A CASE STUDY OF THE MANAGEMENT OF INNOVATION IMPLEMENTATION WITHIN A CONSTRUCTION PROJECT ORGANIZATION

Florence Yean Yng LING¹, Mohammed Fadhil DULAIMI², Mohan KUMARASWAMY³ and Arun BAJRACHARYA⁴
¹ Department of Building, National University of Singapore, 4 Architecture Drive, Singapore 117566. Tel: 65-68743444. Email: bdglyy@nus.edu.sg
² Faculty of the Built Environment, University of the West of England
³ Department of Civil Engineering, University of Hong Kong
⁴ Department of Building, National University of Singapore

Abstract
The purpose of this paper is to analyse and present how an innovative idea can be successfully implemented in a construction project organisation, through the case study approach. The scope of the innovation is the top-down construction technique that was implemented successfully in a building project in Singapore. The sequence of construction makes top-down construction different from conventional technique. In conventional construction, the sequence starts from the very bottom level of structure with fully completed sub-structure. In the case of the top-down technique, construction of super-structure and sub-structure can be undertaken simultaneously with the help of partially finished main support at basement and sub-structure level.

It is concluded that the innovative technique could be successfully implemented because three main forces exist in the construction project organisation: (1) expectancy driven normative forces; (2) result driven instrumental forces; and (3) inter-organisational interactive forces. This paper is important because it shows that for innovation to be successfully implemented, the following conditions must be met: (1) clients must play an active role in the innovation; (2) client and the party who proposes the innovation must have strong bargaining positions; (3) other supporting parties to the innovation must be willing to compromise and have good working relationships with one another.

Key words
Innovation implementation, top-down construction, intra-organisation motivation, inter-organisation interaction, case study.

INTRODUCTION
The future of construction industry is likely to be characterised by intense competition because of increased globalisation and the removal of traditional geographical borders (Silars and Kangari, 1997). For construction firms to survive the competition in the future, they may adopt Porter’s competitive strategies (Porter, 1985). Among other things, Porter proposed the differentiation strategy and cost leadership strategy for firms to be competitive in the market place. The differentiation strategy involves an attempt to distinguish the firm’s products or services from others in the industry. In this strategy, firms need to undertake product engineering, have strong capability in basic research and have corporate reputation for quality and technological leadership. A firm that adopts cost leadership strategy aggressively seeks efficient facilities, pursues cost reductions, and uses tight cost controls to produce products more efficiently than competitors. These firms need process engineering skills and products that are designed for ease in manufacture.