



Case study

IntelligentCity lighting solution in the municipality of Holbæk

Location
Philips Lighting

Holbæk, Denmark
Copenhagen LED luminaires connected with CityTouch asset
and remote lighting management software system



PHILIPS



“We can dim or increase the lighting level in each individual luminaire at any time, ensuring the best possible safety for traffic and citizens.”

Engineer Erik Knudsen, Traffic and Facilities, Municipality of Holbæk



IntelligentCity reduces electricity consumption by at least 75%



Facts

Client and location

Municipality of Holbæk, Denmark

Consulting engineer

Moe A/S

Contractor

SEAS-NVE

Lighting solution

IntelligentCity: CityTouch asset and remote lighting management system connected with approximately 500 Copenhagen LED luminaires. Upon the completion of the project in 2015, we expect to have installed a total of around 9,000 connectable LED luminaires.

Project realization

2012 - 2015

Background

In 2009, when the municipality of Holbæk was faced with the task of replacing street lighting in connection with cable installation for electrical supply, it was decided that the municipality would investigate the possibilities of radical reduction in energy consumption, and the consulting engineering company Moe A/S was asked to propose various systems for lighting controls. Engineer Erik Knudsen, Traffic and Facilities, municipality of Holbæk, explains: "To begin with, we were most concerned with energy savings, but we quickly realized that having an overview and control are just as important with regard to the overall operating costs, traffic safety and the safety of our residents."

The challenge

"We wanted a solution which, over time, would benefit all 69,000 residents in the municipality, regardless of whether they live in the countryside or in the center of Holbæk. At the same time, we wanted to be able to use the system for several purposes: It should be possible to monitor the state of each luminaire; lighting levels should be controlled individually for different times of the day and year; the energy consumption should be recorded and problem diagnostics should be performed so that our technicians have an accurate idea of the task they need to solve before leaving home and to better calculate expected maintenance costs." The municipality of Holbæk started the installation of Philips' web-based CityTouch lighting management system in 2012, as well as replacing the old road and street lighting with LED luminaires that would form part of the new, intelligent, connected IntelligentCity solution. We started in the old municipality of Jernløse, where approximately 500 Copenhagen

LED luminaires were installed. When the entire municipality of Holbæk has been covered by the system in 2015, a total of approximately 9,000 new connectable LED luminaires will have replaced the old, energy-intensive lighting installation.

The solution

The Philips IntelligentCity solution consists of CityTouch software system that communicates with each connected luminaire via a web-interface, so that the status of the luminaire can be read and changes can be made at all times. The CityTouch software system requires only internet access and a password, and user levels can easily be defined for employees. On a day-to-day basis, only employees of the municipality will be able to read data, carry out dimming of the lights etc. CityTouch has a compatible design, so that the system can use lamps, luminaires and control systems from different brands.

The benefits

"LED lighting provides significant energy savings, but it is the lighting control system which has made the greatest difference," says Erik Knudsen. "The total energy consumption is reduced by a minimum of 75% and, as electricity consumption accounts for 2/3 of the municipality's overall lighting costs, we expect very large savings." In addition to the reduced energy consumption, monitoring and diagnostics of the luminaires enables a significant optimization of service and maintenance work, since the long service life of the LED luminaires contributes positively to the calculations. "But the major advantage is that we are able to provide citizens and visitors with increased traffic and social safety and safer everyday life, whilst also saving money and reducing CO₂ emissions through lower energy consumption," Erik Knudsen concludes.



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