

# Stakeholders: How can They be Organized in Order to Achieve the Desired Quality of Public Lighting in 2030?



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## Abstract

High complexity in the ‘engineered’ Lighting Business was so far preventing similar competition levels and disruptions in the concerned industries. According to the author of this paper, Engineering Businesses and lighting Business in particular are the next field for disruptive developments in their business structures – and this not because of the LED-Technology driven disruption but because of a completely different setup of competing structures in the markets.

### “HOW DO STAKEHOLDERS WORK TOGETHER AND HOW CAN THEY BE ORGANISED IN ORDER TO ACHIEVE THE DESIRED QUALITY OF PUBLIC LIGHTING IN 2030?”

Frogs have the peculiar characteristic that they do not perceive subtle changes in the temperature: they will forget to jump out if you slowly bring water to boiling point. This “Boiled Frog syndrome” is also happening within the field of public lighting; subtle risks and changes are not noticed; it is more comfortable to keep the status quo.

It is important to periodically evaluate and monitor developments and trends, as these will affect the quality of public lighting in the future ahead. The ‘Roadmap Public lighting 2030’ provides a basis

for working on specific situations: to be able to ask the right questions and to anticipate choices. Only municipalities and companies that understand future scenarios will understand how to act now and in the future.

This process was led by Iris Dijkstra (Atelier LEK) and Kirsten van Dam (Out Of Office). Both are qualified industrial design engineers, now specialised in lighting design and trend analysis. This combination connects the developments outside with the needs within the field of public lighting. Together with a team of different disciplines platform-meetings were organized where consultants, contractors, designers, municipalities and participants from outside the field of Public Lighting discussed different relevant topics. At the moment several spin-off projects are underway, which go deeper into the specific subjects.

### FROM TRENDS TO TRANSITIONS: RE-DEFINING THE QUALITY OF URBAN LIGHTING

The market is changing on many fronts: the advancement of LED technology, telematic monitoring, the growing demand for safety in urban environments, intelligent controls and the integration of light with monitoring. Furthermore,

there is a call for less light pollution and municipalities want to achieve the integrated management of other lighting qualities. This amounts to cooperation with new players. Companies and governments no longer decide what is good for the citizen; new values such as sharing, locality, solidarity, sustainability and human scale are becoming more central.

The investment climate and the financial capabilities of the parties that traditionally played a major role in the development of public space are under pressure. The government takes a step back and in this context other financial models and methods arise.

It is important to find a new balance and move closer to the “new advisors” and designers of public spaces. There are many opportunities, provided that all parties are familiar with terms such as social capital, smart grids, crowdfunding, sharing-economics, I-beacons, Internet of Things (IoT), 3D printers, and pop-up public values.

Summarizing the trends leads to four future scenarios in the field of public lighting. Here we see that not only the definition of traffic safety changes (imagine the city full of intelligent, self-driving cars), but also other issues and themes emerge. There is confusion about frequently used terms such as participation, innovation, social safety, ecological demands and (local) energy-grids. More content and nuance needs to be created that will lead to a better understanding of these terms. The values and interests of citizens, private parties and government play an important role in this process.

## RE-DEFINING THE WAY PUBLIC LIGHTING IS ORGANISED

Every municipality is organised differently when it comes to the design, management and maintenance of public lighting. Self-knowledge is power: by understanding their own organisation and their context, they will be better prepared to foresee what the impact of the trends will be.

Experts in the field of governance, have given their view on the changes taking place in the roles of the government, the private sector and society, respectively. They foresee a rapid development of citizen participation in government through interaction, co-creation, and in many cases even by taking initiative. Also new ways of organisation are emerging, like the experiments undertaken in

Eindhoven and other cities in Europe. They approach the market with a long-term vision, looking for a way to outsource the content to the market. It is then up to the market to translate the vision into requirements and substantive choices.

But all forms of government organisation should take into account the issues of 1. Lawfulness, 2. Efficient use of all resources and 3. Legitimacy. If these issues are not balanced, there is the inevitable risk of developing the ‘principal – agent problem’ – when municipalities have too little knowledge compared to the contractor. Another risk is limited scope for other creative and innovative companies, other interests, when municipalities enter into long-term contracts with large all-in-one consortia.

The teams of professionals who ask the right questions and make the right choices comprise people and knowledge from the social, creative and technical fields. They connect industry, municipalities / developers, architects and users and combine knowledge of (light) technology and creativity to create practical manageable lighting applications. Furthermore, they know how to start a dialogue with users through a process, by approaching light not as a goal but as a means for creating an experience for the users. And finally, their choices are made independent of commercial interests or arguments, and thereby can achieve maximum results with minimum resources.

Team members will find each other through platforms and networks. More and more people from different backgrounds will participate in the team of public lighting professionals, and guidelines should therefore be made accessible to a wider and different audience.

## CONCLUSIONS:

This process started with the question: How do the stakeholders work together and how are they organised in order to achieve the quality laid down for public lighting systems in the Netherlands by 2030? During the process a number of opportunities have emerged to link new and existing parties and to ensure the quality of public lighting in the future. The three main opportunities are:

- A. Platform for inspiration: exchanging experiences, inspiration, trends and best-practice examples

- B. Professionalisation of the discipline of public lighting by: 1. Creating a faculty to train lighting professionals, and 2. Ensuring “independent lighting professional” is a protected title
- C. Creating flexible management teams for public lighting in the future, teams who are flexible, open and critical, understand their position and context, and know when and who to involve. They also remain updated on the know-how required for good quality lighting, and they use the choice-making matrix for participation and the five other new definitions before embarking on a project.

## Author's CV

### Iris DIJKATRA, MSc

- Profession: Industrial Designer, Lighting Designer
- Current position: owner Atelier LEK, ind. lighting des., Member of PLD-A 2006–2012 (end of PLD-A)
- Years of professional experience: 12
- Qualifications: TU Delft, industrial design engineering, 1995–2003 (MSc), Specialisation: Design for Sustainability (DfS), Lower dauphin Highschool, PA (USA) 1992–1993
- Career: Atelier LEK, 2004-now, Alfa Romeo university design intern-ship, 2001, Specialitions: Design and realization of complex assignments in public space, exterior and interior of buildings, working in co-crea- tion with a multi-disciplinary team of architects and engineers and focussing at all times on the demands of the end-user and sustainable parameters.

## Organisation

### Atelier LEK

Iris Dijkstra finished her Masters degree in Industrial Design Engineering at the Technical University of Delft ( “Design for Sustainability”) and since has specialized in lighting design.

In 2004 she founded Atelier LEK (Light & Color) a widely-oriented, independent lighting design company that focusses on the quality of lighting experience: in public spaces, exterior and interior of buildings.

Atelier LEK works at a variety of levels: master plans (Arnhem City Centre), illuminating architecture and art (Janskerk in Utrecht, Witte de With, Rotterdam) and interior lighting. (Headoffice Rands- tad, Theatre LantarenVenster, Library Rotterdam). But also corpo- rate identity and product-design are part of the palette of skills of our Atelier, such as the design of the Bicycle Chain for the 11 km cycling route on the RijnWaalpad and the award winning Central Plaza Rotterdam.

Our Atelier is furthermore specialized in working with a range of dif- ferent disciplines in an integrated design process. Light represent- ed many values and is part of a larger whole. We therefore believe it is very important to work together with all involved disciplines and stakeholders to achieve the best quality and sustainability in the lighting plans.



Figure 1: Atelier LEK Project