ENVIRONMENTAL PERCEPTION STUDY OF RETROFITTED BUILDINGS FOR ENERGY EFFICIENCY IN CONTEXT TO A SMART CITY NEIGHBOURHOOD

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Abstract - Once the biggest developments in the urbanization arena in this century is the ideation and evolution of "smart cities". With the progress in information technology, telecommunication, electronics and integration, it is evident that the concept of smart city was to emerge as a natural outcome, and was obvious. However the acceptance and awareness of smart cities by theircitizens have been in question for a while now, especially in the Global South. Even in the more advanced economies and societies, 'user empowerment', as opposed to 'user centred' delivery of services, has been proposed in response to a number of global trends, such as increased individualism, extended mobility, improved living standards, and with inevitable massive expansion and pervasiveness of Information and Communication Technologies as indicated by editors Osimoand others (2007) in their book The future of eGovernment. Now, various stakeholders of the cities,have responded to these needs, which often effectively have implication on the physicality of the cities. Needless to say energy Energy is the world's largest business, withover $4 trillion in annual trade. Rapid economic growthin China and Indiahave generated a pronounced rise inenergy price and volatility, and thus the interestin and need for alternative forms of energy and energy-efficient alternatives. Smart cities are in ambit of this, and retrofitting of buildings for existing, is the only viable solution. However there is very little study done on the perception of users in response to the retrofitted buildings. This corresponds to the need for their sense of "user empowerment", "social acceptability" and "social sustainability" at large. This paper attempts to bring forth such an issue through simulation based field study and user perception survey, in context to proposed retrofitted buildings for energy efficiency in a neighbourhood of a smart city. This not only shades light on the users' perspective towards smart city interventions but also on the social context of smart cities in terms of sense of neighbourhood, sense of place and place attachment through changing paradigm physical characteristics governed by globalization and technological exigency.

Keywords - Environmental perception, Smart city, Retrofitted buildings, Energy efficiency, Smart city neighbourhood