ABSTRACT

The motivation for this research stems from the authors experience as a resident engineer spanning two decades, the observation of significant value engineering opportunities persistently remaining available at construction stage and the belief that the engineer's role could be enhanced significantly if these were grasped.

At present clients are increasingly dissatisfied with the service they receive from design professionals. Contractors are no longer covering up the failures of engineers and are developing stronger ties with clients. This development risks alienating the consulting engineer who must deliver improved performance or risk becoming redundant.

Value engineering has potential to fill this gap and redefine the consultant's role. This research explores the opportunities it can bring to the engineer in meeting the changing needs of clients with particular emphasis on the critical design phase.

The methodology was to combine a wide-ranging and comprehensive survey with an in-depth case-study of a specific ACEI firm. This enabled the researcher to cross-check "macro" results against a "micro" environment. The research did not envisage evaluating the merits of different value engineering techniques however if successful, the research will bring the concept of value engineering into the main stream of the Irish construction industry.

The literature review did not uncover any studies concerning the adoption by consulting engineers of a value engineering role and this paper is unique in this regard.

The sample group comprised all consulting civil/structural engineering firms on the ACEI register. More than 97% of respondents held director positions with 70% having over 20 years experience. Given the 39.3% response rate the results are significant.

The findings hold much significance for consulting engineers: a widespread resistance to value engineering, the negative effect of competitive tendering, engineers own recognition of their ability to a better service, the concept of value engineering is poorly understood.

The recommendations include: the establishment of a Government taskforce to explore policy and legislative solutions to the problems the research has brought to light; pilot studies should be introduced to investigate the potential of value engineering in an Irish context; the negative effects of competitive fee tendering on the application of value engineering should be addressed; value engineering should be incorporated in relevant engineering syllabi.

KEYWORDS

Client satisfaction, Engineering consultant, Opportunity, Role, Value engineering,