MANAGEMENT PERSPECTIVE OF THE BALANCED SCORECARD TO MEASURE SAFETY CULTURE IN CONSTRUCTION PROJECTS IN SINGAPORE

Mohammed DULAIMI¹ and CHIN Kar Yin Karen²

¹ The British University in Dubai, PO Box 502216, Dubai, UAE, mohammed.dulaimi@buid.ac.ae.*
² The National University of Singapore, Department of Building, Singapore.

Abstract
The construction industry is perceived to be a dangerous industry. Since 1994, fatalities and accidents in the construction industry in Singapore have continued unabated despite stringent legislation and regulation. The frequency and severity of occupational accidents and injuries of the construction industry in Singapore are high. Construction organisations are becoming more aware that controlling physical aspects and technical hazards are not the only way to reduce accidents. However, these organisations lack the insight for the development of effective performance measures and metrics needed to achieve a comprehensive safety system. Most safety performance measurement systems have been preoccupied with the negative consequence of site accidents rather than pro-active prevention strategies.

This paper reports the findings of a study into the development of a performance measurement tool using Balanced Scorecard to measure safety performance on site. The authors discussed a framework and presented the results of a survey to identify the management goals that would contribute to a positive safety culture. The results of a survey conducted by this study suggest that safety culture on construction sites can be improved by achieving four management related goals. The goals are top management commitment to improving safety, selecting more safety-aware subcontractors, having a workforce that is competent, professional and capable of completing the project within the required safety requirements.

Keywords
construction safety, balanced score card, management perspective, culture, Singapore.

INTRODUCTION

The construction industry has been associated with hazardous working conditions. Since 1994, fatalities and accidents in the construction industry have continued unabated despite more stringent legislation and regulation, as well as numerous management driven initiatives such as a call for safety records to be one of the criteria for selecting contractors (Quek, 2001). The frequency and severity of occupational accidents and injuries of the construction industry in Singapore are high compared to those in developed countries such as United Kingdom (UK), Germany, United States of America (USA) and Japan (Seah, 1997).

Work accidents are the results of a sequence of events. They arise from different causes that can generally be classified as physical incidents posing hazardous situations, and behavioural incidents caused by unsafe acts (Kartam, 1997). Construction organisations are becoming more aware that controlling physical aspects and technical hazards are not the only way to reduce accidents. However, these organisations lack insight for the development of effective performance measures and metrics needed to achieve a comprehensive safety system. Moreover, such measures and metrics are needed to test and reveal the viability of strategies, without