Smart City

How can technology help make our cities better places to live in?

Scheveningen boasts one of the most beautiful beaches in the Netherlands. Nature and big city living come head to head here – with all the potential and problems that entails. The seaside resort, part of The Hague, is situated around 50km to the south-west of Amsterdam and sits right at the centre of the extremely highly densely populated »Randstad« megalopolis that is home to over 8 million people. The Hague is experimenting with the county's first »Living Lab« project, with innovative »Smart City Hubs« that are looking at how smart technologies can make cities more intelligent, and how these technologies can be integrated into urban furnishings in a way that brings the beauty and appeal of the natural surroundings back into the forefront.

As part of the project, the first Lif luminaire columns were erected on the redesigned Noorderboulevard – as strategic support points for an integrated smart city infrastructure.

A mobile waste bin on a boulevard? A self-driving shuttle bus to transport visitors? A robot that resembles a moon buggy and collects rubbish from the beach? In Scheveningen, scenarios like this are not a vision of the future, they are the result of a Living Lab project: intelligent technologies are being applied to address the current challenges of a big city with intelligent solutions.

Adaptively equipped modular Lif system luminaires are being used as strategic support points for this smart technology. Special recording devices in these posts allow varying functions to be integrated, such as a Cyrb microphone: it recognises vehicles moving along the promenade when they shouldn't be and alerts the police or the public order authorities. Acoustic monitoring is also able to identify sounds such as breaking glass, verbal altercations and shouts. The light poles will soon also measure air quality and visitor numbers.

In designing the lighting concept, the planners focused on environmentally compatible lighting to respond equally to the needs of people and of nature. The Lif top element and Twinspot module handle the traditional lighting tasks of general illumination and accent lighting. The top element lights up the boulevard in an even light. The modified Twinspot modules allow the light points to be switched on or off and controlled as needed via the Remoticom telemanagement system. Additional special features of the luminaires include their coating and colour: referencing the colours of the North Sea, Lif is finished in a project-specific light grey varnish. The varnish on the columns is resistant to seawater (C4) and has a special anti-sticker coating.

The smart lighting, as part of the »Living Lab«, thus allows visitors to the Noorderboulevard to enjoy the unique experience of the merging of wild nature and urban living comfortably and safely.

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Motion-controlled lighting

The lighting is controlled as required via motion sensors. Individual or multiple light points change in brightness as people or objects move – the light tracks them.

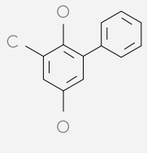
Adaptive lighting

Intelligent sensors allow the lighting to adjust to different weather conditions. The distribution of light from the luminaires changes according to whether the road surface is wet or dry.

Light management

The luminaires are connected via an intelligent communication network. Individual or multiple light points are controlled centrally, or locally via an app.

Environmental data recording



Intelligent sensors in the luminaires or on the pole measure environmental and weather parameters in real-time.

Public information systems

Information can be retrieved via components such as buttons or displays integrated into the pole, including timetables, audio clips for the blind and partially sighted or for use in advertising.

Public safety module

Camera systems, audio speakers and emergency call buttons flexibly integrated into the light pole improve safety in the urban space.

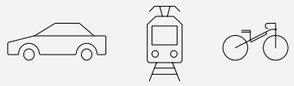
Public WiFi hotspots

Luminaires are equipped with WiFi components to create public hotspots. Information and services for professional and private use are provided via broadband internet.

Electric vehicle charging stations

Charging stations installed at or in the luminaire pole allow electric vehicles to be charged.

Traffic and parking space management



Intelligent sensors record the current traffic situation and provide real-time data for sustainable transport optimisation in cities.

Extended Lighting Key to the Smart City

Fewer traffic queues, better orientation, more information and improved safety: smart, networked technology has great potential to raise the quality of life in our cities. Rather than a vision of the future, networked cities are a sea change that we are experiencing today. Around the world, global metropolises are growing and overcrowding presents huge challenges when it comes to communal living. At the same time, digitalisation is providing new opportunities for organising the way we live together, enhancing the quality of life in cities. Light has long since been an integral part of urban infrastructure – and now Selux Smart Lighting is building new bridges to ensure our cities have a smart future.

Smart Lighting by Selux follows the principle that rather than being an end in itself, technology is closely connected to life and the needs, expectations and potential of human beings. The modular design of our products makes them perfect for the integration of smart functions. Our profound technical understanding enables us to work with our customers, users and technology partners to jointly develop solutions that are individually tailored to each particular situation.

Through this strategy, Selux is making the smart city an aspirational goal, a living space with a sustainable quality of life for everyone. Urban lighting forms the logical basis for this since it already has in place a large number of installation points with an electricity supply. A smart luminaire from Selux, networked via the internet can on one hand be integrated into intelligent controls that switch lights on, off or dim them as needed. On the other hand, it can provide data via sensors: from how bright it is locally to the volume of traffic or the air quality. And it can provide information to the local environment – via audio speakers, displays or WiFi hotspots. The smart city thus interacts with its visitors and residents, it learns and collates knowledge to continually adapt better to the lives that are lived there.

Get in touch – we look forward to working with you to bring visions and solutions for your Smart City project to life!