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**Putting people at the heart of climate-friendly buildings**

John Alker

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**Energy efficiency in office buildings struggles to gain the attention of top management, writes John Alker - because energy is too cheap to really matter. But with 90% of operating costs spent on staff, show that green building design makes employees happier and more productive, and you're really onto something ...**

**If you can reliably quantify the human benefits of low carbon buildings, this provides a much more compelling return on investment than at best modest savings on energy bills.**

There would seem to be no connection between the productivity of office workers and the great challenge of climate change. But a [report published today by the World Green Building Council](http://www.ukgbc.org/resources/publication/health-wellbeing-and-productivity-offices-next-chapter-green-building)suggests otherwise*.*

Globally, buildings are responsible for around a third of greenhouse gas emissions through their construction, operation and demolition. The humble office has therefore found itself on the front line of efforts to reduce energy use and combat climate change over the last 10-15 years.

But despite the IPCC showing that there is more potential for cost effective carbon mitigation in buildings than any other sector, a recent International Energy Agency report suggested we have tapped into less than 20% of this potential.

As world leaders convened this week to yet again agree that we need to take action on carbon emissions, it's a valid question to ask how on earth we are going to have any success when we don't seem to be able to do it in one of the easiest, most economical sectors.

**People costs versus energy costs - 90:1**

Part of the answer to that question is that - like it or not - energy does not cost enough for most office-based organisations to worry about, often representing just 1% of operating expenses. So energy efficiency often fails to get traction at board level.

Staff costs are another thing altogether - typically responsible for 90% of operating costs, with the remaining 9% going on rent.

This means that small improvements in employee health, sense of wellbeing and resulting productivity are of tremendous value to employers. Poor mental health alone costs UK employers £30 billion a year through lost production, recruitment and absence.

What is really tantalising, and at the heart of our report, is the prospect of low carbon buildings positively enhancing health, wellbeing and productivity of occupants.

It follows that if you can reliably quantify the human benefits of low carbon buildings, this provides a much more compelling return on investment than at best modest savings on energy bills, as the report explains:

*"The productivity of staff, or anything that impacts their ability to be productive, should be a major concern for any organisation. Furthermore, it should be self-evident that small differences can have a large effect.*

*"What may appear a modest improvement in employee health or productivity, can have a significant financial implication for employers. This equation is at the heart of the business case for healthy, productive offices."*

**Design matters**

We brought 60 industry and academic experts together (remotely) from 40 different organisations in 20 different countries, and we sifted through hundreds of pieces of evidence to put together the most robust information.

What we found was that the physical work environment - from the impact of ventilation and air quality, to thermal comfort, daylight and inclusion of green spaces and biodiversity - has a major impact on the health and productivity of the officer worker.

Crucially, in many cases there we can see a mutually reinforcing relationship between design that benefits both people and planet.

Give people more personal control over temperature, for example, and typically they will be more productive while also saving energy.

Maximise daylight and access to windows, and it reduces the need for electric lighting, while improving productivity and even workers' sleeping patterns. And in many places there is more scope for using natural ventilation than at present - bringing in fresh air, with low or no energy use.

However, there were challenges that are important to be transparent about. In some climates, high outside temperature and humidity simply make some conditioning of air inevitable, while some recent evidence suggests that higher levels of ventilation and lighting are required to stimulate productivity, with resulting implications for energy use.

This points to the need to continue to develop ever more efficient and innovative ventilation, air conditioning and lighting systems, while developers need to contribute to the growth of on-site and local renewables to make up for carbon they can't mitigate through demand reduction.

**Putting people first**

It's important not to claim that a low carbon building is automatically a healthier, more productive one. But it is perfectly compatible to align both objectives, and doing so can make for a compelling business driver.

If organisations can begin to understand the relationship between their own staff, and the buildings they own or occupy, then the advantages of low carbon, healthy buildings become much more personal and relevant.

To this end, we have suggested a very simple 'toolkit' for organisations (small and large) to use, so they begin to understand the impact of their office on their employees, using data that is readily available via their facilities or office manager, HR and finance departments. We also suggest the sustainability executive has a crucial role in getting these functions working together.

Rightly or wrongly, sustainability - in particular cutting carbon emissions - is often seen as dull, worthy and involving sacrifice.

What we are finding in the property sector - something which is surely relevant for other sectors too - is that the health and wellbeing agenda strikes a chord with a far wider audience, generating a phenomenal level of interest.

Putting humans at the heart of carbon reductions may just have a much-needed galvanising effect.

**The report:** '[*Health, wellbeing and productivity in offices: The next chapter for green building*](http://www.ukgbc.org/resources/publication/health-wellbeing-and-productivity-offices-next-chapter-green-building)'.

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