Value Engineering
Towards Value Compatible Methodology
For National Housing Projects in Egypt
Through Function Analysis

A Thesis Submitted in Partial Fulfillment of the Requirements
of the PHD in Architecture

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The housing problem in Egyptappearedat the outbreak of WorldWar II and it still exists until that year, 2012 AD , that to say, more thanseventy year the government housingsectorpresentsnearly 50,000fifty thousandhousingunits a yearwhilethe actualrequirement converge than20000 which led to acumulativedeficit in thelast twenty five and years to 2.5 million housing units, and if we add the dissatisfaction of the end users from government product of the housing units then we might recognize the scale of problem.Also, If we added to that the evaluation of government spending size, which converges about seven billion pounds a year for the housing sector and the measuring of the spending efficiency for the pound against the housing units it also could be realized that the proplem is bigger than it appears and it linked directly and deeply with the housing project value compared to returns of the physical, psychological and functional achieved for the user and the community.

At the same time our modern world has many of the radical transformations and a dynamic changes at all levels (economic - political - social- technological ... etc) that affected on the development and the changing of many concepts and prevailing theories in all fields of science.

The difficulty of applying value engineering in the Architecture and Urban field which strongly links to the variables needs of end users. Measuring the end users needs requirementsfrom the curriculumproposed by the SAVEInternational hasno implementationmechanism can suite the nature the national architectural and urban case That led to the devaluationin the value

index of the internationalhousing projects in Egypt for the Egyptian society. And we meanhere by the low value indexof this projects is the proportionalitylack between the both the performance (function) and price (cost).

Based on the above mentioned, the research range and the nature of the problem and the formulation of the research target, which research seeks to achieve, it was necessary to set search limits works to focus onthe research problem on which can be analyzed to elements and information while reducing the changes and thus we can possibly clarify the research purpose and we can summarize these limits in these point below The research Works on analyzing the functions (Function Analysis)elements of the national housing projects according to the methodologies of the Value Engineering Technology comparing them with the social and functional needs of the users (determinethese needs through a questionnairefor the arandomsampleof users and analyzed it statistically) toreach the value CompatibleMethodology (the added researchproposed)whichworksto identify unnecessary cost in the national housing projects