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Sustainable Construction in Rural and Fragile Areas for Energy efficiency

# Category: New Technologies Case Study: Wellness Telecom - WeLight





### Context

Public lighting is one of the major sources of electricity consumption in any municipality. Very often, the infrastructure is obsolete and there is no control or monitoring system.

To reduce consumption levels, various strategies have been developed to reduce the light level in the early hours of the morning, using a device such as a post top regulator or bi-level ballast.

Although these devices provide an adequate level of savings, normally there is still the problem of a lack of information on consumption and the savings obtained, so that very often it is difficult to monitor the profitability of the investment and the state of the equipment.

The few solutions that permit some kind of control over the consumption or saving policies can not be used with products from different manufactures. If one has different types of equipment, it is necessary to have access to several management utilities, which makes the operation expensive and slows it down.

Legislation for change:

In accordance with the new Spanish lighting regulation (Regulation on energy efficiency for exterior light installations. Published in the Official State Gazette no. 279 of November 2008, pp. 45988-46057) light levels will be reduced in the early morning, with the aim of reducing both, electricity consumption and light pollution.

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## Description

WeLight is an open architecture adaptable product to control and monitor any public lighting panel.

The system also does not need its own server or its own communication infrastructure: All the information is available through an Internet-based software service.

The components of the product are:

•Flow Regulator

- •Lighting Control Unit (Control & Communication)
- •Network Analyzer (Monitoring electrical data)
- Installation
- •SaaS Platform (monthly fee for access / use)
- •Mobile application (optional)
- The product allows:

Savings

 $_{\odot}\mbox{Header}$  regulator reduces the voltage of the lamps of a line

oMaximum performance with sodium vapor lamps

oPosibility to track savings achieved

•Monitor the consumption and electrical parameters

 ${\scriptstyle \circ}\textsc{Telemanagement}$  platform to track consumption and savings achieved

 $\circ \text{Such}$  monitoring can also be used for maintenance

Alerts

○Deviation from consumption (illegal hooks, equipment failures, electrical problems ...)

oLow power (faulty lamps)

 $_{\odot}\textsc{Deviations}$  from predicted savings



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Monitoring screen

## **References and bibliography**

•Wellness Telecom. www.wtelecom.es

### Control

Set hours of on, off or saving
Graphs and reports
Geolocation



### **Benefits**

Energy-Related and Environmental

- Promotes energy efficiency
- · Reduced emissions and carbon footprint
- Speedy reaction to circumstances that increase electricity consumption

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#### Operational

- Real time detection of faulty lamps
- Preventive maintenance, not corrective
- Knowledge of the infrastructure. Improved planning for the future
- Customizable energy audits

Financial

- · Rapid amortization of investment
- Energy cost reduction
- · Electricity bill savings

## **Potential for transferability**

The solution designed by Wellness Telecom is valid for all type of installations, manufactures and needs a low investment. Its IP communications based architecture permits information to be centralized easily and transparently.

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Lead Partner Province of Savona (ITALY)



#### Project Partner



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