

Planning the maintenance of green building materials for sustainable development: a building information modelling approach

Abstract

Purpose: Most green building (GB) materials, which are used widely in the construction sector in Malaysia, perform poorly in terms of energy efficiency and sustainability. Nevertheless, during maintenance planning of these materials, the focus is often directed towards comfort and design instead. However, as GB material construction projects grow in scale and complexity, interconnections between the activities and processes can be noticed during problematic planning performance management to monitor the GB material components for corrective and preventive maintenance actions.

Design/methodology/approach: The concept of GB material maintenance planning for sustainable development and the main features of information and communication technology tools and techniques are based on analysis of literature reviews of GB material scenarios. **Findings:** The results show how decision-making support in maintenance planning can be unsuccessful and how planning decisions can frame the content of an integrated system to analyse information and reduce risks of GB material failure. **Originality/value:** The paper concludes that implementing a research framework for developing such a system can help improve the sustainable performance of maintenance planning of GB material economic, social and environmental issues.

Keywords

Approach; Building information modelling (BIM); Green building; Green building; ICT; Improvement; Improvement; Maintenance; Maintenance planning; Planning