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Renaissance of the Workplace

Unlocking Workplace Performance with a Full Stack AV Platform

By Alexander Michael, Vice President, Information & Communications Technology

FROST & SULLIVAN WHITEPAPER

In collaboration with

Q-SYS

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Skyrocketing Demand for Superior Experiences

Wherever people gather to collaborate and drive productivity—be it bustling offices, higher education campuses, convention centers, or event spaces—the demand for superior experiences is evident. These spaces now serve as extensions of a company's or institution's brand, designed to deliver exceptional outcomes for staff, students, guests, and owners.

Modern work and education transcend the simple on-site versus remote dichotomy. They encompass diverse work and learning styles, human behavior, and support needs, driving significant investments in commercial real estate and the advanced technology that powers digital work.

> The focus has shifted away from designing physical spaces primarily for efficiency metrics like square feet per employee. New metrics and design principles place more emphasis on how the human experience affects performance and productivity.

Spaces that accommodate personal choices and support an increasingly diverse set of activities (e.g., listening to music, casual conversations, or volunteerism) support mental health and cultivate community and trust. Consequently, workplace design increasingly incorporates greenery, water features, natural materials, light, and shapes, elements typically associated with the hospitality industry, to create engaging communal office and campus spaces.

Renewal is no longer the default response when existing leases are about to expire. Decision makers are taking a more intentional approach to justifying leases and in defining the role of each space, floor, and building. This presents opportunities for tenants, commercial property owners, and technology providers alike to drive positive change. Key drivers for change include the need for flexible, adaptable spaces under shorter lease terms, the migration to cloud-based technology and data, and evolving collaboration styles.

To address evolving business and workforce needs, companies are downsizing their square footage but investing in prime-location Class A properties with state-of-the-art facilities characterized by advanced technology infrastructure, superior architectural standards, and outstanding amenities. This trend is particularly pronounced in large organizations that have more scope for optimizing their real estate. They will need less space overall, but it will be more sophisticated, often multi-functional, and far more technologically advanced.

32% of IT/telecom decision makers have or plan to have more geographically dispersed workplaces

46% are modernizing office technology

50% are offering more office perks

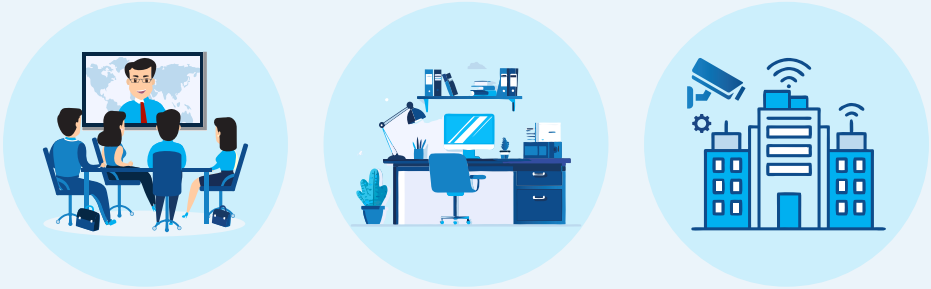
This does not mean that companies are necessarily reducing their geographic footprint. Frost & Sullivan research finds that, to improve employee experiences, 32% of IT/telecom decision makers have or plan to have more geographically dispersed workplaces, 46% are modernizing office technology, and 50% are offering more office perks. Smaller, conveniently located regional and local hubs in major cities help to retain and appeal to new top talent through reduced daily commutes and better technology to achieve personal and company success. Technology behemoths like Amazon, Google, Microsoft, Salesforce, and Zoom have done this in numerous cities around the world, including Chicago, London, Tokyo, and Melbourne.

The High-performance Workplace: A New Paradigm for Success

In 2022, Frost & Sullivan and Q-SYS published a paper about high-impact spaces: a category of meeting space characterized by a focus on achieving outcomes driven by sophisticated, intelligent audio, video, and control (AV&C) capabilities, rather than defined by room size.

High-performance Workplaces

High-performance Workplaces encompass a variety of environments that bridge the physical and digital worlds through enhanced integration of AV into collaboration and building technologies, workspace design, and work processes.



AI Driven by AI

High-performance Workplaces harness the full potential of data generated within the built environment to increase productivity, enhance outcomes, and provide a deliberate workspace experience that evolves with the needs of businesses and institutions.

Key technologies include:

- AV platforms
- Video
- Control systems
- Advanced lighting
- Building management
- HVAC
- Sensors
- Wayfinding
- Security
- Space utilization

Meanwhile, the high-impact vision has spread from traditional office and meeting spaces and is energizing hospitality, learning environments, lobbies, and all the spaces in-between. We call this new and growing trend "high-performance workplace." These workplaces integrate technology into most user-facing spaces of the entire built environment, creating a deliberate, coherent experience that drives successful outcomes and inspires more productive work practices that may involve shorter, purposeful meetings and asynchronous collaboration.

In a high-performance workplace, technology enhances the user experience seamlessly in the background, without requiring direct engagement. Spaces become multi-purpose and reconfigurable, not just through divisible rooms and movable furniture, but by transforming cafeterias, reception areas, campus common areas, and outdoor spaces into welcoming, experiential environments.

The technology is future flexible, scalable, and cloud enabled with functionality increasingly delivered via software, ensuring that use cases can evolve rapidly as needs develop, avoiding the long technological cycles that have characterized building systems and other operational technology (OT). Moreover, the high-performance workplace addresses longtime challenges of working in traditional offices and issues that have arisen with newer work styles.

Boosting Productivity through Dynamic Collaboration

On-site collaboration must be as effective as remote collaboration. AI continues to enhance participant inclusion, equity, and productivity in collaboration with features such as automated audio and video quality adjustments, notetaking, summarization with sentiment analysis, action items, and much more. However, meetings and multi-party collaboration sessions are often conducted as events scheduled for predetermined times and rooms, leaving spontaneous, ad-hoc use of collaboration tools among groups as a less common use case. The connected, high-performance workplace makes collaboration tools more readily accessible and available to support a much wider range of use cases and collaboration styles, from one-to-one to many-to-many.

Igniting Creativity in AI-enhanced Environments

As AI gradually replaces routine tasks, the competition will heat up for innovative, problem-solving individuals who can drive change. High-performance workplaces unencumber creativity by stimulating the human senses and creating experiences that boost productivity. Adjustable lighting that mimics natural daylight, for example, can improve mood and energy levels, making employees feel more alert and motivated. Ambient soundscapes can create a calming atmosphere, reducing stress and enhancing concentration. Interactive displays enable dynamic brainstorming sessions, where ideas can be shared and modified easily.

Catalyzing Development and Building Culture

Limitations of existing tools and workstyles have contributed to burnout that is a critical retention issue for many organizations, in part due to work habits formed since 2019. Multitasking during virtual meetings, lack of work-life boundaries, restrictive routine, and isolation, for example, contribute to the disengagement that diminishes work quality. Those most affected have been new hires and early-career professionals, resulting in decreased productivity, lower quality work and higher turnover.

By addressing the nature of work, behaviors, and habits more holistically, and by offering options tailored to different preferences, organizations can mitigate burnout and avoid costs associated with rehiring and training. Extensive remote experiences surfaced additional unexpected challenges that, now recognized, are helping to catalyze in-office work initiatives.

High-performance workplaces are highly valued over solitary, methodical cubicle life because they stimulate organic experiences that inspire employees to want to be in the office. Training, mentorship, and culture-building flourish as shoulder-to-shoulder in-office experiences with colleagues and leaders make it far easier to provide employees with the professional environment and perfect mix of visualization, collaboration, and computational tools that allows skilled and promising employees to thrive and work efficiently on complex tasks without technical limitations.

Executing on the High-performance Workplace Vision

Top-manager familiarity with the high-performance workplace vision is increasing, in part owing to the experience centers that many organizations invest in today to showcase brands, products, and services in a memorable way. Naturally, customer loyalty and brand advocacy help clarify the value of high-performance workplaces, but C-level executives are more likely to grant budget approvals when they see workplace design changes translated into financial terms and business effect.

Effect on Property Values

The financial benefits of high-performance workplaces can be understood in terms of occupancy, building usage, and profitability metrics, which help establish total cost of ownership and the link between office environment and productivity. AV&C investment has strong potential to lower energy costs over time. However, energy savings can only be a small part of the equation because many budget owners think of energy as a fixed cost, although it is clearly variable. Overall, revenue and profit increases will always be powerful key investment drivers for budget owners.

In owner-occupied buildings, another positive of high-performance workplaces is the relationship between balance sheets and high-performance workplace investments. Workspace quality increases corporate real-estate values significantly. At the other end of the spectrum, the devaluation of commercial office real estate to Class B or lower reflects the insufficient quality needed for safe, engaging work environments and proper brand representation.

Vacancy in older buildings will remain elevated as occupiers continue a flight to higher quality, per CBRE Research (CRBE 2025 U.S. Real Estate Market Outlook, December 2024). The trend is driven by heightened demand amid return to pre-pandemic occupancy levels, need for compelling workplaces within low unemployment conditions, need to reduce costs through reduced lessee turnovers, and other factors. On the other hand, higher turnover and higher vacancy in older and sub-Class A properties offer opportunities for internal stakeholders to upgrade to a high-performance workplace and improve their overall real estate equity and classification.

Stakeholder Convergence

Historically, the responsibilities for AV&C, communications, IT, and building management have been divided. However, increasing convergence and collaboration on technology choices between all the teams that influence the workplace and campus experiences is beginning to improve outcomes. This means that decisions on AV&C and building management systems, which have traditionally been made at the operational level, are now moving up in priority to senior executives because the implications are becoming strategic. The more senior the decision makers, the more likely it is that an organization will be on the forefront of implementing high-performance workplaces.

Organizations should incorporate a granular view of day-to-day processes on the ground into technology and workspace design. Aligning stakeholders, from the CEO to HR and operational management ensures the prioritization of processes that can be improved by technological advancements.

To ensure high-performance workplaces evolve continually, organizations must remain vigilant to potential improvements and emerging requirements. Forming a workplace committee with cross-functional stakeholders is helpful to stay informed and forward-looking. This committee should have C-level sponsorship to drive decision-making and execution across the organization effectively.

Moving at the Speed of Software

The typical building design process spans several years, and this makes upfront AV&C and collaboration technology integration almost impossible. Because early technology selection would result in outdated equipment by the time the building was completed, AV&C choices are made late and added on to workplace designs decided years earlier.

Consequently, organizations should limit fixed architectural infrastructure. Making buildings modular, upgradable, and adaptable to business dynamics allows the workplace to evolve at the speed of software.

Building infrastructure has long been static, but it now needs a transformation—similar to the automotive industry—towards standardized interfaces and flexible, software-driven upgrades. In a high-performance workplace, a full stack AV platform is part of the solution that ensures workspace designs continually meet diverse departmental needs, embody organizational values, and deliver desired outcomes.

When senior executives provide their high-level vision for the workplace before construction or refurbishment begins, they should be mindful of the social dynamics in the workplace. In this context, a full stack AV platform has the potential to effectively represent the organization's brand and culture, mitigating resistance to change and lowering performance barriers.

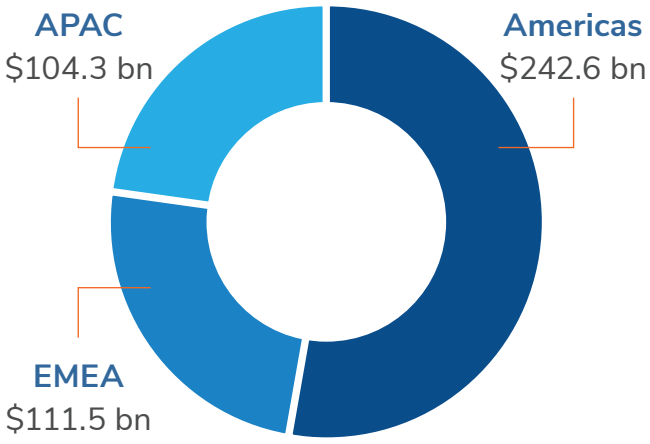
The High-performance Workplace: $187 billion US Market

Frost & Sullivan research suggests that 80% of medium to large organizations will be influenced by the high-performance trend within the next five years. Global investment in workplaces, including AV&C technologies, is experiencing sustained growth, with broadly consistent patterns observed across international markets. Nevertheless, the specific drivers of this trend—such as sustainability imperatives and energy efficiency goals—are often shaped by regional policy frameworks, particularly in Europe where government-led initiatives play a significant role.

In 2024, the US had 9.1 billion square feet of office space, with approximately 5.6 billion square feet classified as Class A properties. Frost & Sullivan considers these Class A properties potential candidates for high-performance workplaces over the next decade. Communal areas in Class A properties are likely to receive more investment—and earlier—than mass deployment spaces, because typical communal areas are not yet equipped with the technology to reach their full potential.

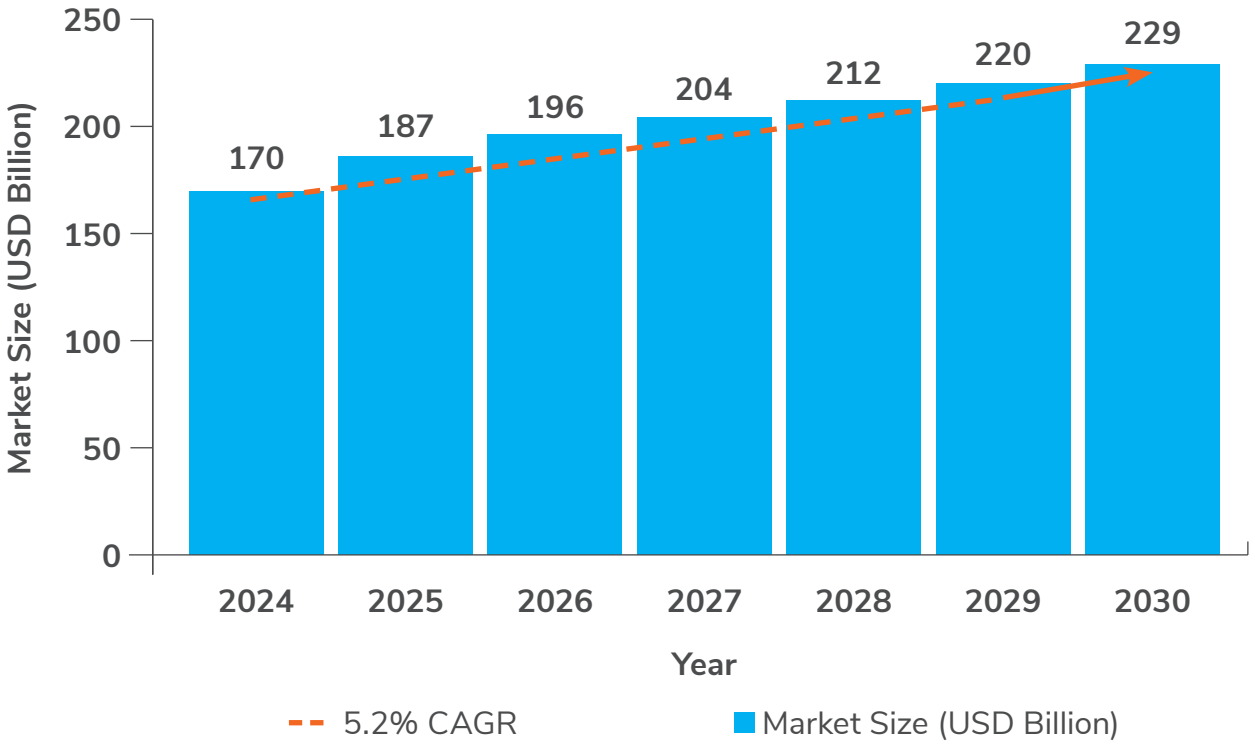
Frost & Sullivan estimates that the total addressable market (TAM) for US high-performance workplace AV&C solutions will reach approximately $187 billion in 2025. When extrapolated to a global context, this figure increases markedly to an estimated $458.4 billion. Frost & Sullivan estimates that roughly $242.6 billion of the market is concentrated in the Americas, $111.5 billion in EMEA, and $104.3 billion in APAC. While this projection does not imply immediate annual revenue realization, it represents the theoretical upper bound of market potential, assuming universal and simultaneous adoption of high-performance workplace technologies.

Global High-performance Workplace AV&C Solutions, 2025 TAM



This valuation excludes several critical technology domains—such as advanced lighting systems, integrated building management platforms, sensors, and digital wayfinding—which are integral to the high-performance workplace paradigm. The inclusion of these complementary technologies would significantly expand the overall market valuation.

US High-performance Workplace AV&C Solutions, TAM



By 2030, Frost & Sullivan projects that the TAM will have grown to $229 billion in the US and $582 billion globally, driven by the construction of additional Class A office space, new functionalities, and inflation increasing the value of average AV&C technology deployments.

Frost & Sullivan's TAM forecast is based on detailed research into the US commercial real estate market, for which solid statistics exist. The calculation factors in projected US construction of new office buildings and an AI-assisted projection of office space downgraded to Class B annually. Extrapolating a US-based TAM to the global market is complex, requiring consideration of GDP growth on a country-by-country basis. The extrapolation adjusts US employee numbers and square footage per employee to different regions, accounting for pricing and revenue variations in high, medium, and low-income countries. Additionally, the percentage of non-retail services serves as a proxy for office employee differences by country relative to the population.

Embracing the Full Stack AV Platform

With the introduction of its comprehensive full-stack AV platform in 2024, Q-SYS demonstrated a leading role in the advancement of integrated audio, video, and control technologies. The platform is designed to consolidate devices and data within a cloud-centric architecture, underpinned by a unified operating system, thereby facilitating real-time responsiveness and enabling data-informed decision-making.

The Q-SYS full stack AV Platform is foundational to the high-performance workplace because it enables organizations to harness real-time data to shape the workplace experience dynamically, meeting the expectations of employees, students, administrators, and business owners. A unified platform that connects the myriad systems and technologies within the built environment helps business decision-makers understand their physical space requirements and usage better. Real-time data can trigger automated actions based on environmental factors like CO_2 levels, temperature, and lighting. By turning real-time user behavior into actionable data, and by using AI to adapt and enhance the workplace experience, the platform strengthens work quality and supports collaboration, productivity, and differentiation.

Full Stack AV Platform Components: Multimodal I/O, Intelligent Platform OS, Cognitive Cloud

The Multimodal I/O connects to the physical world, acting as the eyes and ears for raw data inputs from the vast portfolio of native Q-SYS devices as well as third-party devices available from the extensive Q-SYS ecosystem. After the raw data is processed through the stack, the Multimodal I/O handles the outputs that deliver the desired experience back into the physical world.

The Intelligent Platform OS is a fully integrated AV&C engine that distributes processing based on functional and proximity needs. It moves data bidirectionally throughout the stack and orchestrating the operation of the platform. The Intelligence Platform OS becomes a single operating system for the organization to make integration easier and remove points of failure.

The Cognitive Cloud is an advanced cloud infrastructure that offers future capabilities for harnessing AI cognitive services and machine learning. As the platform develops, it will generate actionable insights from the Q-SYS deployment and its connected ecosystems across time and spaces, offering enhanced decision-making and operational efficiency.

IT-driven Platforms Prevailing

Major IT and OT participants in the commercial real-estate space want to position as a central junction for data. Frost & Sullivan research suggests that IT-driven platforms will likely prevail in accelerating delivery of standardized solutions that integrate devices and systems. IT innovation cycles are faster than those of building management systems and are far more attuned to open standards. It is precisely the open standards that make the full stack AV platform future flexible. Its open architecture will allow it to exchange data with other platforms and ecosystems, like future integrations with building management systems, to generate insights and trigger actions based on a much wider array of data sources.

Frost & Sullivan research also confirms that a full stack AV platform approach resonates strongly with enterprise decision makers. Their priorities are unmistakable: they emphasize platform integration and data democratization as key tech-stack initiatives to improve flexibility, customization, and outcomes.

For landlords, the platform approach is the most effective way to mitigate the need for shorter technology refresh cycles, and it reduces the need to replace equipment almost regardless of the systems and devices a new tenant wishes to use. A very attractive, high-performance workplace also makes it far easier to maintain tenants and higher lease prices over time. The 2025 acquisition of Industrious National Management Company by CBRE highlights tenant interest in flexible, high-quality real estate options and the desire to accommodate the trend that commercial real-estate leaders have.

The specific benefits of a full stack AV platform largely fall into three categories: cost savings, productivity, and sustainability.

Cost Savings and Avoidance:

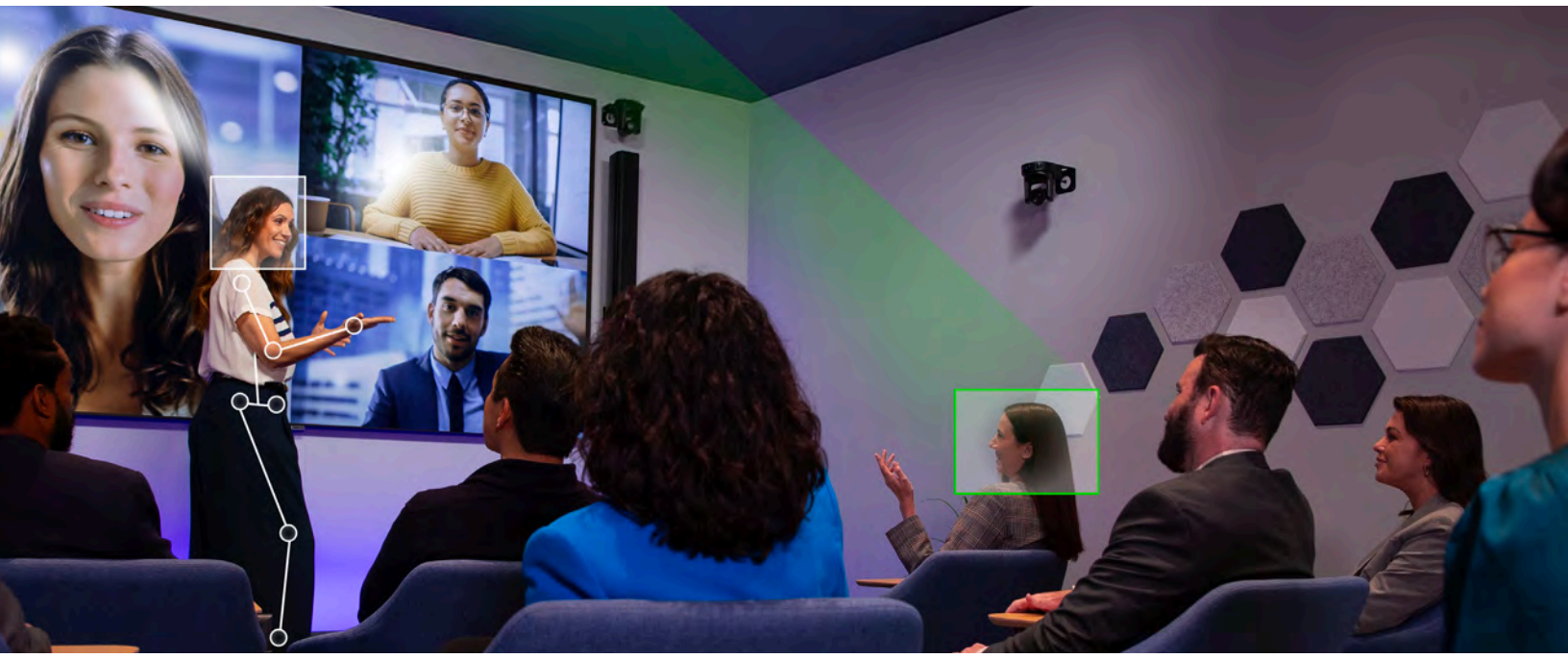
- Increased reliability, fewer points of failure and simplification of system management reduce the support burden and lead to lower support labor costs.
- The “evolutionary update” versus rip-and-replace approach protects the initial investment while allowing for future incremental investments. This is particularly significant in multi-tenant buildings.
- A happy, more engaged and better supported workforce leads to reduced churn and lower recruitment and training costs and more productive employees.
- Eliminated data silos drive enhanced insights into space needs and configurations leading to lower real-estate costs over time.

Productivity

- A software-defined platform can be enhanced frequently to deliver customizations, new feature sets and increased value over time.
- By integrating data from multiple sources, such as scheduling data, access bookings, lighting, energy consumption, temperature, ventilation, AV system health status, and occupancy sensors, organizations can manage productivity and remove obstacles to performance.
- A full stack AV platform helps quantify workplace performance metrics. Critical insights inform data-driven interventions that enhance performance.
- Analytics help organizations understand how changes to workplace policy influence outcomes, enabling faster feedback cycles and better-informed decisions.
- Continuous feedback helps clients optimize workplace strategies.

Sustainability

- Less electronic waste as new functionality can be deployed via software upgrades using existing hardware.
- Promoting a culture of sustainability by using data on emissions, waste, water, and energy to help employees understand how their work affects the environment.
- Setting sustainability goals, targets and objectives, and continually measure, manage, communicate, and report on their performance.



The Last Word

Five years ago, smart buildings were still an emerging concept, and the market needed education on their benefits. Today, people widely recognize the advantages of smart buildings, primarily viewing them through the lens of sustainability. However, decision-makers need to connect a much broader spectrum of benefits, particularly the substantial and tangible improvements that real-time insights through a centralized software platform can bring.

Organizations need a full stack AV platform to measure workplace performance and extract key insights. This enables them to take action on improvement opportunities and remain flexible to changes as they become cleverer about the needs of employees and tenants.

Real-time insights significantly enhance safety and health by constantly monitoring and adjusting environmental conditions. Space utilization becomes more efficient, as real-time data allows for better resource management and workflow. Cost savings extend beyond energy efficiency, as streamlined management and an evolutionary update approach reduce labor support costs and protect investments in existing hardware. The interplay between workplace experience and productivity is significantly enhanced, which leads to lower recruitment, training, and real-estate costs. Finally, a full stack AV platform provides robust cyber protection by integrating secure device protocols and encryption.

In closing, investing in a full stack AV platform significantly boosts the potential of a high-performance workplace, creating a future-flexible asset in a more effective and resilient operational environment that eliminates performance barriers and aligns with corporate goals and economic conditions.

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Frost & Sullivan's Growth Pipeline Engine, transformational strategies and best-practice models drive the generation, evaluation, and implementation of powerful growth opportunities.

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