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Reimagining the Potential of Street Lighting Infrastructure in Nairobi City

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Abstract : Cities worldwide and most notably those in the global south, including Nairobi City are experiencing accelerated population growth and urban sprawl, accompanied with multiple socioeconomic challenges' which in turn increase the pressure on already limited infrastructure such as public lighting and on limited financial resources. Based on this premise, through reimaging the value of street lighting infrastructure, the study attempts to highlight the affordance and affordability of streetlights and suggests them as a tool to optimally address limited financial resources that characterize cities in the global south. As a methodology, the paper reviews and analyzes literature available online including Nairobi city budgets; reports from Kenya Power, World Health Organization and United Nations; and articles on enterprise level Internet of Things (IoT) solutions. In conclusion, this study illustrates that streetlights can go well beyond their traditional roles of illuminating cities at night. They can be as suggested in this paper charging stations, communication network terminals and disease prevention nodes.

Keywords : affordance, Nairobi, developing economies, IoT, smart street lights, smart cities
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