London, Wates Site Office, Article
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CONSTRUCTION GIANT CUTS SITE OFFICE ENERGY USE BY 30%, WITH METAB3E

The Internet of Things (IoT) and building site offices might not at first appear to be a match made in heaven. Exposure to the elements, people, vibration, and the rugged environment of a site are more than enough to put any budding technology company off.

However, a quick Google search will show that there is a wave of technology being developed and deployed within the site office area, and it is a rich hunting ground for those brave enough to venture.

Drones that autonomously monitor the site are alive, and well (and no, they are not made by Skynet); IoT sensors in workers' shoes help monitor safety and worker wellbeing, along with cameras that will automatically detect if PPE is not being worn within a directed area. The opportunities are endless.

MetaB3E is a Digital FM (Facilities Management) company; So, what is that then?

Well, it provides both traditional, electrical engineering, and cutting edge IoT technology. MetaB3E operates across multiple sectors, such as healthcare, education, hospitality, manufacturing, and retail. Combining our customer portfolio with the behind-the-scenes access that traditional FM services provides, ideally places MetaB3E to lead on operational innovation.

We can see exactly what our customers need. Construction offers both challenges, and significant opportunities. Innovative solutions need to be practical, cost-effective, and applicable within the real world. Therefore, prior to designing and implementing any technology on site, MetaB3E goes through a detailed customer journey mapping process through our Customer Experience Arm, MKL CX.

"*This is crucial to ensure we can 'onboard' each customer in a seamless, and tailored way*" says Sharon Boyd, Chief Customer Officer at MetaB3E and MKL CX.

During the entire design and implementation process, the customer is provided a dedicated MetaB3E contact who hand-holds them throughout the journey.

Here is a little more about one particular case study – a Wates site office, in London.

Jeremy Blackburn (Senior Project Manager), and Andrew Vince (Senior Quantity Surveyor), are a rare breed. They both appreciate the importance, and real-world application, of technology. Whilst looking after this London Wates site office, Jeremy and Andrew required technology that showed their energy consumption and carbon emissions, in real time. Why is this important?

Well, Wates Group has very ambitious environmental targets:
• Zero waste from Wates operations, by 2025
• Zero carbon from Wates operations and operational vehicles, by 2025
• Positive impact on nature from all operations

To achieve such stretching targets, technology must play a part. Operating a business that spans construction, housebuilding and property services, naturally brings forth several challenges, especially in the face of inspiring environmental targets. Site offices have traditionally been a difficult area to accurately monitor energy usage and carbon. For a company the size of Wates with scores of site offices, being able to report on energy and carbon, is hugely important.

MetaB3E installed several technologies on site: a state-of-the-art live energy management system (EMS), along with IoT sensors. Installing the EMS outside was always going to be a challenge, however in true MetaB3E style, the team worked with Jeremy and Andrew to determine where best to place the tech.

Andrew Vince comments:
"*Being able to see live, what the site is using from an energy point of view, is really powerful; data normally hidden from view is now visible and inescapable*".

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TURNING THE INVISIBLE, VISIBLE

With the EMS installed, the team has full visibility to the energy cost of the site, a cost variable that is traditionally hard to track. When a team is on site, the management know the cost of the labour, and any materials required for the work. However, they can now accurately track (live) the cost of energy, along with carbon emissions - a cost variable that has previously difficult to track.

Tracking relative humidity and temperature outside the building, is helpful for EWI (External Wall Insulation) specifications. EWI render solutions, can in most cases only be applied in dry conditions with temperatures over 5c, and lower than 25c, and when air relative humidity is lower than 80%. Usually, the temperature check is a manual process completed via the site log, which can bring some inaccuracies through human factors. The IoT humidity and temperature sensors installed on site address this with accurate, real time, 24/7 temperature readings, all logged and backdated from the day of install.

Jeremy Blackburn says:
"Nearly all construction products will have specifics requirements in relation to weather etc., installation outside the specification parameters can prove very costly".

DIGITAL TOILETS

One area that has always been difficult to crack, is the digitalisation of the toilets on site. The traditional 'signed sheets' on the toilet wall that indicate when they were last cleaned, is a relatively routine approach to maintenance, but the process often ignores actual traffic levels (i.e., the same levels of cleaning are provided, no matter how many people use the facilities). However, within the site office, cleaners are alerted to usage data, down to the cubicle level.

30% ENERGY CUT

The team has reduced the site's energy usage by 30%, due to the recommendations that have come out of the tech installed, and working in partnership together. The technology can now be rolled out to additional sites.

The Wates team is leading the way with sustainable innovation, and Team MetaB3E are loving your foresight. Congratulations!

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METAB3E AND THE WIN PORTAL JOINING FORCES TO REACH NET ZERO CARBON

More widely, the Wates Group is so committed to sustainability, that it recently launched its WIN (Wates Innovation Network) portal.

The WIN Portal is the first initiative of its kind, designed to help businesses 'build back better' by connecting companies and customers directly. Supporting them to meet sustainability targets, free of charge. It aims to create an industry-leading network that will accelerate the transition to net zero carbon, by showcasing smarter solutions to design, construct and maintain buildings. The marketplace is currently home to 42 innovation partners, from systems that improve energy efficiency to circular economy office furniture. Users can filter sustainable innovations based on their requirements to find the product, and supplier, most suitable for them.

Partners are approved by an internal screening panel including 40 environmental experts, and all the team at MetaB3E count this as one of our proudest achievements: to be a Wates Sustainable Innovation Partner!

Dr Zainab Dangana the Sustainability Technology Services Manager at Wates Group says:
"At Wates Sustainable Technology Services we work with sustainable technology start-ups and small businesses, and we've seen first-hand the powerful impact they can have on our customers. So far, we have introduced more than 125 of our customers to our ever-growing network of SME innovation partners, not only linking major businesses to new sustainable technology which they might never have been exposed to, but also giving an important boost to the innovation network. Right now, that support is essential".

For more information, look MetaB3E up on the portal - www.wates.co.uk/wates-innovation-network/