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A renewed emphasis on the workplace experience calls for lighting designs that are dynamic, inviting, and future-proof. Photo © Eric Laignel, LLC

Connected Lighting Control – A Catalyst for Creative Designs

by Kendell Clark

Like many workplace technologies, early smart-lighting solutions were promoted as strategies for boosting energy savings and productivity. And they delivered. In fluorescent-lit office buildings, automated dimming controls and occupant sensors were shown to result in energy savings of up to 70% or more.

As fluorescent sources gave way to more efficient and versatile LEDs, lighting designers began to focus on using LED technologies to create personal, dynamic, and human-centric lighting designs that integrate daylight and electric light throughout a space. High-performance dimming, automated shading, and tunable white solutions

combined for spaces that were beautiful and inviting as well as efficient and future-proof.

Then, a global pandemic put much of the world's office space on pause.

Rather than diminish the importance of workplace technologies, the eventual return to the office heralded a new way of looking at the workplace experience and put even greater emphasis on spaces that make the transition between the home office and corporate office seamless. And, more workplaces appear to be renovating existing office space rather than investing in new real estate. According to the AIA, for the first time, billings for reconstruction

projects at architecture firms exceeded billings for new construction projects. This makes wireless, adaptable, scalable solutions even more important in lighting design.

The ubiquity of lighting and the essential role it plays in creating comfortable and productive workspaces – both at home and in the corporate office – helps cement its role as the ideal building system to collect, evaluate, and share data with other building systems such as HVAC, room scheduling software, security systems, and personal control apps. Smart lighting solutions can add value, longevity, and flexibility to corporate real estate.

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Resimercial and flexible design began to permeate office space prior to the COVID-19 pandemic, but the demand for flexibility in building systems is now greater than ever. Photo © Eric Laignel, courtesy of Lutron
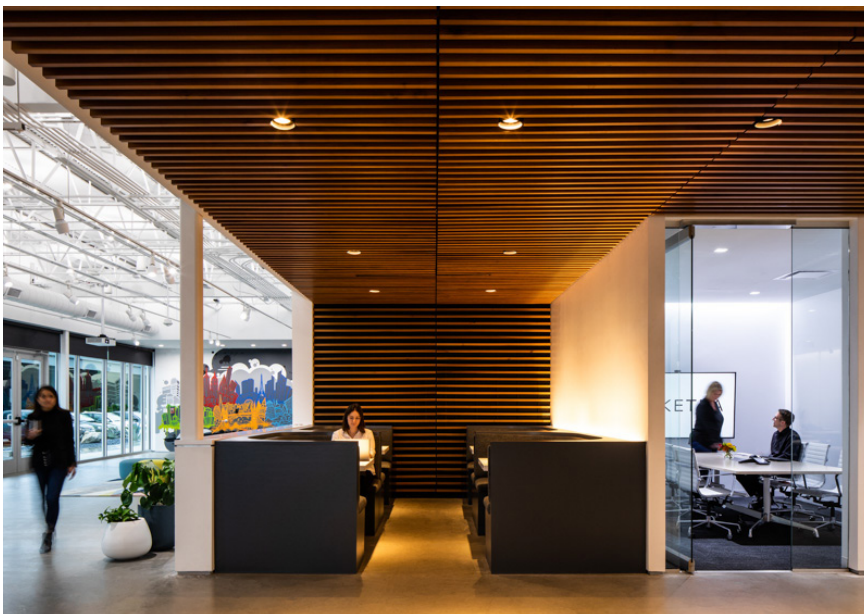
The ubiquity of lighting – and its various form factors – makes it the ideal building system for capturing data and serving as the backbone of a smart building. Photo © Jake Holt, courtesy of Lutron

Data culled from connected lighting control systems represents a huge learning opportunity for evaluating how a space is being used, how it can be reconfigured to accommodate new occupancy patterns, and how lighting scenes, levels, and color temperature impact people in the space. As the commercial real estate industry increasingly embraces property technologies (PropTech) to help clients take advantage of smart building data and IoT solutions, connected lighting control systems will be even more important.

Building owners and managers are looking to lighting system data for actionable insights about how systems and structures can support business

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goals and operations, aid in employee recruitment and retention, and inform better space planning/real estate investment over time. Connected, wireless lighting control solutions can give designers the freedom to create lighting designs that easily and quickly flex over time to ensure lighting solutions that grow, evolve, and flex to meet the current and future needs of any space.

While cloud-connected technology is a paradigm shift in lighting control, IoT-connected systems that deliver increased value over time are already part of our everyday lives. Drivers invest in Tesla technology for its current driving experience today, but they are equally enamored of the wow-factor – future upgrades and the assurance that their original investment is dynamic, evolving, and immune from the immediate obsolescence built into more traditional vehicles.

Similarly, no one expects to have to update their laptops or phones with every software upgrade – we invest in the hardware knowing that functionality-improving updates will be delivered

frequently and easily via over-the-air cloud updates. Office 365 and Apple iOS platforms are key examples of technology that becomes more valuable and more integral to our lives over time. The physical hardware purchase is assumed to be the front end, and we count on it becoming smarter and more capable as software and firmware are enhanced.

This is the promise of connected lighting control, as well – the power to make changes right from our smart phone apps, the potential to easily recreate your favorite home office light levels at the office, the confidence that new capabilities are just a cloud update away. With the right lighting system architectural spaces can become more dynamic, exceed both our aesthetic and experiential expectations, enhance well-being, and still provide the data and insights that drive operational improvements and cement future system value.

Connected control is the catalyst for lighting designs built to take full advantage of innovations such as tunable

white lighting, full-spectrum light, and in-fixture technologies that offer building occupants greater opportunities to personalize their spaces and offer designers unlimited freedom to create just the right light at just the right time for their clients. Connected lighting control systems go beyond smart to deliver dynamic control that supports and emboldens your design visions, and just keep getting better over time. ■

Kendell Clark is the commercial systems product manager for Lutron, responsible for product strategy, full product lifecycle management, and marketing. Kendell began his career with Lutron in 2011 as an electrical design engineer in Lutron's Coopersburg, Pennsylvania office. He led the development and introduction of several Lutron commercial wallbox, systems, sensors, and LED driver products. Kendell also spent time in a system sales role helping customers design and specify Lutron systems. He is passionate about new technologies and delivering new and exciting solutions to customers.

Connected lighting systems offer the benefit of flexible control at the app level – and continuous firmware/software updates allow systems to increase in value over time. Photo courtesy of Lutron

Kendell Clark, commercial systems product manager, Lutron. Photo courtesy of Lutron