San Jose City Hall

CASE STUDY

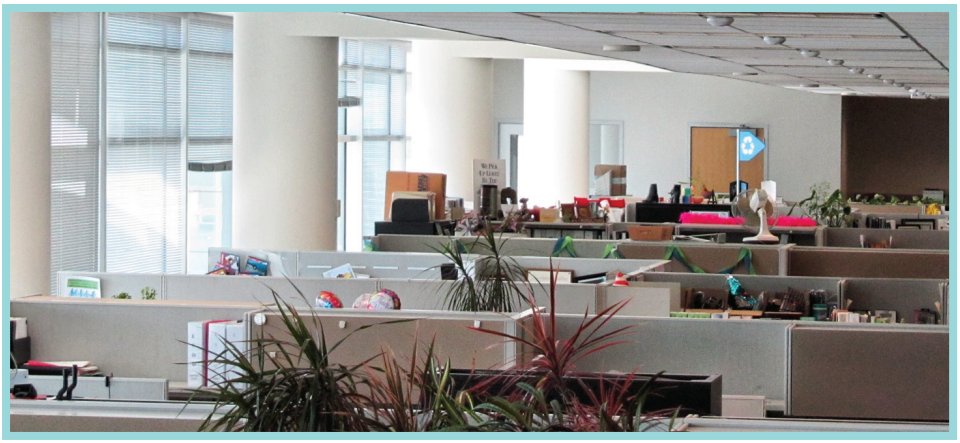
High Performance Building Reaches New Heights with Enlighted Lighting Control

There is an obvious match between the Enlighted sensing and control solution and the challenge of upgrading the vast majority of buildings that have not been designed for energy efficiency. For retrofitting existing buildings, the concept of bolt-on smart sensors and a wireless data back-end makes clear sense. But, what about brand new structures built for high energy performance? Can their comfort be improved and energy spend reduced through intelligent dimming, occupancy control and daylight harvesting? The City of San Jose installed Enlighted across a floor of its recently completed LEED Platinum City Hall building to measure the gains, and they found they reduced the amount spent on lighting for the space by 53% and improved the comfort of employees through personalized light settings.

MUNICIPAL PLATINUM

San Jose City Hall was the country's first city hall to obtain United States Green Building Council (USGBC) Platinum certification for existing buildings in March 2009, the highest possible Leadership in Energy and Environmental Design (LEED) rating. The savings achieved through Enlighted's technology, however, came after LEED certification, demonstrating that there is always more opportunity to tune a building and gain more savings, comfort and operational efficiency.

"We already had an aggressive lighting program in place, starting with a sophisticated daylighting design. Yet, with Enlighted, we found that there was still savings to wring out of this building," said Matt Morley, Deputy Director of Public Works, Fleet and Facilities. "Key for me was being able to address the lighting at the fixture level. With Enlighted, I can easily cater to individual needs, yet maintain command control over lighting energy usage. I enjoy the challenges of creating comfortable and productive work environments for my colleagues while ensuring that the core infrastructure is reliable, functioning optimally, and saving us money—every second of every day."



AT A GLANCE

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

BUILDING TYPE
Office Retrofit

LOCATION
San Jose, California

FIXTURES
118 T8 fluorescent fixtures

PROJECT SCOPE

CONTROL SYSTEM
118 Smart Sensors, 2 Gateways, 1 Enlighted Energy Manager

COMMISSIONING DATE
October, 2012

PROJECT RESULTS

MONTHLY ENERGY SAVINGS
50% to 53%

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Deputy Director of Public Works–Fleet and Facilities
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"I'm sensitive to too much inside lighting. I get headaches," said one city worker. "I was wearing green eyeshade visors at work before we got Enlighted. I had asked our maintenance team to just take the lamps out of my fixtures, and I wanted to bring in my own task lighting. I understand how that might have undermined our building's overall energy savings goals. Now, my overhead lamps are dimmed to my preferences, and others can have the light levels they want, too. I leave my visors and desk lights at home!"

ENERGY PERFORMANCE RESULTS

With one sensor per fixture, the Enlighted system offers the granularity and flexibility to dim, brighten, turn on or turn off lights, according to the space that's being used. The sensors are controlled by software profiles that instruct fixtures to light hallways, private and open offices, as well as common work areas with just the right amount of light, only when it is needed. These profiles are easily changed and updated from a central web-based console.

The City's facilities team dimmed down lighting to 40% maximum light level for the office space covered by Enlighted. With few exceptions, occupants didn't notice or they asked for further dimming. Lighting comfort is a personal preference, but for most people doing screen-based tasks, tuning down overhead lights not only saves energy, it's more comfortable. The system also actively detects worker presence and ambient conditions and makes intelligent decisions about lighting based on these factors in real-time, adding significant occupancy and daylight-harvesting savings to the total. By internal measures, the Enlighted system at San Jose City Hall has realized impressive lighting energy savings results in the range of 50% to 53% over three months.

"As a world center of clean tech innovation, the City of San Jose is an ideal partner for companies bringing next-generation, energy-conserving technology to market," said Tushar Dave, Chairman and CEO, Enlighted, Inc. "The efficiencies we've achieved in this already high-performance city hall building serve as a leading example for other municipalities across the country that have similar energy conservation goals for their building stock, their cities, and their people."

"Investing in energy efficiency measures can produce significant long-term savings," Mayor Chuck Reed said. "Embracing lighting control systems and other energy management technologies can also help San Jose achieve its Green Vision goals to reduce per capita energy use by 50%."

ABOUT ENLIGHTED

Enlighted provides people-smart energy efficiency solutions for commercial environments. Its first application—advanced lighting control, built on the Enlighted sensor and analytics platform—saves companies between 50% and 70% in energy costs while tuning individual workspaces for the comfort and efficiency of the people who work in them. Additional applications ranging from occupancy and real estate analysis, to HVAC controls, to security services are based on additional data that can be observed and aggregated on the Enlighted Cloud.

For more information visit www.enlightedinc.com or email sales@enlightedinc.com.