

Significance of Intelligent Buildings in Sustainable Architecture

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Abstract—To cater the needs of rapid urbanization and pollution, high rise buildings are constructed which comes with problems like air circulation, temperature modulation, lighting and their control, transportation in context of enormous amount of energy usage, storage and wastage as a result of inefficient and incompetent policies and methodologies along with safety problems.

Intelligent building means a high -tech building which has precise understanding of occupier's physiological and psychosocial needs in context of visualization, surveillance, comfort, work ease & convenience. It is capable of adapting to a status change without costing a heavy sum on economics. It keeps an organized set of information of all its associated services within its dimensions that causes efficient and effective information flow, i.e. it is aware of the activities within it and its surroundings. Intelligent buildings also opens up scope for their occupants and property owners to extract profit value in terms of operational cost, long term flexibility, thermal comfort and marketability.

The effective performance of intelligent building in the three major parameters, viz. economic, environment and social, under the pressure of the ever increasing urbanization, impact of climate change and inventory management, will help us to further explore it in terms of sustainability. In this paper, we will try to explore how the parameters of sustainability can be well incorporated in the intelligent buildings or if they are already working on the same parameters.