Assessing the Old Buildings Recoverability into the New Life Cycle  
(The Implementation of Adaptive Reuse Potential (ARP) Model in Tehran) 
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Abstract
Revising the housing census and building statistics in many European cities, shows the large amount of old structures being reintroduced into the life cycle of the cities. It is not wise, neither sustainable to consider the building industry as a demolition machine acting likewise the “Faustian” model of development; a total neglect of the buildings’ life cycle and an endless thirst for destruction and rebuild. As it has been mentioned in all the trustworthy references, the budget spent to build a building, consists more than 75 percent of the total cost needed to plan, design, build, use, maintain, repair and dismiss the carbon emission and resolve the technical issues of a building. In other words, when a building is designed and built, it would be really a must to keep it working for the maximum time to come. In many cases one could find many upgraded centennial and even bicentennial buildings working nicely as if they have been built recently. As such the “Adaptive Reuse” has been a very dominant approach during the last three decades; a tactical policy to benefit as much as possible from the existing building stocks. Although some undeniable evidences could push the history of Adaptive Reuse back to the early 19th century, as in the conversion of the Louvre castle into a public museum, but it was only after the decline of the Modernist legacy that it became a popular and economical approach to retain the validity of old buildings for longer periods of time. After the tremendous rush of the Modernism in western countries and their “construction site-like” cities, a new movement for reevaluating the old structures and using them as an original resource for creativity and reinvention of the cities began to emerge. This was a beginning of the resurrection of the old districts and many neglected, but precious buildings previously considered as deteriorated structures. In the new paradigm the building stock is an irreplaceable urban resource which should be supported and reinforced to be a part of the future development, incarnating the urban history and its multiple facets physically.

Building stocks are the most important physical capacity for infill development and planning for their preservation, restoration and improvement is an important part of the contemporary urban regeneration plans. According to official statistics, parallel to the paradigm shifts in the field of urban regeneration and active conservation, using old buildings in European cities has increased and the demolition and reconstruction of historical and aged structures have been pushed into the margin. In a comparison, one could easily note how many of the old structures in the Iranian cities have been demolished in recent years and an important number of characteristic buildings have vanished from the urban context easily; what have been substituted has no relevance to the tangible and intangible values, lost within the process. From another point of view, despite the economic imperatives that urge the need to lower the wastes and save the investments done in constructing the buildings that have been designed to live an entire life cycle, the free market of real state brokers and developers forced the Iranian cities to demolish more buildings and to build new but absolutely non-significant ones. During this process the only thing that has had no particular value have been the valuable pieces of history which in many cases have been totally and permanently erased. The process of adaptive re-use is an outstanding criteria in the way of safeguarding physical and architectural identity and strengthening the ‘placefulness’ of historic fabrics and urban cores. In the contemporary literature of urban regeneration, some positive characteristics and principles like social and environmental sustainability, sense of place, planning mechanism upgrading, economical efficiency and built environment authenticity are attributed to the adaptive re-use of aged structures. Meanwhile the possibility to re-use the aged structure is something that should be considered in a technical and timely manner. The life cycle of building materials and the course of inevitable decline have a tremendous role in how and when a structure could be regained and reintroduced to the urban life cycle.

This article revises the process of adaptive reuse and its benefits and parallel to the subject, proposes a new equivalent for the title of ‘Adaptive Reuse’ in Persian which would refer to the both parts of the term in a literary and semantic manner. The ‘Adaptive Reuse Potential’ is a calculative and technical tool to assess the different aspects of “Obsolescence” in a specified structure. Using this model, first introduced by Craig Langston of Bond University, Australia in 2010, helps the specialists and the decision makers to have a clearer image of the real efficiency of a building and its deteriorating condition in order to speculate its potential to be used as an active structure after being upgraded. Introducing the ‘Adaptive Reuse Potential’ model to the specialist audition of Iran would be a solution for tracing the decay curve of the aged structures and assessing
the building Adaptive Reuse possibility and obsolescence criteria. This model and its subordinate equational calculations, demonstrate how and with which pace, a building or as it has been considered in this article, the structure, traverses its useful life and when it comes to the point that is most suitable for being the subject of an Adaptive Reuse. The point of maximum potential and the effective useful life of a building subject to the Adaptive Reuse would be designated during this process. As the Adaptive Reuse approach has also a policy-making aspect, estimating the condition of the buildings and calculating the potential that determines whether they could be brought back to a new life cycle as subtle structures having the peculiarities needed for accepting a contemporary role, is very crucial to the course. To light up the ARP model issues, implementing the model in a case study has been a priority. An old and architecturally valuable building in the historic-modern core of Tehran [Lâleh Hotel in Lâlehzâr-e-no Ave.], has been assessed by ARP model. A Hotel designed by the renowned architect of 1930s’ Iranian Art Deco, Vartan Hovanessian (1982-1896), has been chosen for the case study. This building, despite its long story and good construction qualities, has lost a lot during recent years. The study reveals its condition of obsolescence and the recovery potential for of the aged structure, coming back into a new life cycle. According to the results it could be confirmed that this building, like many other similar buildings still standing upright in the inner parts of the Iranian cities, is potentially capable to be re-used. The priceless pieces which fell into oblivion and if the chance of undertaking adaptive reuse projects is missed, there would be an inevitable scenario of demolition and reconstruction just as “Faust” had done; a deep pity for the future generation of citizens, deprived from an enormous fortune and disconnected from their glorious architectural background.

Keywords: Building Life Cycle, Old Buildings (Structures), Adaptive Reuse Potential, Active Conservation, Recoverability