Towards Smart Urban Areas in Western Desert in Egypt: Kom Ombo – Aswan Axis as A Case Study

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Abstract

Over the past two decades, most urban areas in different parts of the world have involved in many initiatives aimed to raise the level of infrastructure and urban services in order to develop its environmental, social and economic conditions and to enhance the attractiveness and competitiveness of urban areas. There is no doubt that contemporary rapid changes have affected the human use of buildings and outdoor spaces, therefore experts in the field of information and communication technology seek to work side by side with architects to develop modern methods and technologies to create urban environments that combine luxury and efficiency in the use of energy resources and the provision of information and services for users. Therefore, it is crucial that urban design can adapt to contemporary changes and current challenges in terms of overriding urbanization, encroachment on agricultural lands, climate change, desertification, and other urban problems. This study assumes that the establishment of sustainable smart urban communities varies from one region to another according to the balance between scarcity and the self-capacity of each region on one hand and the awareness of the local community and its ability to respond to smart urbanization on the other hand. This research paper aims to introduce a practical approach for activating the role of smart urban areas in the development of the proposed transverse axes of the proposed development and reconstruction corridor in the Western desert far from the narrow valley. The current research suggests a set of criteria and indicators related to the proposed urban projects in terms of their types and locations. The methodology is based on setting four scenarios for establishing smart urban communities on Kom Ombo - Aswan axis, which is one of the transversal axes of the proposed development and reconstruction corridor in the Western desert.

Keywords:

Smart urban design**;** development and reconstruction corridor**;** Kom Ombo - Aswan axis

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