

Analysis of Lean, Green, and Smart Concepts to Achieve Sustainability in the Construction Industry

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Abstract

The construction industry is known as one of the major consumers of natural resources and producing the negative environmental impacts. So, the industry has increasingly taken steps to adopt sustainable and innovative strategies to minimize the negative impacts in this area. Many studies have been conducted on the concepts of pure, green, intelligent, and sustainable in the field of construction, and a few of them have studied these concepts together. Therefore, the present study has presented a conceptual model with the aim of investigating how pure, green, and intelligent concepts interact with the concept of sustainability in the construction industry. First literature review has been adopted as a way to review and apply the existing research and studies to achieve a comprehensive understanding of the synergy between these concepts. A clean, green, smart, and sustainable building will reduce environmental pollution, costs, time improve the performance and increase the residents' quality of life. The combination of these concepts provides a new perspective to reduce the negative effects of the construction industry, which paves the way for a transformation in the construction industry and architecture to achieve the three goals of sustainable development (environmental, economic, and social) and encourage construction companies to implement and new technologies in construction projects.

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