



How consultants can lead the trend toward smarter, safer and more resilient buildings

The future foresees opportunities for consultants to introduce ideas that combine cost-effective technology solutions with updated, more sustainable building practices.

The building construction sector was already undergoing rapid transformation when the global pandemic blindsided the industry. A shift was underway, with a heightened focus on energy efficiency, carbon neutrality, data security, access control, and the application of the Internet of Things (IoT). The global health crisis disrupted operations and reduced occupancy, requiring industry stakeholders to redefine priorities and alter financial strategies. Immediate health concerns led to the new normal of social distancing, surface sanitation, airflow integrity, body-temperature scanning and occupant density restrictions, as well as management of a variety of data to enable contact tracing.

The unexpected disruptions and emptied facilities offered a rare fresh start for many buildings. Substantial upgrades could be implemented, which may ultimately be seen

as crucial to a building's survival. In addition to consulting on pandemic-related issues of sanitization, sterilization, and careful management of occupant density, the implementation of "smarter building" technologies emerged as a high priority.

With the right partner, consultants can offer state-of-the-art solutions to industry stakeholders

Managed change is essential, and consultants can offer a broad range of state-of-the-art, best-practice modifications to building owners and other industry stakeholders. These areas of consulting include the strategic implementation of digital twins—virtual clones of buildings to monitor systems and enable predictive maintenance practices—as well as the implementation of touchless controls, sensors and automation, and uninterruptible power supplies. These and the optimization of ventilation, access, energy use, working capacity use, and the establishment of a safe and secure way for people to interact face-to-face will all be part of the new normal from here on.



Local solutions with global reach

Worldwide, one market can learn from the successful practices of another. In Japan, home to Mitsubishi Electric Building Solutions, advanced technology coexists with an entrenched culture of subcontracting that includes many layers of personnel. Methods in Japan have led to efficiencies through the rebalancing of human effort and support technology, which have implications for best practices in the industry worldwide.

According to Michael Owen⁽¹⁾, CEO of Tokyo-based Transpacific Enterprises and executive director of Urban Land Institute Japan, consultants are now uniquely poised to offer crucial business management leadership to help automate and streamline building services. “In Japan, contractors use a lot of layers of people, integrating automation into the building itself,” Owen said. “Systems are so much more advanced than elsewhere, and this will help contractors reduce the hassle of building management. That can then be applied around the world.”

Methods in Japan have led to efficiencies through the rebalancing of human effort and support technology, which have implications for best practices in the industry worldwide

This may reveal a silver lining in the prompting of modifications that could improve efficiency and profitability on a local level, while achieving economies of scale that can be replicated anywhere. Offices in Japan traditionally place more people closer together than offices in the West, with workers seated in open, hierarchical arrays of desks. Under the current conditions, however, the open layout can be a liability. People adapted to the need to work from home or from a satellite office, creating an unprecedented opportunity emerged to reorganize workspaces to achieve effective social distancing, with more space for each employee, and physical barriers, in ways that would have likely met with culturally rooted resistance in the past.



Evaluating ways to control airborne threats

Ensuring the health and wellness of tenants, building workers and guests has emerged as foremost among policy concerns. Biometric scanning, access control and proper distancing between people, along with the prevention of airborne pathogens, are now all daily concerns that affect healthy working environments. Consultants can help to plan and implement wellness goals as part of the overall building services strategy, and take advantage of new opportunities.

New HVAC solutions improve energy efficiency, incorporate alternative energy technologies, and support carbon-neutral goals

Because of newly enacted government policies and incentives and a general acceptance of wellness initiatives focused on occupant safety, health-centric building modifications are easier to approve and

finance, and offer opportunities to implement other changes in areas that may require the specialized expertise of consultants.

As building systems continue to be reevaluated, consultants can also support architects, builders and owners in making changes that improve energy efficiency and incorporate alternative energy technologies and carbon-neutral goals. Along with determining the right equipment modifications, stakeholders need advice on meeting certification and eligibility requirements for regulatory agencies, tax incentives, and potential partnering opportunities unique to the building's location.

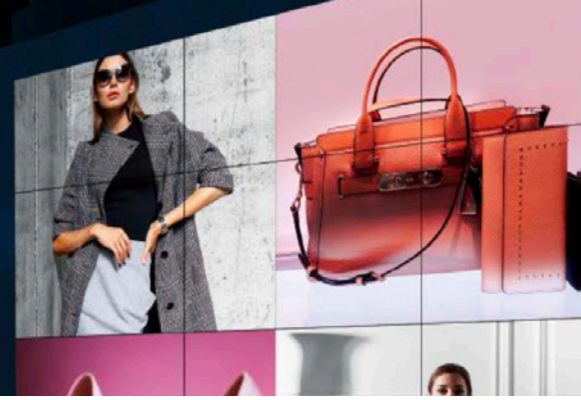


The simplest way to understand the needs of tenants is to ask them. Greater transparency and control, with open lines of communication, can bring benefits to building services management, as well as the occupants and building visitors. It can help allay anxieties about security, room ventilation concerns and other issues, and drive productive change that can bring new value to buildings. A side benefit of greater tenant feedback is the power of a more robust data set, which can be used to evaluate and streamline processes throughout a building.

Better air quality with improved energy efficiency

In the case of HVAC, new Mitsubishi Electric Building Solution platforms⁽²⁾ allow integration with apps that give tenants, workers and visitors a reassuring measure of control, while gathering useful data. Google Assistant, for example, provides web-based controls that appeal to residents of multi-family residential structures. But the potential applications of synergistic tenant and worker feedback are limitless.

"The demand is going to be on how you heighten the worker's experience through data, electrical solutions and sensors," said Michael Owen. Whether this interaction is app-based, menu-based or passive, it can bring new life-improving value to buildings. An open and respectful exchange of facts and best practices can help everyone to cope with the new norms and move forward.



Ventilation and airflow are now mission-critical factors, due to the need to rapidly disperse suspended airborne particles. Airflow management has become central to any effort to address safety and wellness in occupied structures. Fresh air, high-tech filtering and UV light treatment are just some of the tools available for addressing threats within an HVAC system. With the proper expertise, holistic air-quality solutions may also end up improving return on investment and creating a healthier workplace. As a part of an entire-building design, high-performance HVAC systems can theoretically save up to 70 percent of a building's energy bill⁽³⁾. Consultants can work with Mitsubishi Electric Building Solutions to optimize this enormous potential to save on operations costs through the leading edge in technology solutions, as well as learn about best practices that have emerged worldwide.

New technologies and systems save on operations costs, and employ best practices that have emerged worldwide

Interconnecting building systems site-wide

In 2020, Mitsubishi Electric introduced its ClariSense integrated IoT technology designed for the accelerated development of IoT systems⁽⁴⁾. Synthesizing artificial intelligence (AI) and security technologies, this unified design guideline and solution library can be centrally maintained and expanded.

Consultants approaching building owners with added-value products and services can count on the support of Mitsubishi Electric's century-long experience as a manufacturer, and on the robust potential of solutions built on the ClariSense platform. It allows facility management IoT systems to be linked flexibly to everything from in-building equipment

to smartphones. Industry-standard APIs and communication protocols make it easy to link to internal and external systems, resulting in integrated and collaborative solutions.

No one expected the likelihood of a sudden disruption of business practices when IoT development began. But the scale of the disruption means that a broad range of obstacles can be overcome in new ways, using mobile and other devices, in ways that make the IoT even more useful.

Moreover, Mitsubishi Electric can, with its ClariSense technology, become a valued partner for consultants ready to reshape the building services industry with IoT innovations

that pave the way for a brighter future, where clients are better prepared for a natural disaster or a major security challenge⁽⁵⁾.

Safer elevators and multidimensional support

Elevators are confined spaces that traditionally require physical contact with buttons. Because they primarily move people from one place to another, this essential conveyance within buildings, along with escalators, have come under intense scrutiny due to the need to avoid contact with physical controls and ensure that escalator handrails are kept clean.

As an enclosed space, an elevator poses challenges both in terms of air quality and its ability to comply with social-distancing requirements. Mitsubishi Electric elevators are known for fast and predictable service, which helps to control traffic, despite the need to move smaller groups of people at a time. Air quality, airflow and air pressure are other



variables that owners and their consultants can revamp to help minimize the risk of airborne droplets.

Building service experts have long relied on Mitsubishi Electric Building Solutions for support in the form of equipment, controls, maintenance and customized solutions across a wide variety of equipment and systems. Consultants will find that this support is being reinforced as partnerships must remain focused on creating safer, more efficient and more profitable work environments.

Consultants can be more innovative by partnering with Mitsubishi Electric, which works closely with contractors, developers and building owners to solve business problems with the highest

standards of quality, service and expertise. Growing complexity has resulted in a market for specialized expertise, and consultants have to fill these roles with exceptional agility and ingenuity.

Recent and new challenges that may emerge require consultants to reach deeper into their conceptual toolboxes, and Mitsubishi Electric Building Solutions can support them through access, expertise and genuine engagement on an ongoing basis.

Mitsubishi Electric Building Solutions can support consultants with access, expertise, and ongoing engagement

**Some of the technologies mentioned above are not yet available in Vietnam. Please contact us for more information.*

References

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