Developing a Cost-Effective Web-Based Communication and Information Management System for Construction Projects

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Construction projects face several problems due to the lack of well-organized communication and information management within construction sites. The traditional communication and information management system in the site is almost run on traditional processes which makes the project delayed, misled and inefficient. Certain IT solutions have been introduced from time to time for the construction industry, and they are costly as well as do not exactly suit Sri Lankan construction conditions. Being a third world developing country, cost-effective solutions that suit the Sri Lankan construction conditions are essential. Therefore, this study aimed to develop a low-cost web-based application to communicate, make decisions, and handle information within a construction site matching the Sri Lankan construction conditions. A web-based application was developed (prototype) according to the collected expert ideas by considering their experience related to the construction sites in Sri Lanka. Semi-structured interviews were adopted to collect the relevant data, and content analysis was used to analyse them. Eventually, considering all of the above, a web-based prototype was developed to manage communication and information within the construction site. Minimizing contradictions within the worksite by providing a virtual platform to communicate with relevant parties, managing information by providing virtual document store in relevant locations, notifying tasks, etc. are provided as functions by the system.

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