Powering clients to a future shaped by growth

A Frost & Sullivan White Paper

Using Data to Drive Workplace Innovation and Sustainability

FROST & SULLIVAN

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Introduction

In the past 18 months, the sense of urgency has dramatically increased. Both sustainability and workplace optimisation have shifted from long-term goals to urgent, short-term priorities. In the wake of the coronavirus pandemic, the new future of work has arrived ahead of schedule, digital transformation of the built environment has accelerated like never before, and sustainability—especially energy and climate issues—has rapidly ascended in public consciousness, corporate prioritisation and government support.

The way we manage our buildings will play an enormous part in achieving a net-zero future, and until recently the tools have not been available for us to collect, analyse, visualise and act on data that truly allows building managers to optimise sustainability, productivity, resilience and risk.

But not anymore. We can now leverage data to enhance the people-centric working environment, improve asset-centric operations and maintenance, and align real estate portfolios as users' needs change. With the right analytics layer on top of smart building solutions and Internet of Things (IoT) technologies, data can truly optimise our workplace and support a more sustainable future.

With the right data analytics layered on top of smart building solutions and IoT technologies, the time has come for data to truly optimise our workplace innovations and drive a more sustainable future.

> **"The way we manage our buildings will play an enormous part in achieving a net-zero future."**

The Future of Work, Buildings and IWMS

For several years, the global building technology and facility management (FM) industry has been going through an unprecedented period of change. As always happens with big changes, this presented new challenges for both customers and service suppliers and new opportunities for exciting and innovative value propositions.

The transformation had been driven by a host of Mega Trends including new business models, technological innovation, sustainability, health and well-being, and a new vision for the future workplace. And then along came COVID-19, and many of these trends were exacerbated like we couldn't possibly have predicted—especially the vision for the future workplace.

The pandemic has created new or heightened use cases for solutions or innovations that address these trends; for example, one of the fastest-growing areas in the global market in 2020 was cloud-based analytics and remote monitoring and management of building assets such as HVAC and refrigeration. The focus on digital transformation has continued its climb up the list of priorities in 2021 as suppliers have the opportunity to bring technology to life and deliver integrated solutions that focus on both people-centric outcomes and asset-centric solutions including maintenance management, energy efficiency, renewable energy integration and optimisation of building technologies.

Exhibit 1: Top Transformational Trends in FM and Buildings

At the same time, the nature of work is changing: choice, flexibility, employee well-being and hybrid and collaborative working have become key considerations in workplace planning. Workspace optimisation is increasingly recognised as a driver of productivity and sustainability, and as a tool for attracting and retaining top talent. Most organisations' current priority is getting people back to work in attractive, sustainable, efficient and healthy buildings.

> **"Workspace optimisation is increasingly recognised as a driver of productivity and sustainability."**

With complexity, change and technology convergence becoming ever more commonplace, the pressure on building owners, occupiers and service providers is increasing. The need for solutions that fully integrate wide-ranging inputs and provide actionable data and visualisation for users has never been stronger.

In response, the market for integrated workplace management systems (IWMS)—software platforms that enable users to optimise all of their workplace resources, people, infrastructure and assets—is flourishing. Frost & Sullivan believes IWMS will become one of the most critical tools of the decade ahead.

Sustainability

The Urgency Behind Energy, Climate and Carbon Emissions

There are also many positive signs that sustainability is continuing to become more important and this will be one of the leading competitive differentiators over the next few years for all types of companies. Lots of talk about a green recovery from the pandemic has included the World Economic Forum calling for a "new energy order" and a "great reset." Meanwhile, the United Nations is calling on countries to "green their recovery packages" in the wake of COVID-19 and shape the 21st century economy in ways that are clean, green, healthy, safe and more resilient. Meeting sustainability goals will be big business in the years ahead.

All around the world, governments and societies are supporting new and more ambitious targets for emission reductions. The European Commission has adopted a package of policies under the banner of "Fit for 55" aimed at reducing net greenhouse gas emissions by at least 55% by 2030; the Biden administration in the United States is showing support for the Green New Deal initiative with the president stating that he wants all electricity to be renewable by 2035; and Chinese President Xi Jinping has announced that the country will peak its CO2 emissions before 2030 and achieve carbon neutrality by 2060.

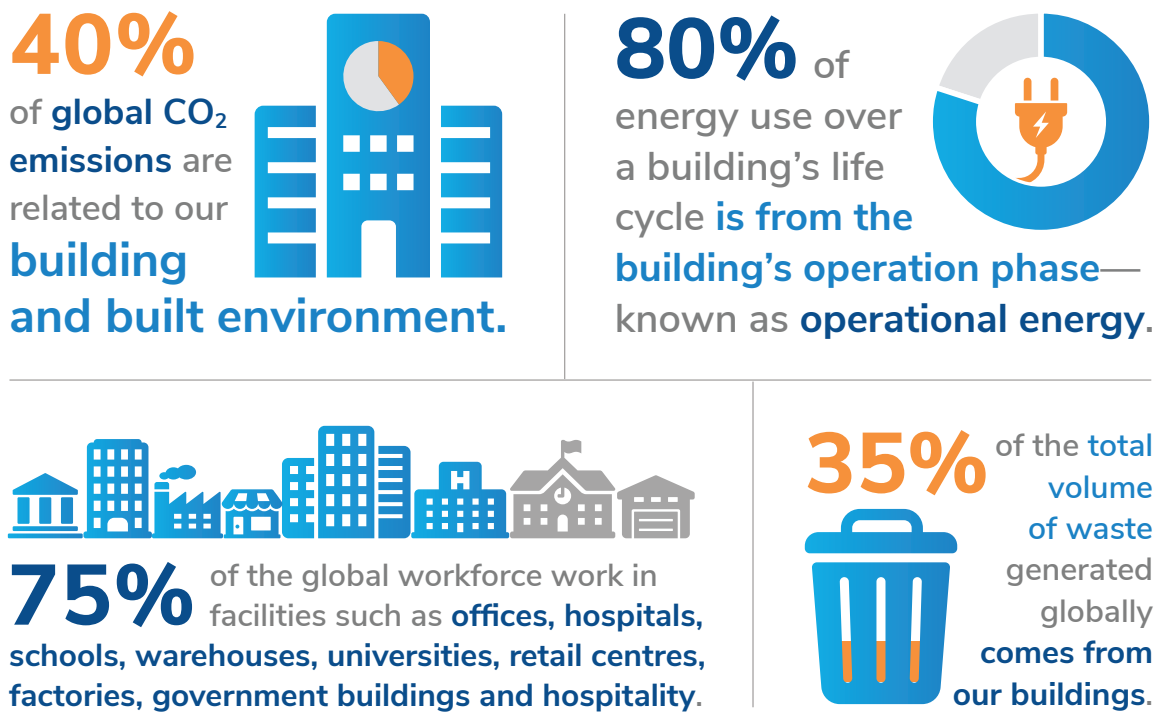
"After many decades of posturing and pondering, the era of urgency has finally arrived."

The Role of Buildings and the Scale of Opportunity

Most sources today agree that around 40% of CO2 emissions and more than 50% of electricity consumption is from our buildings. On top of that, buildings account for around 35% of waste production and provide a working environment for over 75% of the global workforce in facilities as diverse as offices, hospitals, schools, warehouses, universities, retail centres, factories, government buildings and hospitality.

About 80% of energy use over a building's life cycle is from its operation (known as operational energy). This creates a massive opportunity to maximise the efficiency of the people themselves, as well as the performance and emissions data from assets such as heating systems, lighting, air conditioning units, ventilation, refrigeration, tools, machinery and IT systems.

Exhibit 2: The Impact of Buildings on Our Environment



To maximise operational energy efficiency, decision makers need comparable and reliable data to decide how and when to use their assets, monitor and report emissions, plan maintenance and optimise costs.

At the same time, in any working environment a happy and healthy workforce is crucial for a productive and sustainable business in the long term. According to the World Green Building Council, staff costs including salaries and benefits typically account for 90% of business operating costs, so maximizing the comfort, efficiency and health of building users also is more critical than ever.

This is why real estate management, facility management, maintenance management, sustainability, energy management, and personal efficiency of users are all converging.

A successful IWMS strategy connects workers and assets using the IoT and generates the data needed to optimise the workspace from a total life cycle perspective: energy efficiency, maintenance management, renewable energy integration and optimisation of other building technologies.

Sustainable Development Goals, Regulation and Compliance

In the broad arena of sustainability, data is just as critical. After all, we can't track change and improvement if we don't have robust data.

As organisations scramble to address sustainability challenges, they're faced with a complex convergence of corporate social responsibility (CSR); regulatory compliance; environmental, social and corporate governance (ESG); customer and staff expectations; risk management; business objectives; and cost reduction. Sustainability is no longer a tick-box or checklist exercise but a critical investment area with genuine returns and opportunities for competitive advantage.

Many are aligning themselves to the United Nations' Sustainable Development Goals (SDGs). The 17 SDGs represent an urgent call to action for all countries, recognising the true breadth of the sustainability agenda and acknowledging that ending poverty and inequality sits alongside strategies to improve health and education, reduce disparity and discrimination and drive economic growth—all while tackling climate change and working to preserve global ecosystems.

> **"Sustainability is no longer a tick-box or checklist exercise but a critical investment area with genuine returns and opportunities for competitive advantage."**

As more and more companies embrace SDGs, tracking their success requires real data from people and assets, performance indicators against the goals, carbon reporting, and scorecards and dashboards that enable managers to make the best possible decisions. A building management strategy built around IWMS can play a massive role in delivering this.

Compliance with ever-changing national or regional regulations regarding energy efficiency and carbon emissions also is a challenge. Many national regulations, frameworks and directives are regularly updated and have varying requirements for different types of buildings, making it especially challenging for real estate managers with complex portfolios. Add to that a plethora of global and regional certifications that buildings can achieve to show their commitment to environmental performance and health and wellness of building users (think of things like BREEAM, LEED and WELL as examples) etc.

All this is great news for sustainability. The language of building managers a decade ago didn't include terms like SDGs, CSR, ESG or workplace optimisation, and regulations were less binding and easier to navigate. But in today's world, progress has brought complexity; technology and data have become essential to help managers navigate risks to find real opportunities.

Climate Accounting, Risk Mitigation and Cost Optimisation

With today's focus and urgency surrounding energy, carbon emissions and climate change, energy monitoring and carbon reporting are imperative for any organisation that is serious about sustainability.

Carbon reporting (otherwise known as carbon or climate accounting) is important for organisations that want to accurately measure, track and disclose the impact their business is having, as well as the climate risks they and their stakeholders face. It's also crucial for matching long-term sustainability goals with actions today, monitoring progress, and providing data to prove compliance (and in many cases going above and beyond compliance) with regulations.

Why is it done? Apart from compliance, the many reasons include communicating performance in company reports, marketing and messaging; staff and customer engagement; due diligence for investments; and highlighting competitive advantage or meeting of tender requirements for business contracts. It can even be used to quantify carbon credits that can be traded on carbon markets.

Since buildings are such an important contributor to energy consumption and carbon emissions, understanding, monitoring and reporting their performance is essential for any organisation.

IWMS provides real-time data reporting for individual buildings and for whole property portfolios. This can mean high-level insights and dashboards for accounting and reporting, and in-depth analysis at an asset level to support on-the-ground decisions and provide the tools to execute on them.

Many other factors relating to the building or property portfolio (such as space occupancy, property value, room availability, asset location, maintenance plans and needs, lease contracts and service suppliers) can carry huge risk to the organisation if there are any blind spots. Risks include unexpected costs, poor utilisation of space, badly planned maintenance of assets, failure to comply with regulations, or interruptions to business continuity; of course, any loss of efficiency of either people or building assets is a loss of sustainability.

IWMS by definition is a tool that focuses on delivering transparency and efficiency. That means providing building managers with the insights they need to make better decisions, report the performance of their buildings, comply with regulations, utilise space effectively, optimise costs and ultimately boost business productivity.

All this adds up to mean that the financial benefits of IWMS include direct and indirect cost savings, capital cost avoidance, and opportunities to increase both revenues and returns on property investments. It also enhances the governance of the organisation by providing transparent data to investors, staff, customers, suppliers, regulators and any other stakeholders.

The Role of Technology and Data

With so much at stake—and such an enormous opportunity for building management to make a real difference—the time is right to embrace smart buildings, the IoT and IWMS to generate and collect data. We've all known for several years that operating technology (OT) such as smart building platforms and the digital world of information technology (IT) are converging. IWMS brings the very real opportunity to unify the OT and IT worlds.

The performance of our buildings and the productivity of the users depend on our ability to optimise the workspace and built environment based on real sustainability data using IWMS.

The key message of this story is that among all these trends is the growing role of digital, smart and cognitive technology that is changing the way we generate and use data to control resources and transform the relationship between buildings, equipment, systems and users. Software is moving to new levels to deliver optimised utilisation of resources and enabling new technology solutions and operating models with sustainability at the core.

With the backdrop of COVID-19, digitalisation strategies are accelerating. The use of augmented and virtual reality (AR & VR) will become more common in operations to enhance technician performance, improve safety and optimise costs. Wider use of sensors, the IoT and automation will enable the delivery of contactless products and services. Healthy buildings (in every sense of the words) will the goal.

Next we'll start to see the impact of tools such as artificial intelligence (AI), indoor navigation systems, robots and drones making an impact on the built environment. Cloud-hosted analytics will increasingly drive remote management for technical services and preventative maintenance. All this will generate even more data that—if used properly—will help us improve efficiency and tackle the sustainability challenges of the future.

"We believe IWMS will become one of the most critical tools of the decade ahead."

Introducing Planon

The IWMS vendor landscape is characterized by many mergers and acquisitions, enabling companies to extend their solutions to address these new market challenges; however, the resulting mix of technologies often causes new issues such as lack of integration, data inconsistencies and reporting complexities.

For many years, Frost & Sullivan has recognized Planon as a strong and global IWMS leader. Planon's vision is to enable enterprise building digitalisation by integrating the diverse landscape of smart building technology, business solutions and data into one source of truth and turning that into value for building owners, building users and FM providers.

> **"Optimised data alongside intelligent deployment of IWMS will play a critical role."**

All Planon solutions are based on a single technology platform and therefore integrated by design. Through the openness of the platform, Planon solutions seamlessly connect with the huge variety and diversity of building operating technology (OT) like building management systems, sensors, HVAC systems, smart assets, or energy systems. Most importantly, the platform embeds and converges this OT with IT business processes to provide actionable data and tangible solutions to improve.

Planon offers an extended sustainability solution that is fully integrated with all IWMS processes: space and workplace management, asset and maintenance management, real estate and lease management, capital project management and many more. The solution not only measures and reports on sustainability metrics (such as carbon emission, energy consumption and energy cost) but also offers the tools to realize and monitor improvements.

Conclusion

In summary, the work of building owners, operators and facility management firms is becoming more complex and challenging, but there's also a huge opportunity to make a difference—in sustainability and environmental impact, staff performance, and a company's bottom line. Optimised data alongside intelligent deployment of IWMS will make this happen.

The way we design, build and operate buildings; comply with regulations; report our emissions; eliminate waste; and reduce operating costs and minimise risk can all be integrated to deliver opportunities for companies and benefits for society as a whole.

NEXT STEPS

To find out more about how IWMS solutions can help you, visit the Planon website to read all there is to know about Integrated Workplace Management Systems.

Are you interested in discovering more resources that Planon and Frost & Sullivan have worked on together? Check out this recent roundtable discussion on new strategies for the future of work.

Planon is ready to help you get the basics in place to improve building sustainability. You can get in touch with any questions, wherever you are working today.

FROST & SULLIVAN

Growth is a journey. We are your guide.

For over six decades, Frost & Sullivan has provided actionable insights to corporations, governments and investors, resulting in a stream of innovative growth opportunities that allow them to maximize their economic potential, navigate emerging Mega Trends and shape a future based on sustainable growth.
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