



LIGHTING AND HVAC SYSTEMS LEFT ON IN UNOCCUPIED SPACES APPEAR TO ACCOUNT FOR ABOUT 40% WASTED COMMERCIAL ENERGY.
- US DEPARTMENT OF ENERGY

INTELLIGENT BUILDING AUTOMATION

As the recognized leader in intelligent analytics software, ObjectVideo leverages its vast expertise to offer a vision-based building automation solution that provides considerable cost savings and help the building management industry reduce harmful emissions.

With energy prices on the rise and the strong push for restrictions on carbon emissions, building managers must focus on minimizing energy consumption in order to keep their business ventures competitive. Over 20 years ago, occupancy sensors emerged as an effective technology to reduce energy waste in unoccupied spaces. Although these sensors had the potential to reduce energy use by 60% in certain spaces, they penetrated only 3% of the market due to their technical limitations (false triggering, time-outs, etc.).

However, Intelligent Building Automation from ObjectVideo is based on field-proven intelligent analytics technology (aka: computer vision), embedded within a self-contained sensor device. The OV intelligently enabled sensors use

advanced mathematical algorithms to accurately detect and classify objects within a field of view to determine the presence/absence of humans or monitor occupancy levels in key areas.

The output of the OV Intelligent Building Automation devices is an accurate, real-time data stream which can be used to trigger lighting control systems, HVAC systems or simply to gather occupancy data for further analysis by a reporting application. The result is optimized energy consumption and space utilization for a cleaner environment and lower energy bills.

COST & ENERGY BENEFITS

For example, by integrating with lighting controls only, end users could experience the following results (based on 20,000 sq ft building).

By providing accurate occupancy data, ObjectVideo will help users save more energy and reduce more carbon emissions than any existing sensor-based technology. For example, if only 10% of all existing US office buildings integrated Intelligent Business Automation with their lighting controls, the US has the potential to save about 3.5 Terawatt-Hours of electricity use each year, equivalent to almost \$290 million.

	BASELINE	CONVENTIONAL OCCUPANCY SENSORS	INTELLIGENT BUILDING AUTOMATION
Hours of Operation	100%	70%	55%
Annual Savings (kWh)	--	26,500	40,000
Annual Savings (\$)		\$2,100	\$3,200
Annual Reduction in CO2 Emissions (lbs)		41,300	62,200
Annual "Cars Off Road" Equivalent		3.6	5.4

* Assuming: 75% applicable space, \$0.08/kWh

Example applications for the Intelligent Building Automation solution from ObjectVideo include:

SPACE MANAGEMENT

PROBLEM

Many corporate real estate organizations do not have an effective way to measure actual space utilization.

CURRENT SITUATION

Real-time actual use of space data would enable corporate real estate managers to make better space planning decisions, including when to divest or re-allocate under-utilized space.

INTELLIGENT SOLUTION

Sensors with OV intelligence generate real time occupancy counts and aggregates that data over time, on a per-space basis, for use workplace management software, improving the accuracy and efficiency of workplace space management.

AUTOMATIC DOOR CONTROL

PROBLEM

Automatic door controls are increasingly pervasive in commercial and retail settings, yet sensors for these systems are typically able to only detect a presence near the door, resulting in wasted openings and unnecessary energy loss.

INTELLIGENT SOLUTION

Door systems can be made far more effective by ensuring doors are only opened when necessary and left closed when people are merely passing by implementing an intelligently-enabled sensor to determine actual ingress and egress.

ENERGY MANAGEMENT

PROBLEM

The U.S. Department of Energy reports that lighting and HVAC represent 40% of the average commercial building's electric bill.

CURRENT SITUATION

Operations managers know that advanced technologies to reduce lighting and HVAC usage are the easiest, most profitable investment for energy-saving building systems, however existing lighting controls technology is limited, and leads to a high number of false-offs. To compensate, these existing systems leave lights on for an average of 30 minutes after vacancy is detected.

INTELLIGENT SOLUTION

OV-enabled sensors reduce the extra power time to virtually zero by intelligently determining the occupancy of each space at all times. In addition, most buildings are heated, cooled and supplied with fresh air independent of actual occupancy. Implementing intelligent automation to help manage heating and cooling systems will result in significant energy savings.

CONTACT US

For more information on ObjectVideo OnBoard and the Intelligent Building Automation, go to www.objectvideo.com

