Closing the data deficit – how PropTech can help tackle the net zero data challenges

"If you can't measure it, you can't manage it."

A 'data deficit' is slowing the race to net zero. This was the subject of the second BPF and UKPA Sustainability Techfast discussion on 24 September, sponsored by Greengage and hosted by Maples Teesdale. It followed up the BPF's report with Savills on the same topic published in June which details issues, case studies and potential solutions.
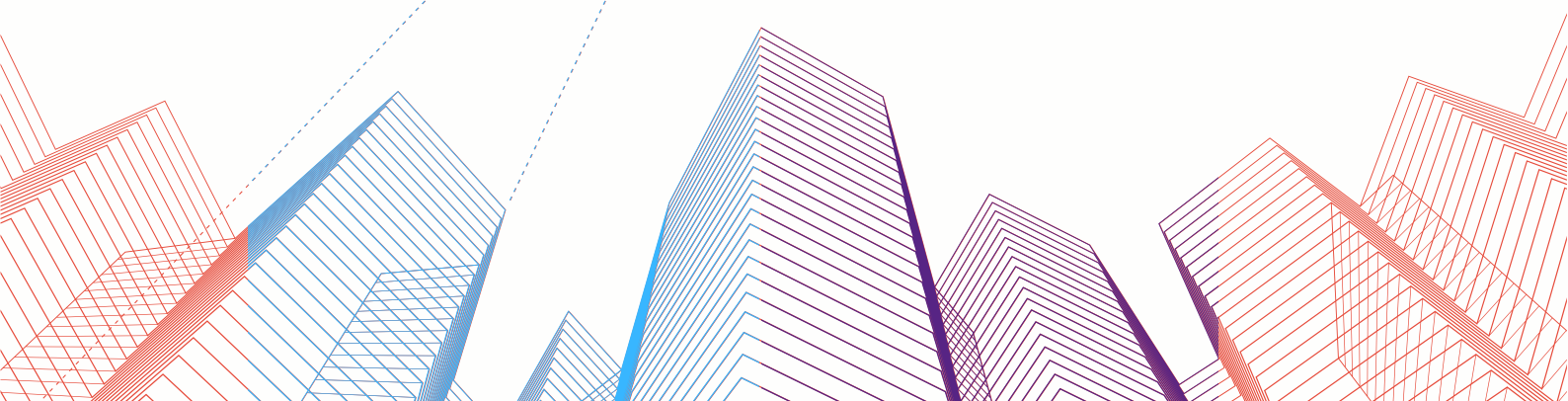
Alerting Government to the importance of data

Investors, developers, landlords and PropTech providers were given an introductory summary of the BPF's new research report published in partnership with Savills. Five key 'barriers' are slowing the transition to a net zero carbon property sector: lack of policy certainty; cost challenges; planning barriers; the lack of capacity in the national grid and connection challenges; and the 'huge challenges' to obtaining accurate energy consumption data. 'Can you trust it, can you access and interrogate it, can you report it?" BPF assistant director Rob Wall, asked attendees.

The purpose of the BPF's report (**Energy Data, Buildings and Net Zero, Closing the Data Deficit**), was to raise the critical issue of energy data in buildings with Government policy makers, he said. Data rarely makes the agenda and the BPF and UKPA want to change that.

Energy consumption data is needed for baselining emissions, for developing strategies, for accurate reporting and is essential to navigate the journey to net zero, and in working with occupiers to cut bills.

In short, accurate data is essential but access to data is frequently difficult, or even impossible, for a wide variety of reasons varying across residential and commercial buildings and between new and old buildings. There is a pressing need for solutions.

Barriers and why data sharing should be mandated

A lot of data is still collected and analysed manually. Resourcing is an issue. There are trust challenges between occupiers and owners, with the former sometimes concerned how energy performance data will be used. There are challenges with tech solutions, but they are an enabler of better data. Previous smart meter programmes 'did not fail' but there are some important lessons to learn for the future because 'it didn't happen as intended'. Legal and regulatory challenges need tackling, not least around consent and confidentiality around data. Green leases can help with that.

Solutions can take the form of better collaboration between owners and occupiers, coupled with the acceptance that tech is an essential part of the solution. The BPF, however, believe that there is also a need to mandate the sharing of energy data.

When it comes to tech there can be problems around installation, especially in older buildings, reliability and integration of the meters and energy kit, and providing access to and collating the data they generate.

Data can be 'locked up' in Building Management Systems (BMS), which have 'so many different formats', and while the BPF research is focused on energy consumption data, there are wider data issues.

A comparison was made with Open Banking where customer data was shared with banks to improve service. But banking has much more 'commonality' about it, it was felt, whereas buildings are so individual and BMS systems so varied. And of course with buildings, the hardware has to be created first.

Trust, not estimation, and better understanding

Data that could be trusted was very important but in the absence of accurate data, data was being estimated, and decisions taken on that basis were sub-optimal. Many properties lacked the infrastructure to take smart meters, or owner/occupiers did not know if their infrastructure was suitable. Even in many new buildings it was hard to integrate new tech and get data back.

Part of the problem is the rapid evolution in tech solutions, understanding them and achieving better collaboration to implement them. Validation or verification issues - checking what performance improvement is actually being achieved compared with what is claimed - can delay the process of implementation.
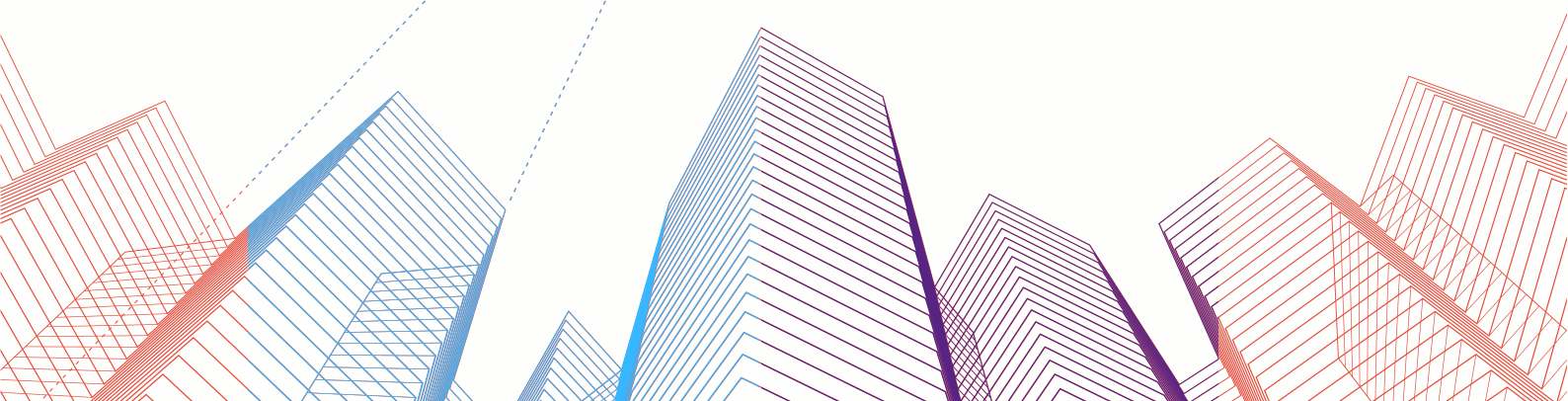
One developer said the management and maintenance of 6,000 smart meters across their mixed-use portfolio of new and refurbished listed buildings was 'a nightmare', with the LED displays a particular problem. 'We need to get a cheaper, easier specification for meters,' they said.

When it came to financing issues, one attendee said 'It gets difficult in terms of linking verifiable data for financiers. 'It would be easier to offer financing for some of this [PropTech] if we could get the verifiable data.'

**Who's in charge? And justifying the investment**

The question 'whose responsibility is it?' raised other issues. Often development and finance teams are looking to 'tick the innovation box' without consulting the person who will be running the building's systems. And responsibility for marshalling data or taking decisions is split between stakeholders within a portfolio or building.

Even more pressing for those with diverse and numerous residential properties, like Registered Providers, is making the business case: 'How do you know it's worthwhile implementing smart meters? There may be little direct benefits to tenants and we're only doing it to justify it on a regulatory basis. And the repair spend is so much more of a priority, not energy data. When looking at PropTech solutions we need to better understand the return on investment and [providers] need 'skin in the game' so problems are resolved.'

A tech provider said it was vital to have training for both the property manager and asset manager. 'We have greater success often with owner occupiers. I dream of a "hit squad" who are all on the same page, including the lawyers, with some financial support for what needs to be done. And the project manager is key from start to finish.'

The complexity around 'ownership' of sustainability and innovation issues added to difficulties, especially in a changing landscape of regulation, targets, new tech solutions. 'The landscape totally changes every 3-4 years making it nigh on impossible to pick the right solution.'

And while it was much easier 'to do cool stuff to big shiny new boxes', the majority of the stock is not like that. We need to look at the sectors where the biggest problems are.' 'Gamification' can be helpful in getting access to data, particularly in the residential or office sectors. In other commercial property sectors, the first essential step was getting access to aggregated data to help minimise risk [of wasting energy].'
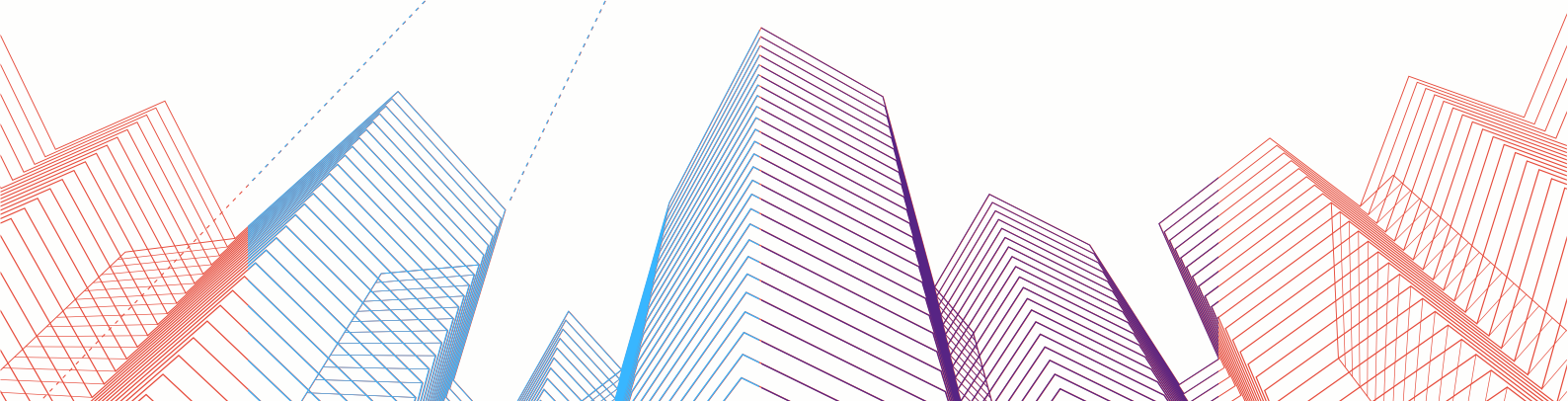
A main issue with data was that it has not yet moved 'into the Cloud' and was still contained within individual BMS systems. Data also needs to be 'contextualised' within each building and how it is being operated to fully understand the implications of it. Otherwise comparisons might be misleading.

It was felt surveyors needed to be taking a closer look at the implications for equipment and costs. And that, moving beyond building related issues, how to calculate the carbon implications for example, of how each local authority treated waste so this could be added into the mix of data.

The wider benefits of better data and collaboration

Sammy Pahal of the UK PropTech Association (UKPA), concluding, said the challenges lay around access to and trust in data, that tech solutions were vital as was improvements to infrastructure to accommodate the tech, and improved training and implementation. Government needed to understand the basic data challenge and its importance and that more open data would help create wealth and increase the value of the PropTech sector.

It would also be valuable for public and private sectors to work together, local authorities and property companies, to help add value for each other by reducing energy consumption which could have substantial environmental and economic impacts.

The need for collaborations was vital, to understand the value of PropTech platforms, and because there is much duplication of effort in the industry to understand solutions. A 'Toolkit' was needed to reduce that duplication, with different users defining key questions and providers supplying the answers, to frame challenges and solutions for users.

It was felt there was a need also to move to a broader discussion around PropTech, beyond energy, and the BPF and UKPA are considering how to 'keep the conversation going'.

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