



# Activity

## Success Story

- Smart City -



# ZIUT

The Netherlands

## Ziut leverages LoRaWAN to optimize street lighting in the Netherlands

### Keeping people safe and saving energy at the same time

The Netherlands is famous for its large number of bicycles. National bike lanes amount to more than 35.000km. For the Dutch, who use their bikes as a means to transport themselves from A to B, a high quality maintenance and service of their bike lanes is a must. Those who ride the lanes at night never have to worry about being left in the dark: lampposts are always switched on. Although this gives people a sense of safety, it is not environment-friendly.

Aiming at reducing energy consumption of street lighting, the City of Rotterdam started a pilot along the Havenspoorpad, a 6km-long bike lane running through the city. The 185 lampposts along this path appear to be continuously switched on, regardless of people actually using the space. This excessive use of lamps represents more than 4,000 hours of lighting per lamppost per year, and equals the electricity consumption of ten households in a year.

“ We see a big advantage in connecting our TeleControllers to the LoRaWAN network which consumes less power, and is less sensitive to interference ”

*Peter Wijnands, Manager public street lighting at City of Rotterdam*

### Using LoRaWAN TeleControllers as motion detectors

Ziut, the company in charge of public lighting, traffic systems and camera safety in the Netherlands, turned to KPN to come up with a solution that guarantees safety and considerably reduces energy at the same time.

KPN is a leading supplier of ICT services, serving a large number of diverse customer groups at home and abroad with a wide range of products and services under various brands: from prepaid call services in the USA to interactive HD television in the Netherlands. KPN has been successfully delivering smart connections since five years. The operator chose the LoRaWAN technology for its cost and energy efficiency. KPN's nationwide LoRaWAN network runs on Activity's ThingPark network server. Thanks to this platform, KPN was able to efficiently roll-out its network, enabling smart solutions for a variety of use cases in the country. Ziut managed to keep (LED) lampposts of popular bike and walking lanes in the night to a minimum of 10% of their maximum capacity. Each time a biker or pedestrian passes by,

the LoRaWAN TeleController detects movement and communicates to the lampposts ensuring that three lamps before and three lamps after the passenger are switched on, then immediately bringing them back to 10% of their capacity.

### Benefits

The easy to control tele-management system implemented by Ziut runs on LoRaWAN TeleControllers. These controllers can be programmed on a daily basis, enabling them to smartly dim lights. The system is fully manageable remotely and can be modified anytime. This ensures a great flexibility of energy use at any given time of the day throughout the year. By dimming the lights to 10% of their capacity, up to 80% of the original energy consumption can be saved. Moreover, malfunctioning of lamps is instantly detected and therefore solved faster, which optimizes controlling and repairing processes. The TeleController can be connected to other objects such as light towers to regulate their energy consumption.

### KEY FIGURES



Up to 80% energy saved thanks to LoRaWAN network



From 100% down to 10% use of public street lighting

Ziut



kpn