

SMART CITY HELMOND

Reference Project / City Lighting

TRANSFORMING HELMOND WITH
**CONNECTED INTELLIGENT
STREETLIGHTS.**



TVILIGHT
EMPOWERING INTELLIGENCE



Gemeente Helmond

Project Information



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Intelligent streetlights on
Europaweg, Helmond
2017

Dutch city Helmond adopted the intelligent street lighting technology from Tvilight to make the streets safer, cut energy use, optimize maintenance, and become a more attractive place for working and living. Thanks to Tvilight Open API and best-in-class interoperability, Helmond has laid a foundation for a Smart City.

Application areas:
main and secondary roads, residential neighborhoods, pedestrian zones and bicycle paths

Location:
Helmond, the Netherlands

Tvilight products:
CitySense, SkyLite, CityManager (with a variety of LED streetlights)

Client:
Municipality of Helmond

Connecting a growing industrial city



Gemeente Helmond

Helmond is a historic city in North Brabant, the Netherlands, with about 90,000 residents and more than 25.000 public lighting points.

The city is known as a knowledge hub and a living lab for the automotive industry, where many companies design, develop and launch innovative new transport technologies.

As a growing industrial city, Helmond has been facing several challenges. First of all, the city needed to find ways to save energy and become more sustainable in its daily operations.

Furthermore, the municipality wants to tackle the negative effects that street crime has on public safety and comfort. To achieve these goals as well as to enhance the attractiveness of the city, local authorities have focused attention on improving public street lighting.

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Heeklaan
Helmond
2017



CUSTOMER CHALLENGE:

how to slash the energy use while maintaining public safety and comfort?

Sjef de Kimpepad,
Helmond 2017

— Helmond was looking for a solution to help it save energy, fight street crime and uplift the city attractiveness.

It is known that public safety and street illumination are linked: safer streets are the ones that are well illuminated. However, striving to provide citizens with sufficient lighting levels, cities typically end up with overly-illuminated streets where the lights burn for hours without a single living soul around them. In short, cities spend on powering the streetlights that burn for nobody. At the same time, switching off the lights completely is never an option for reasons of public safety.

How can municipalities save energy while ensuring citizen safety with the right amount of light? This dilemma is well known to cities worldwide. As much as there is a need to save energy and cut costs, there is also an imperative to put citizens first and ensure their safety and comfort.

One of the leaders who understands this challenge well is Alfred Groote, Public Lighting Manager at the Municipality of Helmond. He says:

“ My job is to provide adequate illumination for our citizens and to make sure that the municipality achieves this at a reasonable cost. ”

His job is complex, requiring him to deal with a wide range of public lighting issues and take timely actions to resolve them.

Groote explains:

“ Public safety comes first. We want to ensure that the streets are well illuminated, so the citizens can enjoy the city and feel safe during the evening and night hours.

But we also need to save energy and be sustainable. That's why we began researching different smart street lighting systems. We noticed that other systems on the market deliver mainly static dimming, which means that the lights dim down even when there are people on the streets.

This is, of course, inadequate, if you think about public safety. We wanted more than that. We needed a street lighting system that would deliver adaptive lighting based on actual human presence. That was one of the reasons to choose Twilight. ”

Heeklaan
Helmond
2017

SOLUTION:

The right amount of light with Twilight



CitySense delivers true “light on demand”, just the right amount of light when and where it is needed

Groote is in direct contact with the local citizens and is well aware of the resident’s needs and preferences when it comes to street illumination. **“ People usually complain that there is either too much light or too little. That’s always the trick—to get to a point when the level of illumination is just right. Motion-sensing street lighting technology helps, because it allows to have just as much or as little light as needed. With Twilight, Helmond preserves citizen safety with maximum energy savings. ”**

In 2013, the city started testing CitySense (Twilight streetlight sensor) on selected locations and was quickly convinced of the benefits. Today, Helmond counts more than a dozen of intelligent street lighting networks extending across the city and continues to roll-out the solution further.



Because the streets are safely illuminated, the attractiveness of public spaces and the city in general increases. The use of motion-based intelligent street lighting allows the citizens and visitors to experience and enjoy the true “light on demand” and other smart lighting benefits. Connected lighting makes the roadways, residential neighborhoods, pedestrian zones, bicycle paths, and other areas safe. Illumination is always tailored to the actual human presence. At the same time, the new intelligent street lighting solution helps Helmond reduce its carbon footprint and save energy.

— Heeklaan Helmond 2017



After a successful pilot, Helmond has applied Twilight technology on more than a dozen of locations across the city

Smart City Helmond

safe, sustainable,
and attractive

In Helmond, one can see the true versatility of the Twilight intelligent street lighting solution. The wireless street lighting controllers were deployed throughout the city in a variety of application areas.

Alfred Groote:

“ We want to make Helmond a smart city and a great place for people to live and work. Connected intelligent lighting is a logical step towards this goal. ”

During the past years, Helmond has made significant progress in improving the street safety, which is a result of a variety of measures, including a better street illumination and the implementation of new technology.

With the deployment of wireless smart street lighting, Helmond's streetlights are centrally managed, monitored and controlled with the Twilight CityManager software. Using the software, the municipality can set up dimming and switching profiles as well as regulate the brightness of each streetlight based on a time schedule, type of the road and needs of local citizens. CityManager online platform delivers valuable information and control of luminaires on the individual and group level.

Twilight connected intelligent street lighting technology has helped Helmond to slash the energy use by up to 70% and improve the maintenance efficiency by up to 50%.

Alfred Groote:

“ I was looking for a system that would allow us to remotely monitor and manage the streetlights across the city. A smart streetlight notifies us about a failure immediately, so we can take corrective action and repair it even before a citizen notices the problem. ”

In Helmond, one can see the true versatility of the Twilight intelligent street lighting solution. Wireless controllers are deployed throughout the city in a variety of applications: from roadways, and residential neighborhoods to pedestrian streets and bicycle paths.

By rolling out the connected lighting networks, Helmond has prepared an infrastructure for a Smart City. Twilight Open APIs enable Helmond to integrate multiple third-party sensors, software and applications.

Alfred Groote continues:

“ We are interested in sensor applications and Big Data analytics. We see connected lighting networks as a gateway to this. We are already testing several sensors and exploring the possibilities to interconnect smart streetlights and traffic lights. To achieve all of this you need a system that is open and ready for the future. With Twilight, we can. ”



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