

Creating continuous smart city innovations

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Creating continuous smart city innovations

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The Netherlands, and especially Eindhoven, features in the top of most entrepreneurial, technology, and innovation rankings worldwide. Not only are its companies and universities successful in innovation, but also the municipality of Eindhoven can be seen as an exemplar for other cities. The Eindhoven public lighting tender provides an interesting leading case of how to use the public lighting infrastructure in a smarter way to go beyond illumination within an urban context.

Most smart city initiatives hardly go beyond the pilot project phase and are only partly able to fulfill their promise of a better quality of life for a city's citizens and visitors. At the same time, we see that the traditional public lighting procurement approach does not consider the ongoing societal and technological evolution and its accompanying challenges. Traditionally, a public lighting procurement procedure would publish strict product and technology specifications for companies to follow. With this approach there is no room for collaboration and innovation. To be successful in smart cities both the procurement approach as well as the current business models need to change drastically.

The city of Eindhoven can be seen as an exemplar case of how to take a non-traditional public lighting procurement approach by leveraging the public lighting infrastructure to go beyond illumination moving towards smart cities. From the start, the

municipality stated that the ultimate goal is to improve the quality of life in their city through continuous innovation in lighting and smart city applications. Central to realizing this goal is connected lighting and a smart lighting grid, provided by Philips Lighting. Besides energy savings, connected lighting will provide the city infrastructure that makes it possible to create a dense network of sensors and actuators, i.e. a smart lighting grid, on which the

smart city services can be based. Meanwhile, public lighting is closely interwoven with Eindhoven's identity and character as the 'city of light'. Together with the Eindhoven University of Technology the municipality of Eindhoven created a roadmap for public lighting in Eindhoven for 2030 - a shared vision for the bright future of Eindhoven that provided the basis for the procurement process. Philips Lighting, together with its consortium partner Heijmans, went into an open dialogue with the municipality to define how to make the roadmap and vision reality. More specifically, Philips Lighting, Heijmans and the Eindhoven University of Technology, designed the Smart City Continuous Innovation Process (SCCIP), a long-term oriented process that will enable continuous innovation in Eindhoven. The people and citizens of Eindhoven are central to this innovation process and their needs form the starting point for any smart lighting or smart city application.

"All in all, we see that the Eindhoven case is not a one-of-a-kind case."

Within this process four key stakeholders: (1) municipality, (2) businesses, (3) citizens, and (4) knowledge institutions collaborate in creating, developing and realizing smart city opportunities. All in all, we see that the Eindhoven case is not a one-of-a-kind case. Many other municipalities worldwide feel limited by the current product-oriented procurement procedures and traditional product business models of companies. Municipalities are therefore challenging businesses and other stakeholders to go beyond products by leveraging their technological knowledge to create and deliver smart city services that will improve the quality of life in their respective city. The full length article is available upon request or visit the Lighthouse website.

<http://www.tue-lighthouse.nl/Publications.html>

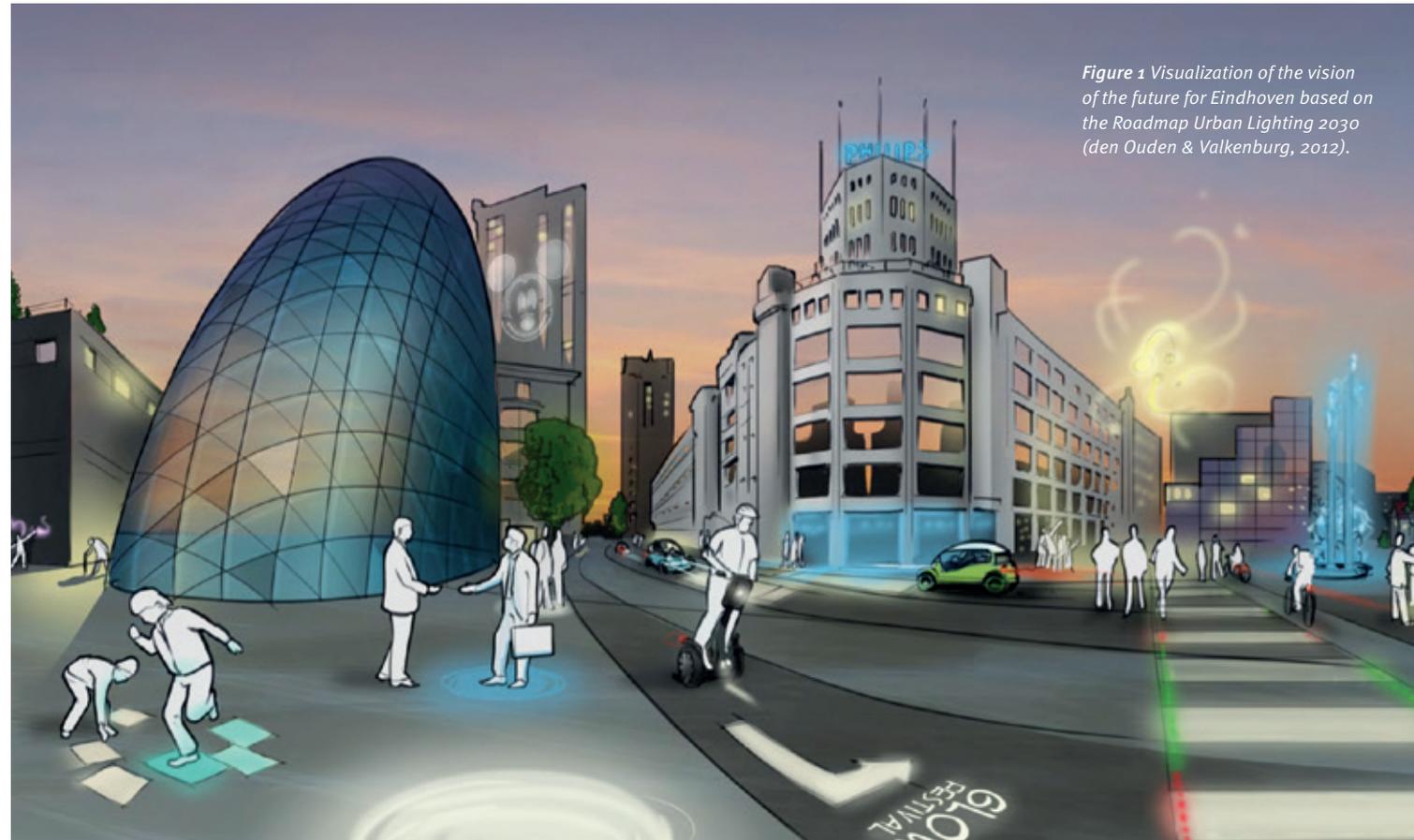


Figure 1 Visualization of the vision of the future for Eindhoven based on the Roadmap Urban Lighting 2030 (den Ouden & Valkenburg, 2012).