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Navigating the future: Strategic options for sustainable and efficient building management

As building owners face increasing pressure to reduce carbon emissions, ESG (environmental, social, and governance) criteria are becoming central to building performance management. Yet, many real estate owners and users are hesitant to take the appropriate course of action because they do not have access to live and correct data of their asset portfolio. Could artificial intelligence (AI), the Internet of Things (IoT), and digital twin technologies be the missing link to align ESG goals and operational efficiency?



5 insights you should know

Rising cost of energy in major cities: A growing challenge. As energy costs continue to climb in major metropolitan areas, businesses and property owners face mounting pressure to optimize efficiency and reduce consumption. Factors such as increasing demand, aging infrastructure, and global supply chain disruptions are driving utility prices higher, straining budgets across commercial and residential sectors.

The cost of noncompliance is added to the cost of missed savings. Not only does noncompliance result in significant penalties, but it also increases operational inefficiencies, which can lead to increased costs. These include regulatory fines, financial liabilities, and reputational damage that can undermine stakeholder confidence and hurt market value. The resources required to remediate noncompliance can divert focus from core business activities, reducing profitability and long-term sustainability.

Regulation is moving. Regulations surrounding sustainability and corporate governance are evolving rapidly, requiring organizations to proactively adapt their operational strategies and compliance frameworks. Staying ahead of these specific regulatory shifts is essential to maintaining compliance and aligning with industry standards.

Static reporting is not enough. Traditional static ESG reporting methods, such as annual sustainability reports, periodic ESG questionnaires, and static data spreadsheets, are inadequate to meet evolving stakeholder expectations. Investors and stakeholders demand real-time, transparent reporting of ESG metrics.

The future of building is cognitive. Imagine a building managed by autonomous systems powered by AI and IoT, centered on a digital twin technology that continuously monitors and analyzes energy usage and performance, enabling proactive improvement and maintenance for efficiency and sustainability.

5 actions to consider

1 Utilize ROI positive technologies. In response, cities are doubling down on sustainability initiatives, and technology-driven solutions like digital twins, and AI-powered energy management platforms are emerging as essential tools for mitigating rising costs while ensuring operational resilience. Now more than ever, smart energy strategies are key to maintaining profitability and long-term sustainability in urban environments.

2 Aim not only to be compliant but also to improve your building utility consumptions and maintenance operations. Conduct regular broad energy audits, invest in energy-efficient systems, and adopt leading practices in facility management to reduce costs and improve compliance.

3 Deploy advanced data analytics and real-time monitoring tools to help continuously track asset/building performance. Access to continuous updates on your ESG performance can allow for agile responses to issues or opportunities that arise. This enables timely, data-driven decision-making and enhances transparency for stakeholders.

4 Understand the impact of regulation on your assets and operations. Develop a dynamic compliance framework that regularly monitors and assesses regulatory changes so you stay ahead of evolving requirements. Engage with stakeholders to align your operations with the evolving standards.

5 Engage with internal and external subject matter specialists to leverage their knowledge to develop and implement a phased approach toward carbon neutrality. This includes setting incremental goals, investing in green technologies, and regularly reviewing and adjusting your strategies to maintain progress toward sustainability.

Connect with us

NATHAN FLORIO
Principal | Deloitte Advisory Real Estate
Deloitte Transactions and Business Analytics LLP
naflorio@deloitte.com

SHARON CHEN
Head of North America, Akila
sharon.chen@akila3d.com

OSSIAN HEULIN
Chief Revenue Officer, Akila
ossian.heulin@akila3d.com

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