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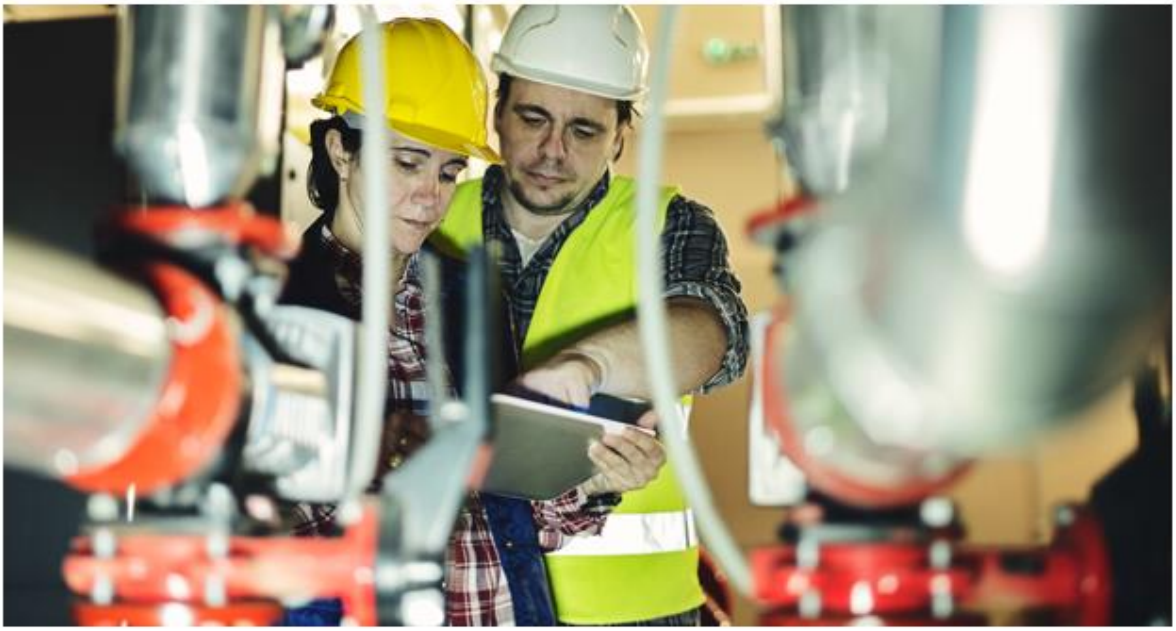

FM Clinic: Dealing with ageing infrastructure

According to a recent survey of FMJ readers one of the biggest challenges facing FMs is dealing with ageing infrastructures. We ask a panel of experts how far preventative maintenance can go towards counteracting the deterioration associated with ageing infrastructure, whether the latest technologies can help better monitor assets and what advice they'd give FMs on planning for the inevitable wear and tear of buildings.

THE TECHNICAL DIRECTOR'S VIEW

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In every organisation there are processes, systems, or facilities that are crucial to the smooth running of operations. Breakdowns as a result of poor maintenance of assets can have enormous consequences and directly impact cost and profitability. It is a well-known fact that maintenance of facilities can often appear to be overly costly, at times exceeding projected budgets, but this is usually a result of a lack of investment in planned maintenance or asset replacement.

Undertaking planned maintenance helps to reduce costly reactive repairs because systems are less likely to break down or fail. It also significantly reduces legal risk to organisations by ensuring regular inspections of life safety systems such as fire alarms, extinguisher systems and emergency lighting are properly undertaken and recorded.

Planned maintenance can take many forms, including routine visual inspections, invasive testing and more. However, these are often limited to calendar based activities which may not be the most efficient way forward. In high value asset industries, such as the utilities sector, condition base maintenance has been effective, but has had limited transfer to facilities maintenance (FM) due to the relatively high cost of implementation which has been hard to justify in many cases.

There has been rapid progress among building managers regarding the management of workplaces, as organisations strive for continuous improvements in performance and efficiency. This process is being driven by a powerful combination of influences, including a desire to drive down building operations and management costs, while the need to comply with stringent regulatory frameworks.

Advances in technology are driving some of the biggest changes as facility managers seek to keep pace with the benefits afforded by technological advancement—particularly in relation to building environment measurement, operational reporting and lifecycle asset management.

Businesses are increasingly open to investing in, or adopting, innovative Internet of Things (IoT) technology for condition monitoring, to more accurately identify developing faults in facilities. Opportunities created by IoT are increasingly driving connectivity in disparate systems and sensors, providing real-time analytical data on everything from office temperature and humidity, to CO2levels, occupancy and energy consumption. The more affordable costs of long life battery sensors – which utilise Wi-Fi or other connection protocols – negate the need for expensive hard wiring.

The increase in IoT-enabled buildings allows for the use of artificial intelligence (AI) and algorithms to optimise building management and efficiency. This demonstrates the potential of a future whereby buildings can "think" for themselves and maintenance can be tailored to individual asset requirements in a more cost effective way.

This positive disruption is playing a significant role in driving cost-efficiencies and competition within FM, which is good for business and good for customers. Facility managers embracing large and transformative change is essential, and much like the rise of the internet in the nineties, or the growing dominance of digital commerce in retail, businesses that fail to respond run the risk of being left behind.

When it comes to building management, facilities management companies are often at the heart of the data supply chain to provide a first-hand understanding of the type and vast amount of data being generated. This might include systems providing notifications that a system is running low on water or requires cleaning, or other maintenance before a building user is even aware of an issue. This encompasses all the services required and expected of a modern working environment, including cloud-based data systems, fixed and wireless networks, and application interface that are customised to meet the needs of specific customers.

All of this functionality has the potenllial to generate a lot of data. But its value is minimal if it cannot be rationalised into information and translated into knowledge that informs a practical FM strategy that helps drive a stronger bottom line.