How the Internet of Things is Revolutionizing Corporate Real Estate

BY **TERRENCE DEFRANCO** | DECEMBER 2019

Our country's corporate real estate (CRE) sector has already been affected by the Internet of Things (IoT) but we are still in the infancy of the changes brewing, thanks to this ever-advancing technology. IoT – the ecosystem featuring cloud-enabled smart devices that use embedded processors, sensors and communication hardware to collect, send and act on data these devices acquire from their environments – is optimizing our day-to-day modern workplace experience.

If you're considering investing in smart technology for your building(s), you're in good company. Recent research shows that the global smart-building market is expected to grow from an estimated $7.42 billion[1] in 2017 to nearly $32 billion by 2022. And a survey of 20 countries[2] found that 57 percent of U.S. organizations and 59 percent of global organizations planned to increase their investments in smart-building measures related to energy efficiency over the past year.

How does building optimization translate to real-world results? Benefits of smart-building IoT technology includes the following.

1.   Cost-savings
Keeping building operations costs in check is a challenge for every owner, occupier and/or facilities manager. While spending on new technology might seem counterintuitive to saving money, cost savings will be actualized over the long term.

Power-hungry machinery, inefficient lights and equipment, and proper time of use can all be addressed – if you're aware of your real-time energy usage. A building enabled with technology gives you granular data regarding every pump, motor, compressor, boiler, light, etc., so you can see where your building's energy usage is concentrated. With greater visibility into operations and equipment, you can pinpoint inefficient pieces of equipment or wasteful usage patterns and make deliberate improvements to reduce your energy consumption – and costs – overall.

Wouldn't it be time-efficient to fix things **before** they break? The data you gather from your smart-building technology can

help you predict when something's going to fail. Predictive maintenance allows you to avoid an expensive emergency technician visit and the costs associated with downtime.

Utility companies charge more for power at certain times of the day than others – usually the times when everyone else is also demanding it. Knowing the energy use of all your equipment at all times throughout the day can help you plan ahead to avoid those high-demand times (and charges). Smart-building technology can help with that, giving you the ability to shift the power demand in your favor, and reducing your energy bill dramatically.

2.   Happier and more-productive tenants
Smart-building benefits aren't limited to cost savings; they also extend to people. Optimizing the human experience[3] is important for attracting and retaining talent and can boost productivity and satisfaction among employees.

Studies, for example, have shown that as air quality goes down, so does productivity[4]. Smart buildings allow you to track indoor air quality – CO_2, dust particles, volatile organic compounds, humidity level, and more – and make improvements toward healthier working and living. (And if you think a bit of lost productivity is worth the cost, another study showed that from 2000 to 2008, improvements in air quality nationwide are estimated to have saved manufacturers $20 billion[5] annually from productivity loss!)

A 2012 study[6] found that only about 40 percent of U.S. workers were satisfied with their office temperatures; design standards call for a rate closer to 80 percent. And, 53 percent[7] of employees say they're less productive when the office is *cold*. The trend today is more modern, livable workspaces; smart buildings make it possible to enhance the human experience and cut costs at the same time.

3.   Enhanced sustainability
Optimizing energy and resource use is a concern faced by many corporate real estate leaders tasked with meeting certain objectives related to sustainability. Four in five U.S. firms[8] are currently putting sustainability strategies in place for a variety of reasons, ranging from revenue growth to cutting costs to keeping pace with competitors. Technology makes it possible for buildings to operate at optimum energy levels and reduce their carbon footprint, making them both smart *and* sustainable.

4.   Increased competitive edge for building
Thanks to smart-building benefits, corporate real estate value is now about more than just location. The presence of smart technology is also becoming a market differentiator. Prospective buyers are not just interested in the bottom-line benefits connected to energy use and maintenance; they're also interested in the ways data allows them to connect with their occupants[9] and strengthen occupant engagement. Technology also makes potential problems and issues easier to identify, diagnose, and manage – another plus. Deloitte even suggests that a building lacking "smart" features may trade at a discount.

Corporate real estate professionals need to react quickly to issues, which is why it's also important to have connected devices like water and electrical sensors that can automatically send an alert when there's a problem. Continually improving intelligent-building technologies such as these dramatically enhance the operations of equipment and provide energy efficiency.

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[3] https://www.us.jll.com/en/views/the-benefits-of-working-in-smart-buildings
[4] http://science.sciencemag.org/content/359/6371/39
[5] https://medium.com/@hellowynd/indoor-air-quality-can-impact-your-productivity-f3431a775507
[6] https://escholarship.org/uc/item/1wc7t219
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[8] https://www.ingwb.com/media/2266556/ing-sustainability-study-2018.pdf
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