international DESIGN JOURNAL
Print ISSN 2090-9632
Online ISSN 2090-9640

An innovative approach for Reshaping of Facades of the old Building through Adaptive reuse

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Abstract:

Cairo possesses significant architectural wealth, both quantitatively and qualitatively, representing the material aspect of its cultural output. The facades of its buildings are the primary element of communication with the external environment and the most accurate expression of the building. They play a significant role in highlighting the city's ancient identity. One of the main features of downtown Cairo is that it was planned in the style of Paris. Khedive Ismail was fond of the French capital and even wanted to create a square resembling the Champs-Élysées. Indeed, Khedivial Cairo was, with its streets converging in a large square called Ismailia Square, later renamed Tahrir Square. This preserved the city's structure from ancient times, and the cultural, social, and economic characteristics that accompanied each period were reflected in the architecture of each era. The old buildings give the neighborhoods their distinctive character while simultaneously providing a tangible connection to the past. As sustainable development has become a goal for all countries seeking to balance social, environmental, and economic needs, the primary vision for a sustainable built future is to develop innovative designs that efficiently and effectively use energy and smart materials. However, this vision must take into account older buildings constructed many years ago. Although many of these buildings are in a stable condition, sometimes buildings outlast their original purposes, becoming obsolete and their value is not fully utilized. In order to revitalize and activate the sustainable values of these buildings, adaptive reuse has been adopted as a process of modifying, adapting, and reusing old buildings with their existing structures to extend their life cycle while performing a new function. This is particularly true when the building has a unique architectural character, is in a distinguished location, and is in stable condition. The research problem can be summarized as an attempt to answer the following question: How can an existing building be adaptively reused to achieve a sophisticated alternative while avoiding the loss of "character, spirit, and sense of place"? To develop a strategy for implementing adaptive reuse of a building by reshaping the facade and enhancing the building's sustainability values. The research aims to: Increase the effectiveness of adaptive reuse as an innovative approach to reshaping the facades of old buildings to enhance the building's sustainable value. Achieve a gradual transition from old to modern architecture by controlling the process of reshaping the facades of old buildings. The importance of the research lies in: Preserving the spirit and authenticity of the place through its sustainability with a contemporary vision. Activating the potential of adaptive reuse as a sustainable development option and an alternative to demolition. Research boundaries: Tahrir Square in the downtown area, Cairo, Egypt. Methodology: An adaptive reuse strategy will be formulated and tested through case study examples.

Paper History:

Paper received January 21, 2025, Accepted March 28, 2025, Published on line May 1, 2025

Keywords:

Adaptive reuse, Sustainable values, Reshaping of Facades through

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CITATION Samar Gomaa (2025), An innovative approach for Reshaping of Facades of the old Building through Adaptive reuse, International Design Journal, Vol. 15 No. 3, (May 2025) pp 371-390