

Design of Smart Urban Lighting by Using Social Sustainability Approach

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Abstract : Creating cities, objects and spaces that are economically, environmentally and socially sustainable and which meet the challenge of social interaction and generation change will be one of the biggest tasks of designers. Social sustainability is about how individuals, communities and societies live with each other and set out to achieve the objectives of development model which they have chosen for themselves. Urban lightning as one of the most important elements of urban furniture that people constantly interact with it in public spaces; can be a significant object for designers. Using intelligence by internet of things for urban lighting makes it more interactive in public environments. It can encourage individuals to carry out appropriate behaviors and provides them the social awareness through new interactions. The greatest strength of this technology is its strong impact on many aspects of everyday life and users' behaviors. The analytical phase of the research is based on a multiple method survey strategy. Smart lighting proposed in this paper is an urban lighting designed on results obtained from a collective point of view about the social sustainability. In this paper, referring to behavioral design methods, the social behaviors of the people has been studied. Data show that people demands for a deeper experience of social participation, safety perception and energy saving with the meaningful use of interactive and colourful lighting effects. By using intelligent technology, some suggestions are provided in the field of future lighting to consider the new forms of social sustainability.

Keywords : behavior pattern, internet of things, social sustainability, urban lighting

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