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Designers' perspectives on early contractor involvement as a means to improve the safety performance on construction sites

Mathenge, Njeri Karuga

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ABSTRACT

The construction industry is one of the major industries in the world and has one of the poorest records in Occupation Health and Safety. In developing countries with improved political and economic stability in recent years, infrastructure developments have significantly increased which has implications for the industry to deliver projects safely.

Many designers' in the construction industry in developed countries believe that contractors have knowledge to offer concerning safety as they have the experiences from different projects and can pin point potentially hazardous risks in the design phase of the project and consequently improve on the Health and Safety and Safety Performance of a project. This research aimed to discover what designers' in the South African construction industry perceived about the use of ECI in the industry and its effect on the safety performance on construction sites.

A review of the literature showed that the designers in the construction industry had various perceptions towards trust and commitment of the contractor towards safety and liability issues among other concerns. Twenty-nine questions were identified, which formed the basis of the quantitative analysis that was undertaken. Five hundred architects, engineers and project managers were identified from the Gauteng Province of South Africa and a questionnaire survey emailed to them. A census sample was used in this research and despite the low response rate (9%) from the participants; the data collected was seen as representative of the population.

Analysis of the data collected from this survey revealed that designers believe that the use of ECI in the construction industry may improve the safety performance of the project as well as including contractors earlier in the design phase may be beneficial in enhancing safety during construction. The research also revealed that the designers believe that contractors have knowledge to offer in designing for safety as well as identifying potentially hazardous risks that may elude the designers during the design phase.

From the data collected, a number of recommendations were developed to promote the use of ECI in developing countries including a review of policies and guidelines in the construction

regulations so as to boost the use of ECI and consequently reduce the number of accidents and fatalities in the industry and as well as improve the overall safety performance of construction sites in South Africa.

The overall finding of this research show that the designers in the South African construction industry have a positive attitude towards the use of ECI in the construction industry and are ready to implement it mainly due to the fact that it has a positive impact on the health and safety of workers as well as the overall safety performance of construction sites.