Public Lighting

Reinventing lighting in public space with inspiration from nature

Challenge Introduction

Today's solutions for (artificial) lighting have a negative impact on our planet (material use, energy consumption), nature (light pollution and disturbance of insects and wildlife) and even our own well-being (sleep deprivation). On the other hand the right lighting has a positive effect on how we feel, enables us to do all kinds of activities after sunset and strongly influences the atmosphere. Wouldn't it be great if we can have the positive effects of light without the negative impact on our environment?

Natural light is awesome: people enjoy sunsets and sunrises and the way light creates mesmerizing shadows through leaves of trees or reflections on water. Nature can be the ultimate inspiration to create sustainable lighting solutions. For example, bioluminescent fish, light-emitting algae or fireflies all produce light without waste.

Wouldn’t it be awesome if we transform lighting in public space entirely through the inspiration provided by nature? E.g. only using biobased materials. Providing light where and when it is needed to support activities we like to do outdoors, but also learning to appreciate darkness again. So even in more urban areas, the milky way becomes visible again, and people can enjoy stargazing.

Who is behind this initiative?

This challenge is in collaboration between two organisations, ILI and OVLNL.

TU/e Intelligent Lighting Institute
Elke den Ouden is TU/e Fellow and responsible for the living light labs and developing new business in public-private value networks. She is also responsible for the lighting theme in challenge based learning at TU/e innovation Space.

[www.tue.nl/ili](http://www.tue.nl/ili)

The association for Public Lighting in the Netherlands
OVLNL has a large number of municipalities among its members, as well as companies (multinationals as well as smaller companies) and lighting advisors. Daaf de Kok is leading the knowledge network ‘society’ and has been working on (among many other things) circularity for public lighting.

[www.OVLNL.nl](http://www.OVLNL.nl)

Relevant considerations for the challenge / theme:

This challenge is quite broad, so feel free to narrow it down based on the interests and competencies you and your team have. We will be helping you with our vast network in the industry, knowledge partners and cities, so you can validate your ideas all through the project.

Relevant links

Challenge Introduction Video

Dark Sky Organization
Light Pollution
Reduction in Visibility of Stars (paper)
Nova Innova (sustainable light start-up)
Doughnut Economy (circularity)
The Natural Step (sustainability)