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Business Value Highlights

18%
energy-related cost savings

11%
fewer occupant complaints

83%
fewer operational problems

43%
faster to resolve operational problems

8%
higher employee satisfaction

The Business Value of Schneider Electric's EcoStruxure Solutions for Commercial Property

IDC OPINION

The commercial real estate market has been in the midst of a transformation for the past several years as the focus has been on keeping costs down, making spaces more appealing to tenants, and offering energy-efficient infrastructure to meet the sustainability goals that many organizations are measuring themselves against. Most recently, the COVID-19 pandemic has caused commercial real estate companies to rethink providing services and functionality that prioritize health, safety, and compliance to tenants and those tenants' employees and customers.

IDC spoke with companies active as property investors, developers, management companies, and tenants in commercial property markets around the world about their use of Schneider Electric's (ES') EcoStruxure for Commercial Real Estate solutions. These companies reported that EcoStruxure helps them build, maintain, and operate high-value, efficient, and sustainable commercial properties. Specifically, they attributed the following benefits to their use of EcoStruxure:

- Increasing the value and attractiveness of properties
- Making properties more cost effective, including substantial energy cost savings
- Improving the tenant experience
- Supporting "green" and sustainable development

Overall, these interviewed organizations agreed that EcoStruxure has played an important role in making the commercial properties with which they are involved more attractive and valuable.

SITUATION OVERVIEW

Over the past many years, organizations have been dealing with rising commercial real estate costs. Across industries, organizations had three clear goals for their facilities and office environments — keeping costs down, making spaces appealing for employees and customers, and meeting or exceeding sustainability objectives. Increasingly, commercial real estate companies are deploying connected or smart technologies to help achieve these goals not only for themselves but also for their tenants. These technologies include lighting controls, HVAC controls, access controls, surveillance systems, energy management, and shade/sunblind controls, among others. Not only do these types of connected solutions provide efficiencies, but they also lend themselves to creating new data sources that commercial real estate companies and tenants can use to drive business value — whether it's cost savings, increased security, worker safety, or better energy management.

Other trends that are driving change in the real estate industry include:

- **Urbanization:** With more than two-thirds of the world's population expected to live in urban areas by 2050, buildings will have to be optimized for increased person traffic and the evolving needs of tenants and their customers.
- **Cybersecurity:** With more “things” being connected — many of which will reside in connected buildings — there is a broader threat for security breaches in vulnerable endpoints.
- **Digitization:** IDC predicts that there will be 14x more connected devices than people. These people and “things” will increasingly interact seamlessly.
- **Sustainability:** As mentioned previously, organizations are looking for ways to reduce their carbon footprint and finding efficient ways to reduce emissions and waste in the construction and operation of buildings, which will become a strategic objective.

The global COVID-19 pandemic of 2020 has added a new and very important factor to the equation. While cost and energy efficiency were at the top of the list, now tenants must prioritize health, safety, and compliance as top objectives. Organizations are moving quickly to prepare for a safe return to work. Most organizations are focused on meeting immediate needs around contact tracing, social distancing, space reconfiguration, space reservations, capacity planning, and scheduling. From a real estate perspective, HVAC is a prime area of focus with the need for quality air ventilation as well as the need for integrated workplace management systems/applications to optimize space allowing for proper social distancing. With connected systems, facilities will be more flexible to adjust to physical workplace occupancy fluctuations, which are expected to become the norm in the “next” normal.

SCHNEIDER ELECTRIC'S ECOSTRUXURE SOLUTIONS FOR COMMERCIAL REAL ESTATE

Schneider Electric offers a suite of solutions to support commercial real estate organizations to help them connect and manage their commercial building projects. SE's goal is to help companies make the most of their energy and resources across their real estate assets.

EcoStruxure Building has three key elements:

- **Connected Products:** The EcoStruxure platform helps buildings manage all the connected devices within a building and allows them to easily adapt to tenant requests and securely connect to an increasing number of devices as they are added to the network. The Connected Products portfolio includes smart systems and devices with embedded communication that help organizations efficiently maintain uptime, safety, and availability of commercial real estate buildings. Some of the solutions and products are:
 - Connected Room Solution
 - SmartX IP Controllers
 - Sensors
 - Valves and Valve Actuators
 - Network Infrastructure and Connectivity
- **Edge Control: SE offers edge** control solutions that can connect to existing and future systems within the building. Some of the solutions are:
 - EcoStruxure Building Operation
 - EcoStruxure Security Expert
 - EcoStruxure Fire Expert
 - EcoStruxure Microgrid Operation
 - EcoStruxure Power Monitoring Expert
- **Applications, Analytics, and Services:** Schneider Electric provides tools that allow a building management team to offer value-added services and analytics to its customers but also have a view across the facility to ensure optimal operation and predictive maintenance of potential issues. Some of the solutions are:

- EcoStruxure Workplace Advisor
- EcoStruxure Engage Enterprise Mobile App
- EcoStruxure Building Advisor
- EcoStruxure Resource Advisor
- EcoStruxure Power Advisor
- EcoStruxure Microgrid Advisor

With this portfolio of solutions for commercial real estate owners and operators, Schneider Electric offers tools and technologies to help the transformation of commercial building management as they incorporate smart building technologies and look for opportunities to make data-driven decisions that will drive cost savings, tenant satisfaction, occupant safety, and energy efficiencies.

BUSINESS VALUE OF SCHNEIDER ELECTRIC'S ECOSTRUXURE FOR COMMERCIAL REAL ESTATE

Firmographics

IDC completed five in-depth interviews with organizations active in commercial property markets around the world that are using EcoStruxure for Commercial Real Estate solutions.

Interviews included:

- A European property developer active in several markets that uses EcoStruxure Building Advisor as a "controller" for its buildings through construction and into the early stages of occupancy
- A Canadian office of a global property management company that uses EcoStruxure Power Monitoring Expert to retrofit buildings with sensors to self-manage lights, HVAC systems, and building operations monitoring
- An APAC office of a global property management company that spoke to its use of EcoStruxure Building Advisor, Workplace Advisor, and Power Advisor from its perspective as a tenant in one of its buildings
- A U.S. developer that has deployed Schneider Electric for several high-profile office buildings to connect disparate systems across the building on a single fiber network

using SmartX IP Controllers/Sensors, Valves and Valve Actuators, EcoStruxure Building Operation, SmartX Automation Servers, and EcoStruxure Building Advisor

- An APAC organization with a facilities management practice using Schneider Electric's EcoStruxure for monitoring to control building systems through a single dashboard, including IP and room controllers, fire detection panels, and lighting solutions

Drivers of Use of Schneider Electric's EcoStruxure

Interviewed organizations described various reasons for using EcoStruxure for Commercial Real Estate solutions. Common themes that emerged from interviews were organizations' desire to leverage sensor technology to create connected buildings and capture benefits from increased visibility and actionable data, including operational efficiencies, cost savings, and meeting sustainable building criteria. Several interviewed organizations cited the high quality of EcoStruxure software as a driver of their choice, as well as their confidence in Schneider Electric as having a long-term interest in the commercial property markets and offering an integrated and robust platform. They spoke to their specific reasons for choosing EcoStruxure for Commercial Real Estate solutions:

- **Foundation for connected building:** *"We knew from very early on that we wanted to connect all of the disparate engineered systems in the building with a single fiber network, but we wanted to do it differently ... At the time, there weren't really many people that were thinking that way back then, but Schneider Electric was certainly at the forefront."*
- **Quality of software/integration possibilities:** *"Schneider Electric's software is exceptional — which is why we use it. Microsoft integration is very important to us, so our building software has to integrate into the entire Microsoft environment, and Schneider does that, working with our setup including wireless, which we need for smart building purposes."*
- **Strength of integration and features:** *"Schneider Electric EcoStruxure comes as an integrated system. What we do for the other solutions is that we integrate technology into our own platform ... Schneider comes as a product that is integrated and ready to use and has a lot of features. It's a good product."*

Property Developers and Investors

Commercial property developers and investors face constant pressure to bring properties to the market that will meet current and future demand and expectations for quality, amenities, and efficiencies. Meeting this demand is an important part of realizing the expected payoff on their investments in commercial properties. This can be challenging to achieve; investor and

tenant preferences evolve and shift, and market conditions can change quickly, as evidenced by the impact of the COVID-19 pandemic.

Interviewed Schneider Electric customers active as property developers and investors spoke to how they are leveraging EcoStruxure solutions to improve their competitive positioning:

- **Data-driven development decisions:** *"Schneider Electric Building Advisor delivers the analytics for us. We learn if things are not going well and can adjust to optimize new projects. We are data-driven developers, so we learn from the data we obtain during development ... Building Advisor can also help after the delivery of a building, especially in the first few years, to ensure that the building is delivered perfectly and optimized in terms of its use."*
- **Ensures positioning as leader in sustainable design:** *"Schneider Electric EcoStruxure helps us position ourselves as a firm that can design and build smart buildings, in partnership with cities that are committed to more sustainable urban designs ... This is the most important benefit; it is central to our business and future."*

Commercial Property Managers

Commercial property managers must weigh their operational costs and their tenants' demands for efficient and attractive properties. Striking this balance often requires being able to create deeper connectivity across their buildings and leveraging operational data in real time. Automation and integrated management systems can help commercial property managers establish and maintain more efficient and attractive properties for their tenants. One interviewed Schneider Electric customer described how it is using EcoStruxure to achieve this objective: *"We've created a very malleable solution — a building solution for going forward all the time, because we can go in and implement change in the brain of the building, which is able to communicate with every system in the building."*

Commercial Property Tenants

Most commercial property tenants share common objectives that include minimizing operational costs, providing a high-quality and comfortable work environment, and ensuring operational continuity. They understand that, while the first objective can be measured in terms of hard costs, the other two can also exert significant costs on their organizations despite being less tangible. One Schneider Electric tenant customer spoke to how Schneider Electric's EcoStruxure is better understanding use patterns and optimizing use: *"Schneider Electric EcoStruxure helps us really understand the building space ... For example, we can benchmark between two different business units, and when there is a difference in use levels, we can go to the microlevel to analyze why business unit A is consuming more power than business unit B despite*

having lower head count.” The ability to optimize electricity costs was also mentioned: “The energy savings and quality of power use are the two main benefits of Schneider ... That’s important because of energy savings, but also power quality because if we have a power loss — that means downtime for our customers and our employees ... If we didn’t have EcoStruxure, it could be a few days sometimes. In the last year, we have had zero employee-impacting downtimes, as far as I know. Before the sensors, it would be two to three times a year.”

Value of Schneider Electric's EcoStruxure for Commercial Property

IDC's research — which included interviews with organizations with varied positions in the commercial property market, including investors, developers, management companies, and tenants — demonstrates the value of EcoStruxure for Commercial Real Estate solutions in creating and maintaining high-value, operationally efficient, and sustainable commercial properties.

More Valuable Commercial Property

One of the foremost objectives of developing, building, and operating a commercial property is to maximize its market value. While commercial property valuation is complex and depends on many factors, the basic truism is that more attractive properties will be worth more than less attractive properties despite otherwise similar characteristics. While investors, developers, and owners have limited or no influence over some valuation factors, including location and general market conditions, they can exercise much more control over building conditions and capabilities that can have a significant incremental impact on the attractiveness and therefore value of a commercial property.

Creating and maintaining this differentiation can be challenging, but interviewed Schneider Electric customers described how their use of EcoStruxure solutions has positively affected the value of their commercial properties. They linked investor and tenant interest in “smart” and “green” buildings to valuation and rent premiums achieved using EcoStruxure:

- *“We didn’t have any issues renting our building, but I would tell you that we got more rent for it as a smart building with Schneider Electric; we are going to get a premium I’d say of at least 5%.”*
- *“For the societal aspect, having Schneider Electric helps because it’s a green building or a wellness-certified building, so you can probably charge a dollar extra per square foot ... This is probably about 6-7-8% more in rent as a result.”*

- *"In practice, our customers are only interested in the value that a building can create; so they check to see if a building is in line with promises and regulations to say that they are selling a 'smart building.' However, it's a unique selling point, and there is an expectation that it will be a smart building. It doesn't necessarily raise the price, but if the building were of a lower quality, it would reduce the selling price by a few percent."*

Given the variety of factors that affect a property's value, IDC has not quantified the average valuation impact of using EcoStruxure solutions, although these quotes establish the link that interviewed organizations see between EcoStruxure use and higher valuation.

Operational Efficiencies

Study participants also described leveraging EcoStruxure for Commercial Real Estate solutions to achieve operational efficiencies for their buildings. These efficiencies take different forms but come back to having the ability to collect and leverage real-time data about use patterns and then creating policies that are applied across their buildings through the management console. Value from operational efficiencies is reflected in benefits such as optimizing the use of office space and electricity, as well as requiring fewer staff resources for ongoing operational maintenance activities. For example, IDC quantifies electricity-related cost savings for interviewed organizations at an average of 18% with EcoStruxure solutions, which can be worth millions of dollars per year for large buildings or groups of commercial properties. Interviewed Schneider Electric customers provided examples of such operational efficiencies:

- *"Through the ability to add a degree of control and observation with Schneider Electric EcoStruxure, we estimate that we will save a million or a million and a half dollars a year in operating expenses, mostly in electricity savings."*
- *"Depending on the property, we save probably 15–20% on electricity with Schneider Electric ... although it depends on where it's been installed and on the behavior of occupants and tenants."*
- *"Schneider Electric EcoStruxure provides microlevel data analytics, which allows us to make decisions about space use. For example, why do we have a six-person meeting room when 80% of the time only two people are using that room? As a result, we don't have to find more space. We're avoiding 20–30% of the space that would otherwise be needed."*
- *"If we didn't have Schneider Electric sensors in our electrical and air conditioning, we would need someone to manually go there, take measurements, and record them, which is manual work ... for a large building, we're avoiding probably about two people for activities such as electrical, heating/cooling, space and lighting management, data analytics, and trend tracking."*

Improved Tenant Experience

Study participants also described how EcoStruxure solutions have helped them provide a better experience for tenants. These improvements are manifested both in terms of observable metrics, including frequency of complaints, number of operational problems, and time to resolve operational issues, and in less tangible terms such as employee comfort and satisfaction with office conditions. Both are important for tenants, as they seek to maximize employee productivity levels in support of business operations.

Study participants reported demonstrable benefits from use of EcoStruxure solutions in terms of minimizing problems affecting building operations. They linked these improvements back to having sensor-based real-time information and the ability to react quickly and effectively based on this information. They reported improvements in key metrics such as frequency of tenant complaints (11% lower), number of operational problems (83% fewer), and time required to resolve operational problems (43% less). One interviewed organization stated: *"Our ability to respond to problems in buildings has changed with Schneider Electric EcoStruxure because we get lots of granularity about events. We can do diagnostic work much more quickly by pinpointing the issue by simply running a report. I would say that it's significantly faster — more than 50% faster."*

Meanwhile, study participants also tied use of Schneider Electric's EcoStruxure to higher employee comfort and satisfaction. These improvements are associated with the importance of the environment in which employees work in terms of office temperature and air quality. On average, study participants reported 8% higher employee satisfaction with office conditions. They provided several detailed examples of the impact: *"Schneider Electric has helped us create a high-performance building, which results in high-performance people. People who are in an environment that they can control are generally happier ... If they can control temperature, light, and noise, they tend to perform better ... I would say they are at least 5–10% more productive."*

Another explained: *"Because the interior design plays a major role — the environment and the design — in the worker experience, it can be important ... With Schneider Electric EcoStruxure, things like cooling and air quality are automatically controlled, which helps to keep them happy. They are happier in an environment that has EcoStruxure — I'd say about 5–10% happier."*

Schneider Electric's EcoStruxure for Commercial Real Estate solutions can also help interviewed organizations adapt rapidly to changing conditions. For example, one interviewed organization described how it can better ensure the safety and comfort of office environments during the COVID-19 pandemic: *"With COVID-19, we don't want to ventilate meeting rooms based on CO2 levels, so we can easily overrule CO2 control loops and put in 100% air; then when someone leaves the room, we can ventilate for 100% and automatically move back. It's very easy to implement, change, and optimize with Schneider Electric."*

Green Building and Sustainability Benefits

Study participants are working in markets that increasingly expect buildings to meet environmentally driven specifications. While investment and occupancy decisions may not be made entirely based on a building's "green" credentials, it is often a clearly stated decision criterion. Further, as noted previously, several interviewed organizations linked their ability to create and market green buildings to higher property values and rent levels. For many organizations, there is also a societal responsibility component of their desire to create and operate green buildings, as they either must minimize carbon emissions per government regulations or perceive it to be a societal imperative.

Study participants provided specific examples of how Schneider Electric's EcoStruxure solutions help them create and operate more environmentally friendly buildings:

- **Applying rule-based policy means lower electricity consumption:** *"There are benefits to using Schneider Electric EcoStruxure in terms of green building because you can now control your air-conditioning including to run it at a different speed depending on whether there is someone occupying a room or section of space. As a result, electricity use can be lowered."*
- **Support leadership in green buildings:** *"We are perceived as a leader in green buildings in part because of capabilities enabled by Schneider Electric. There's value to that for us. It's about how clients see us managing our building, as well as how efficient we can be and our control of the building."*
- **Minimize carbon footprint through automated control:** *"We are now using Schneider Electric EcoStruxure in the design of our storage and battery solutions. We use their controllers to control the building — if we did not have their controllers, the building would not be sustainable ... We've reduced our carbon footprint by about 10% — we have built a lot of energy-neutral buildings, and Schneider Electric is a factor of that."*

CHALLENGES AND OPPORTUNITIES

Based on the study, there are challenges that commercial real estate owners and operators must still overcome when it comes to investing in connected building technologies. Some areas that need to be addressed are:

- **Integration:** Many building owners have an existing building management system that must be integrated with new connected building technologies. The integration challenge often means additional investment in infrastructure and equipment to support the

transition. However, many new IoT-connected building management systems can minimize integration costs and support the transition to smart buildings.

- **Data management:** With increased visibility into building operations, the data created can be overwhelming for building managers. Commercial building owners must determine what data is required to inform decisions and what data is additive. Yet there are software solutions available that help correlate this data to enable data-driven decisions for commercial real estate professionals.
- **Security concerns:** As more elements of a commercial building become connected, building managers and owners are concerned about the security of these endpoints, as well as the data and applications that connect to the endpoint. It becomes important for commercial real estate owners and operators to look for partners that have cybersecurity advisory services to help assess risk, implement cyber-specific solutions, and help manage business defenses over time in building assets.
- **Tenant adoption:** While commercial building owners are implementing the technology, for the full value to be achieved, tenants need to adopt it. However, some tenants may be reluctant to incorporate the building management technology within their own footprint because of worries about security, loss of corporate intelligence, or building manager oversight. One way to overcome this challenge is the use of mobile applications that can help transform the tenant or employee experience in addition to delivering digital workplace services and improve communications.

To overcome these concerns, commercial building managers need to help build awareness of the business value that connected building solutions can provide including energy efficiency, cost savings, increased security, and worker/customer safety.

CONCLUSION

The transformation taking place in commercial real estate is happening in real time. In addition to macro trends like urbanization, digitization, and sustainability being driving factors, building owners and operators are looking for ways to keep costs down, offer appealing spaces, and install energy-efficient infrastructure. Add to that the COVID-19 pandemic, which means rethinking space design, HVAC requirements, and the longer-term health and safety concerns of tenants. It now becomes even more important today to have the systems that can help manage rapidly changing tenant requirements.

Interviewed organizations — active in commercial property markets around the world as investors, developers, property managers, and tenants — reported that Schneider Electric's EcoStruxure solutions have enabled them to build, maintain, and operate high-value, efficient, and sustainable commercial properties. They linked their use of EcoStruxure to increased quality, cost effectiveness, and attractiveness of properties, which help them maximize property values and rents. Meanwhile, from a tenant perspective, EcoStruxure solutions allow them to provide a comfortable, customizable, and efficient workspace to their employees while also offering flexibility to respond to new challenges such as those posed by COVID-19. Particularly in challenging economic and market conditions, creating this type of differentiation with EcoStruxure solutions can be critical to the success of organizations active in commercial property markets.

APPENDIX

Methodology

IDC's standard Business Value methodology was utilized for this project. This methodology is based on gathering data from commercial property organizations using Schneider Electric's EcoStruxure solutions as the foundation for the model. IDC collected quantitative benefit information during the interviews using a before-and-after assessment of the impact of using Schneider Electric's EcoStruxure solutions.

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