



THE ECONOMIC BENEFITS OF HUMAN-CENTRED DESIGN

Workplaces that are designed to promote the health and wellbeing of employees could help boost productivity and strengthen the economy. Preliminary research has revealed that even minor improvements to people's workplace environment may have a big impact on an organisation and even on GDP.

Researchers have sought to understand the benefits of putting people's needs at the heart of building design, that is, taking a 'human-centred' approach. Initially, the work identified opportunities to improve individuals' and a business' performance. It then went a step further and assessed the wider economic impact of user-friendly design characteristics. The underlying data research was conducted by researchers from Imperial College London in partnership with Atkins.

THE IMPORTANCE OF PRODUCTIVITY







There is ongoing concern about the UK's productivity performance compared with other major economies. Recent figures show productivity in the UK continues to lag behind the levels seen before the financial crisis. At 15.9% it is lower than the G7 average and significantly below France (22.7%), Germany (26.7%) and the USA (22.2%)¹.

An improvement in the level of productivity growth would be welcome news in the lead up to Brexit and would help make the UK more competitive on the global stage. But productivity is not only an economic or organisational metric – it impacts on, and is driven by, people.

There are 20 million workers in the UK spread across 1.6 million office-based organisations and this is where 75% of all economic activity occurs².

WHAT MAKES PEOPLE MORE PRODUCTIVE?

The benefits of having a comfortable, stimulating and inspiring environment in which to work are increasingly being documented and this new research has built on the established findings. Researchers from Imperial College London identified six key areas as being critical to people's experience of the office environment, and therefore, as having an impact on productivity. They include:

-  **1. Lighting** – improving daylight provision and increasing the quality of artificial light
-  **2. Ventilation and air quality** – increasing ventilation and reducing volatile organic compounds and carbon dioxide
-  **3. Thermal comfort** – the temperature of the working environment, including an individual's ability to control it
-  **4. Noise and acoustics** – covers environmental noise (e.g. roads), white noise (e.g. air conditioning systems) and pink noise (e.g. human voice frequency)
-  **5. Interactive office** – the level of control an individual has over the office environment, for example, control of lighting, ventilation and physical desk set-up
-  **6. Visual / biophilia** – plants, nature, a view of the outdoors, interior colours and materials



Productivity

There are many drivers of productivity and some important ones, including office design, configuration and organisation, can be overlooked. This research explores the idea that changing the way buildings are designed to make them more human-centred could have a positive impact on the economy.

¹ <https://www.ons.gov.uk/economy/economicoutputandproductivity/productivitymeasures/bulletins/internationalcomparisonsofproductivityfinalestimates/2015>

² Atkins Research (2016) which draws upon ONS Business Estimates, Regional GVA Estimates, Health & Safety Executive and Land Registry data – All 2015. Supported by Cabe (2006). The Impact of Office Design on Business Performance. British Council for Offices amongst others

³ Applying design thinking to boost workplace productivity by 5-8 per cent could contribute up to £20 billion to GDP. However, this figure only takes into account absenteeism and sick leave. It does not include the cost of recruiting new people or the effects of presenteeism, due to the difficulties of collecting and validating this data

⁴ Payback times would decrease if recruitment costs and presenteeism were taken into account

THE QUALITY OF DESIGN AFFECTS THE ECONOMY AND DRIVES INNOVATION

Improvements in the working environment can help businesses: attract and retain skilled staff; reduce sick leave; improve communication and collaboration; encourage innovation and create the desired culture.

However, the benefits extended beyond the organisation too. Researchers found that small gains in productivity could create an economic advantage for businesses and boost the wider economy:

- Each of the suite of six human-centred design interventions **could improve productivity by more than 1%**.
- If all offices in the UK were upgraded and **workplace productivity enhanced by 5-8%** it could **impact UK GDP by £12 billion to £20 billion** (0.9%)³.

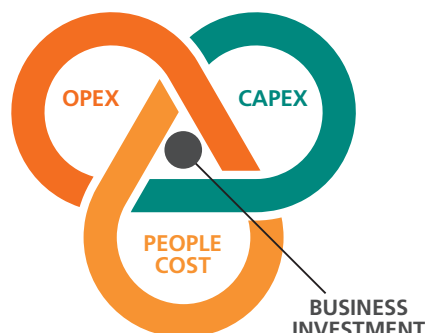
Thoughtful design does require additional investment, as much as 21%, but the report by Imperial College London in partnership with Atkins highlights that the payback period across the six areas ranges from around two to six years, and some **individual components could provide a return in as little as six months**⁴.

TECHNOLOGY ENABLES CLEARER DECISION-MAKING

The initial findings suggest that companies could benefit from taking a closer look at their real estate portfolio and moving beyond an initial analysis of capital and operating expenditure to also consider how workers' health and wellbeing affects the bottom line – that is, a CAPEX, OPEX and PEOPLE COST model.

Technology enables us to gather data on the factors that affect people's relationship with their environment and develop a detailed understanding of how buildings can be optimised. It gives owners and operators the information they need to make more informed investment decisions and maximise the potential of people and property.

Impact of people on the balance sheet



UPLIFT IN
PRODUCTIVITY
5-8%



IMPACT ON UK
GDP COULD BE
AS MUCH AS
£20BN



PAYBACK PERIOD
2-6 YEARS

DESIGNING WITH PEOPLE IN MIND

While this latest research highlights the importance of putting the needs of users at the heart of building design it also gives us the opportunity to question the standards that we set from now on and that define excellence within the industry. In the future, people may choose a place of employment based on their understanding of how the workplace will affect their health and wellbeing. A rating system such as a mandatory wellbeing or productivity performance certificate could help them decide by determining the quality of an organisation's facilities.

The work also encourages us to build on the concept of sustainability, which up until now has focused on energy and greenhouse gas emissions. Instead, we are prompted to consider economic sustainability. It is clear that investment in the workplace not only affects the health and wellbeing of people but also the long-term financial health of the entire organisation.

The economic argument for a human-centred design approach in the UK is compelling. For the sake of our economy, and to reduce the burden on our social and healthcare infrastructure, we need to seize the opportunity to invest in better quality workplace environments.

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