



# **kinetic Architecture as a Tool for Architectural Adaptation**

**Towards Design Criteria for Achieving Users Needs**

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**Abstract:**

The importance of buildings is to be a shelter for a person in order to achieve his or her desire to survive and provide safety, but human needs go beyond that to broader horizons. With the development of materials and technology, architects began to search for what the surrounding environment could offer to the interior spaces of the building to meet various needs. Afterwards, seeking to achieve human comfort in the interior spaces became one of the basics of architectural design.

Achieving the diverse human needs of users is considered one of the most important issues in the architectural field. Despite of the available capabilities, the architectural product continued to move slowly towards achieving those needs. That was the result of a set of obstacles, including ideas based on the conflict between achieving physical comfort and achieving adaptation to the environment. There is a well-established idea about the preference of achieving a permanent separation of the internal environment from the external one in order to avoid its negative aspects. Through the research, it is possible to emphasize the achievement of adaptation to the physical and non-physical needs of users in the presence of the most developed capabilities on the architectural scene through what is known as “**kinetic Architecture**”.

The research aims to present the relationship between kinetic architecture and the changing physical and non-physical human needs, and to set design standards for kinetic architecture in order to meet human needs and to reach through it a measuring ruler for the design and evaluation of kinetic buildings.

**Keywords:**

Kinetic Architecture, Adaptive Architecture, Interactive buildings, Responsive buildings, Human needs, Achievement user needs, Design criteria, Evaluating dynamic buildings.