life. He offers strategic advice to clients, designers and facilities managers on attaining and managing healthy and sustainable environments in buildings of all types. He researches, writes and lectures on these issues for companies and wider audiences nationally and internationally in China, Australia, New Zealand, Poland and Finland particularly.

John O'Brien, Founding Partner and Managing Director, LCMB (WLP+) John is the founder and managing director of LCMB Building Performance Ltd. He is an engineer who has designed, constructed and operated over £3.5 billion worth of real estate over the last thirty years. John and LCMB's aim is to make a difference by making buildings work harder for their clients, their staff, customers and society. The team does this by ensuring buildings and workplaces perform at their best while minimising the costs and resources needed to operate them.

Dr Ed Suttie, Research Director, BRE Ed is the Research Director of BRE, the home of BREEAM and a world-leading international built environment science and research business. The team delivers consultancy and research programmes on material and product sustainability for clients from retail, manufacturing, construction, real estate and government.

Ed is involved in research into the health and wellbeing qualities of materials used in the fit-out of offices, schools and healthcare buildings. He is the BRE lead for a pioneering office refurbishment study deploying biophilic design that will generate evidence of occupant benefits of a human-centred workplace. He has published widely in the field of construction products, including service life and sustainability.