

Build smart, build sustainably



Buildings aren't merely bricks and mortar. They're places where business deals are brokered and families gather at the end of the day. They're spaces we live, work and play, where we grow up, and grow old. They are the heart of our cities, towns and villages and [where we spend most of our lives](#). And, sadly they are our greatest challenge in our fight for sustainability

We're facing a climate crisis. Despite efforts to rein in greenhouse gas production, the world continues to warm. Buildings – and the construction of new ones – constitute [almost 40% of the carbon emissions](#) and are most squarely to blame.

This needn't be the case. With a little technological ingenuity, our homes, places of work, schools, hospitals, and factories can be part of the solution, not the problem. So-called 'smart buildings' promise to help pave the way to a cleaner, greener future, if they're smart enough.

The budget abyss

And yet, budget constraints are holding progress back. [Two-thirds](#) of building decision-makers in the UK and Ireland said this was the main barrier preventing their adoption of smart technologies.

While almost all of the organisations surveyed agreed there was value to be had with smart building design, only a third reported having a smart setup already in place. An equally dismal proportion, just 35%, said that their current premises were considered sustainable.

Future proof, before it's too late

If this is a problem now – which it surely is – it threatens to be an even greater one in the future. With ever-mounting costs and the need to meet increasingly stringent sustainability targets, it's a case of act now, or prepare to stump up for urgent improvements in the years to come.

That's why, hemmed in by budget restrictions, companies must be clever – using what funds they have in the most cost-efficient manner and investing in the right technology at the right time to create the greatest value. Some sectors, including public sector organisations, were found to be less hampered by budgetary constraints, allowing for greater uptake of smart solutions, while others, like commercial office space, face huge deficits – of up to 50% of their existing budget – which makes it difficult to realise the value they want from their smart investments.

These investments can take many shapes. It might mean festooning the walls with flow sensors – little devices that can detect, let's say, when the fourth floor is empty, prompting a second smart system to turn off the lights, and then a third to lower the central heating so energy isn't wasted. In an era of hybrid- and home-working, when buildings will likely be at reduced

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capacity for the foreseeable future, such a setup could create huge savings – financially and environmentally.

This sort of tech has a bright future. Though the short-term priority for most building owners is occupant health and safety (a consequence, no doubt, of heightened COVID-awareness), over the next five years their focus will move onto energy efficiency. By 2030, when several major companies hope to hit net-zero carbon emissions, including [Rolls-Royce](#), [AstraZeneca](#), and [Legal and General](#), sustainability and achieving net-zero targets will be the prime concern for the majority.

This, in part, is a result of ever-tightening government regulations. From 2025, gas boilers are to be banned in all new-build homes, while non-domestic buildings will face increasingly strict energy efficiency standards – and the UK itself has set the target of being net zero by 2050, adding a [recent target](#) of 78% reduction in emissions by 2035.

The knock-on effect of this on building owners and occupiers varies from industry to industry, and business to business – but it's safe to assume every organisation is under pressure to deliver on eco-targets. More than simply hitting incremental ESG goals, making bold strokes on sustainability is more important than ever to keep employees happy – younger generations in

particular have come to expect it, if not demand it from their current and future employers. Many businesses must now ramp up what their workplace offers its staff, to rival the most comfortable and personal working environment of all: home.

A smart building step-by-step

To see success will require specialist expertise – especially when budgets are tight, boardrooms are hesitant, and ROI calculations aren't clear. This takes a methodical approach. First, areas of weakness in a building's operability must be identified. They might not be immediately evident, but look hard enough, and you'll find them.

Next, formulate a clear idea of what you want from the structure – energy efficiency is an ideal starting point, but don't be afraid of going further in the name of sustainability. After that, assess the effectiveness, and flaws, of any pre-existing smart tech, and how it might integrate with a future setup.

Fourth, draw up a blueprint to present to the wider organisation, sharing how smart installations might help reach business objectives. And finally, deliver on the plan: this is a defining moment in the evolution of smart building technologies. Now's the time to prove they aren't just a flashy gimmick, but solutions that can positively impact lives, and help change the world around us – for occupants in the present, and for the future.

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