

SMART BUILDING MANAGEMENT



**Smart Building
Management**



SBM, SMART BUILDING MANAGEMENT PLATFORM

PROOF OF INTELLIGENCE COMES WITH YOUR ELECTRIC BILL.

SBM, is a Business Intelligent Platform to use in buildings, developed for maximum energy savings, high equipment performance, water use and control, user's comfort and ergonomics.

In other words, users will be happier and you will save money and reduce your carbon footprint.



SIMPLE

- To install, to use and to check results and equipment operating conditions.



ECONOMIC

- SBM significantly reduces energy consumption from over 40% up to 75%.
- Maintains a high level of users comfort.
- Predicted savings according to usage expectations are delivered to clients together with the acquisition proposal.
- Clients receive periodic reports on usage and savings so they can easily check results against predicted savings and improve operating conditions.
- SBM provides after-sales support and service, namely reporting, according to sales contract.
- When installed alone to improve existing systems the payback is shorter.



VERSATILE

- SBM easily and quickly adapts to changes in working conditions, zoning or scheduling. All is needed is a smart-phone.
- SBM is compatible with most existing equipment, lighting and automation systems.
- SBM is wireless and creates its own network.
- SBM making it easy to install, configure and reconfigure both in new and existing buildings.



INTELLIGENT AND AUTONOMOUS

- Each SBM controller continuously monitors its surroundings and feeds data to its dedicated algorithms to always manage equipment and lighting in an optimal way according to its own programmed set of rules.
- The collected data together with usage parameters and system consumption is sent in real time to the cloud so it can be processed, analysed and data-mined.



FIVE STEPS TO KNOW HOW MUCH YOU CAN SAVE.

Through our five step approach we can tell you how much you are going to save with SBM Technology.



GUARANTEED SAVINGS

We always work together with our client to provide them support from initial assessment to ongoing operation to make sure the targeted savings are reached. Our confidence in SBM performance enables us to propose to our clients different forms of acquisition.



IsGreen is a company dedicated to develop smart solutions to better manage water and energy in buildings.

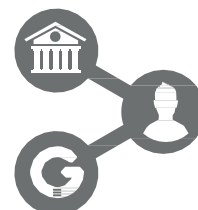
Simple sale

The client buys the SBM solution and optionally contracts a company to support for as long as wants.



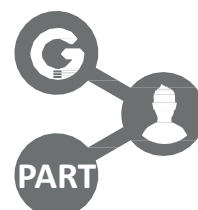
Performance Agreement

IsGreen established agreements with several financing entities. The SBM solution is financed by them based on SBM savings assessment. The user contracts support for as long as he wants.



Partners Agreement

We also have established partnerships with other companies so you can contract SBM solutions with them. The user may contract SBM support for as long as he needs.



NEVER TOO BRIGHT.
NEVER TOO DARK

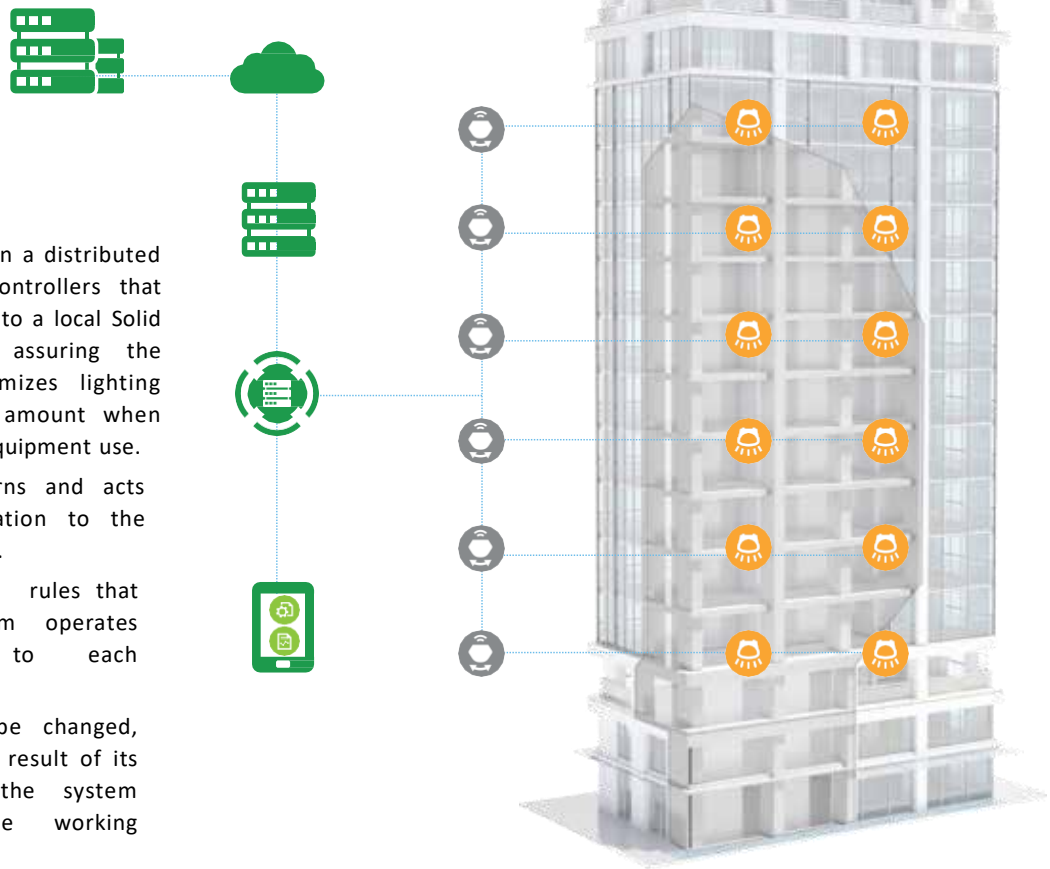
How it works

SBM Technology is based on a distributed intelligence network of controllers that exchange data in real time to a local Solid State Embedded Server, assuring the system continuously optimizes lighting always providing “The right amount when and where necessary” and equipment use.

The SBM controllers, learns and acts always adapting its operation to the evolving usage environment.

SBM has a built-in set of rules that specify how the system operates enabling its adaptation to each situation.

These rules can easily be changed, either by the system, as a result of its learning capability, or by the system manager, whenever the working conditions change.



LUMINAIRE



CONTROLLER
AND SENSOR



SSS



LOCAL SERVER



CLOUD



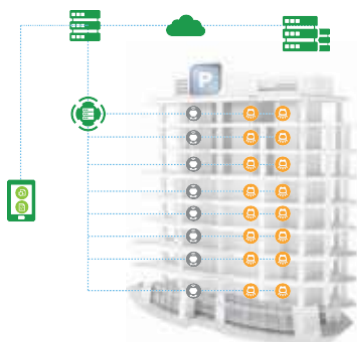
REMOTE SERVER



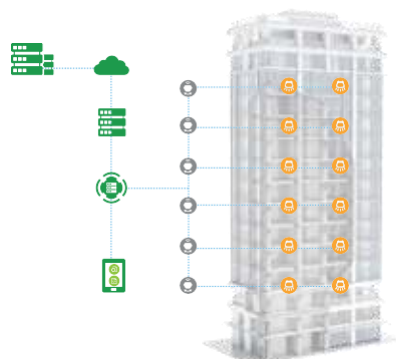
MOBILE

A system that adapts to your needs.

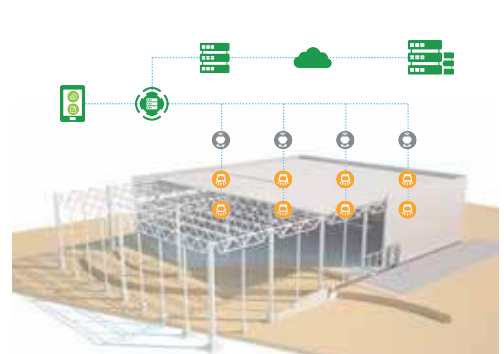
Parkings



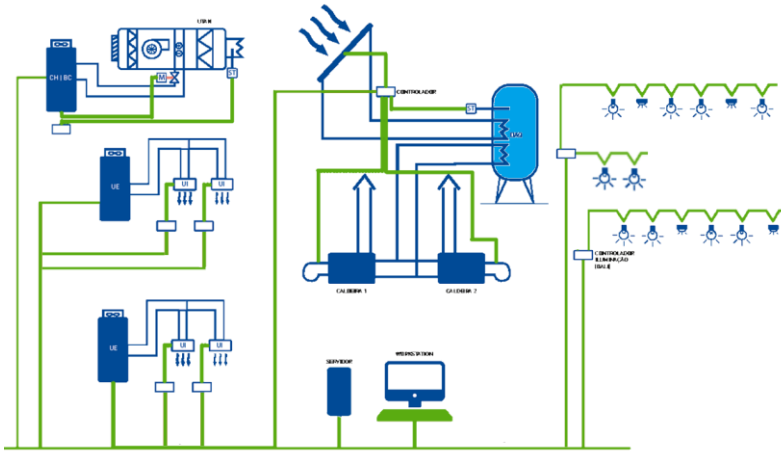
Offices



Industry and Logistics

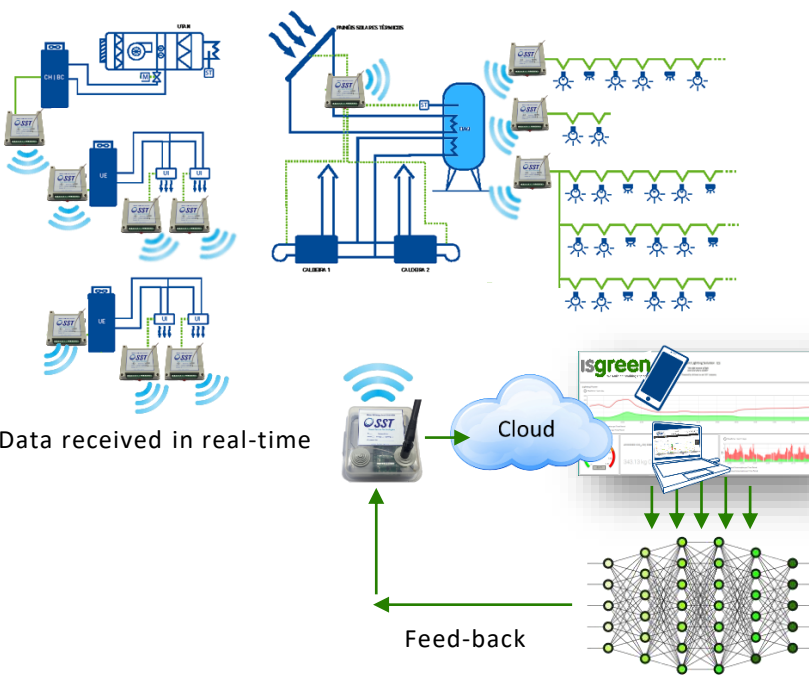


ADVANTAGES OF SMART BUILDING MANAGEMENT VERSUS CENTRALIZED MANAGEMENT SOLUTION



Centralized Solution

Traditional solution used by large players,
Centralized data and processing,
Fully wired,
Working as a clock with predefined times,
Programmed only by the manufacturer and with
the intervention of expensive technicians,
Costly solution to implement and not reusable.



Smart Solution

Simple to install and totally reusable,
Autonomous and automatic solution,
Local and remote access,
Fully wireless,



Each device has embedded intelligence,
Automatic decisions are taken by the system,
according the existing business rules and real-time
data received analysis,
Business rules, available in easy to use language,
parameterizable by the facilities technician,

If temporary failure at the gateway, all
configuration still working normally,
Received data from each controller are analyzed by
a neuronal network to optimize the normal
operation,
The normal working status is automatic mode.

Parkings

Offices

Industry and Logistics





SAVINGS

>40%

PAYBACK

<18
months

CLOUD CONNECTED

AUTONOMOUS
AND AUTOMATIC

WIRELESS



INTELLIGENT LIGHTING & VENTILATION IN BUILDINGS

Lighting & Ventilation is the driver for more than 50% of all energy consumption in office buildings, and is also the main cause for electricity wastage as often rooms and spaces are always lighted and ventilated independently of usage and occupancy.

To minimize this wastage SBM Technology always provides “the right amount of comfort when and where needed” at any place.

SBM Technology continuously and autonomously enforces the site and time specific defined operational rules and logs usage data and consumption so managers can improve the working rules or establish true cost accounting. SBM Technology controls any kind of lamps found in offices either traditional or LED, is easily programmed and reprogrammed by non-experts and logged data can be accessed with just a smart-phone.

CASE STUDY

SBM Technology was installed in a five floor office building in Lisbon downtown with an overall area of 1.250 sq. m. of open-space where more than 100 persons work.

Schedules are flexible and the need to work overtime is frequent. Results showed 70% energy savings in Spring, a 20% reduction on a monthly electricity bill of 1.250 Euros.

The workers were pleased with more uniform lighting all over the day and the CFO was rewarded with a 14 month payback.

Challenge

- To reduce the lighting & ventilation electricity bill.
- To manage equipment by turning them off when they are not needed.
- To guarantee workplace ergonomics and workers comfort.
- To do it in an unmanned and autonomous way so workers can concentrate in their jobs.



70%

SAVINGS

Savings

Usage



SAVINGS

>50%

PAYBACK

<12
months

CLOUD CONNECTED

AUTONOMOUS
AND AUTOMATIC

WIRELESS



INTELLIGENT LIGHTING & VENTILATION IN PARKING LOTS

Underground and covered parks must be lighted on a 24/7 basis to guarantee users and drivers safety. And face different lighting demands on circulation and parking areas. The ventilation worked according to a clock, with or without occupancy.

Usage is very irregular with peaks during rush hours and almost quiet in the between. And when night falls although usage is very sporadic light must still be on so latecomers can still safely use the park. Usual solution is to keep lighting always on regardless of park vacancy and usage. Even during the night the ventilation worked according a clock.

CASE STUDY

A high school building faced high electricity cost in its 3 floor underground parking with a total area of 2.250 sq. m. Usage period is long but very uneven. The challenge was to save as much as possible in Lighting and ventilation costs while keeping the parking always lighted and air cleaned so users safety was maintained and the right lighting levels in the circulation zones were complied.

SBM Technology implementation allowed them to zone parking and circulation areas with different operational rules and a minimum lighting level was enforced during classes hours.

As a result users felt comfortable, drivers safe and 77% energy savings were obtained with a 11 month payback.

Challenge

- To reduce ventilation & lighting costs, both energy and maintenance
- To provide differentiated light levels in circulation and parking areas and air renovation when necessary and also according occupancy.
- To improve new level of security to users and assets.
- To implement comfort levels of light during a specific period of time.



77%

SAVINGS

Savings

Usage



SAVINGS

>50%

PAYBACK

<18
months

CLOUD CONNECTED

AUTONOMOUS
AND AUTOMATIC

WIRELESS



INTELLIGENT LIGHTING IN INDUSTRY AND LOGISTICS

Industrial facilities and logistic warehouses have high lighting costs due both to electricity consumption and high maintenance costs. The causes are multiple mainly related to facilities dimensions and productive layout:

- High bay luminaires require high wattage;
- High wattage means consumption is also high;
- Large areas require a large number of luminaires;
- Lack of daylighting requires a long daily usage;
- Even when daylighting exists its distribution seldom fits the needs and as a result lights are on for a long period.

CASE STUDY

SBM Technology was deployed in an industrial facility nearby Lisbon, with 2.400 sq. m. of area and plenty of daylighting in the roof-top. The facility operates in a 2 shift basis six days per week. Taking advantage of the fact that all high bay luminaires have 3 T5 tubes, IsGreen light controls each one so a 3 level dimming is available. Results shown in the adjoining graph were obtained in Spring in a lighted clouded day. Savings amount to 63% with a 14 month payback.

Challenge

- To reduce lighting costs, both operation and maintenance ones
- To provide differentiated light levels according to tasks performed
- To manage equipment by turning them off when they are not needed.
- To be easily adapted to evolving needs and changes in operations layout



63%

SAVINGS

Savings

Usage



Rede Municipal de Bibliotecas Públicas do Concelho de Palmela

SAVINGS 72%

PAYBACK 18 months

CLOUD CONNECTED

AUTONOMOUS
AND AUTOMATIC

WIRELESS

72%

18
months



INTELLIGENT LIGHTING IN LIBRARIES

Public libraries are complex spaces involving very different room typologies ranging from reading rooms to exhibition spaces and multimedia rooms. All with specific lighting requirements. To manage such a different spaces and keep them at top performance is a challenge to energy managers:

- Open high bay spaces with ample skylights requires hi-power lamps preferably with dimming capabilities;
- Diverse occupancy along the week and days means it is not easy to set a scheduling;
- Traditional solution is to provide excess light even when the space is unoccupied, a large lighting energy waste with corresponding high carbon footprint and bills.

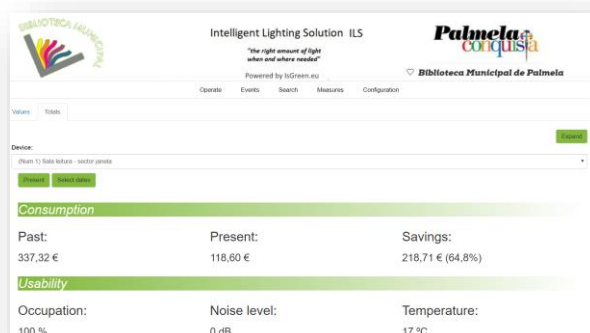
Challenge

- To reduce lighting costs while improving the readers comfort.
- To provide different lighting strategies according to the room purposes, ranging from reading to media room and ancillary spaces.
- To harvest daylighting savings from large windows and skylights.
- To easily adapt to evolving needs and changes in the operations layout.

CASE STUDY

SBM Technology was deployed at Palmela Library within spaces with variable purpose and usage: each room was a different challenge with specific operating rules and lighting requirements. Usage varies a lot as beside its normal usage the building is also used to host town meetings and exhibitions.

Different lighting strategies were deployed from simple on-off in the archives and depots, to light level controlled on-off and plain dimming. Results were beyond expectations and this lighting improvement was nationally recognized, receiving the 2016 Green Light Award in its category.



72%

SAVINGS

Savings

Usage



IsGreen is a technology company dedicated to developing and selling Smart technology to better manage the buildings. SBM Technology it's a hardware and software platform to, intelligently, manage Lighting & Equipment use, with a focus in office buildings, residential offices, hotels, underground parks, industry sites, logistics facilities, and others.

Our R&D department continuously improves and simplifies integrated systems of control, analysis and data-mining enabling smart technologies to fulfill the client's real needs now and in the future.

contacto@isgreen.pt

Lisbon Office – IsGreen Lda.
Rua Alexandre Ferreira, 38 B
Lumiar 1750-012
Lisboa – Portugal

Estonia Office – SST OÜ
Smart Secure Technologies OÜ
Narva mnt 5 Kesklinna linnaosa
Tallinn 10117, Estónia