

FUTURE

Schneider Electric partners with the DMA to safeguard its gallery environment for priceless antiquities

Dallas Museum of Art

How EcoStruxure™ for Buildings implementation helped the museum team earn an EBie award.

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Visitors enjoy live jazz music in the museum atrium set against a towering backdrop of glasswork by Dale Chihuly.

King Tut visit inspires energy retrofit for the Dallas Museum of Art

When the internationally acclaimed Tutankhamun and the Golden Age of the Pharaohs exhibition made an encore return to America, the Dallas Museum of Art was ready. The museum was in line to be the first stop on the tour, but before the contract could be signed, the tour organizers needed some guarantees. Specifically, the museum had to confirm it could maintain a temperature and humidity constant within 3% of variance in the galleries where the Egyptian antiquities would be on view.

Fortunately, the city of Dallas had contracted with an energy management partner and could offer King Tut the royal treatment, complete with temperature and humidity data and a history to show that the building could maintain those exacting standards. Before then, all bets were off. “The systems we had in the museum were antiquated, and at the time we had no energy management practices in place. It was a situation that concerned us,” recalls John Claire, Dallas Museum of Art buildings manager.

That changed when the state of Texas mandated cities reduce energy use in public buildings by 5% a year over a six-year period. The city of Dallas quickly identified the energy-intensive museum as one of the first buildings in this energy conservation program and put it on the fast track in preparation for King Tut.

Savings exceed expectations

Along with a new pressurization and environmental control strategy, the museum’s energy management upgrade included new high efficiency chillers, upgraded variable air distribution and water pumping systems, dynamic lighting control, and a new building management system that gave the museum visibility into its mechanical systems, energy usage, and environmental performance — and provided the museum with a reliable, knowledgeable energy partner.

Goal

- Maintain humidity and temperature with a maximum variance of 3%
- Reduce energy usage as per government mandate
- Maintain comfort levels of visitors

Solution

- EcoStruxure™ Resource Advisor*
- EcoStruxure™ Building Operation**
- Room sensors

Results

- 45% reduction in energy usage
- Savings of more than \$5 million over five years

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— Jeff Guy, Chief Financial and Administrative Officer,
Dallas Museum of Art

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How far? Through the partnership, the museum decreased its energy usage 45% over five years — 15% more than the original goal — for a savings of more than \$5 million. The retrofit was so impressive it won an EBie award from the U.S. Green Building Council, which notes buildings account for one-third of the nation’s greenhouse gases.

Environmental control is precise

But all those savings and recognition would have been meaningless if the system couldn’t perform its main job: protecting the delicate and priceless art objects the museum houses. “Part of our mission is to conserve the art for future generations, so anything that can help is very important to us,” Guy says. “The demands and strain on our energy management system are particularly high, and the standards have to be exacting.”

Those standards were put to the test when Tut came to town — along with everyone else. Guy says more than 650,000 people streamed through the museum over a six-month period, more than typically visit in an entire year. “The body heat and CO2 coming off all those visitors were at very high levels,” says Claire.

Support provides peace of mind

The Schneider Electric partnership meant Claire had a team of energy management experts to help devise a plan that not only allowed the museum to maintain its precise standards, but also keep visitors comfortable at the same time.

Claire says the combination of proactive energy monitoring along with the support of Schneider Electric are giving him and the museum peace of mind they never had before. “All the information is right there at my fingertips,” he says. “I don’t have to go hunting or pecking around for anything that’s in the building. It’s like going from an old MG to a new Lexus.”

Guy says the balance achieved between energy savings and art conservation has been one of the most refreshing aspects of the museum’s energy partnership.

The Schneider Electric partnership has freed Claire up to focus more on strategic energy management, rather than putting out fires. “They’re here to come up with solutions to problems we run into,” says Claire. “But the in-house staff has to do the behind the scenes work.”

He’s grateful that Schneider Electric is in the game for the long run. “Ten years of having someone here checking on what was installed is great,” he says. “I assume I’ll start to see issues with the equipment. We’ll run into some problems. But I know they’re there if and when that happens.”

3%

Maximum variance in temperature and humidity

45%

Energy usage reduction

\$5

million saved over five years

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EcoStruxure™

Innovation At Every Level

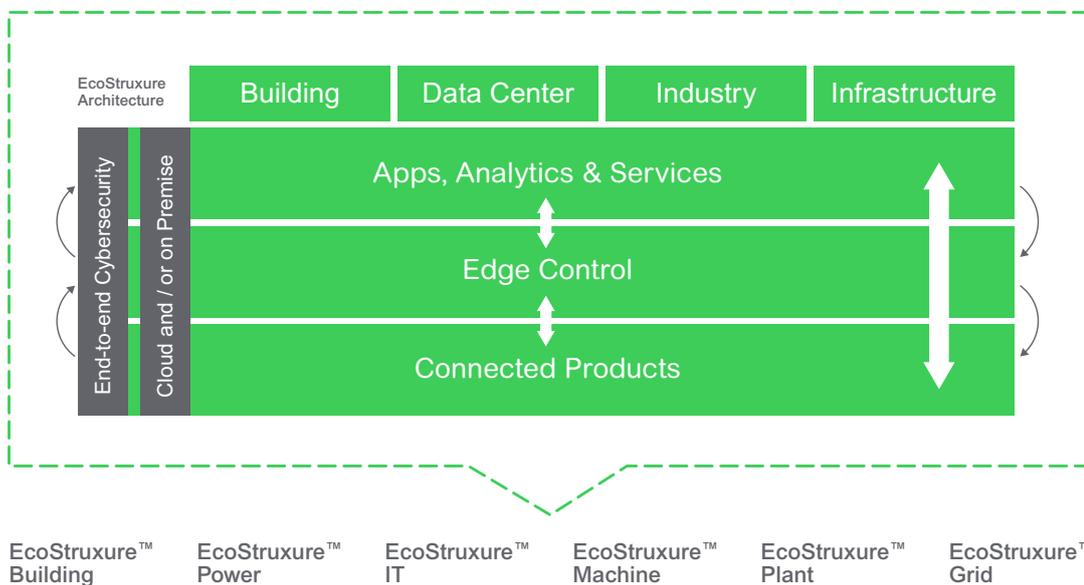
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January 2019

*Formerly known as Resource Advisor

**Formerly known as SmartStruxure BMS

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998-20424601_GMA-US

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