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Centre for Asian Tall Buildings and Urban Habitat Centre for Infrastructure and Construction Industry Development

FORENSIC PROJECT MANAGEMENT: AN EXPLORATORY EXAMINATION OF THE CAUSAL BEHAVIOUR OF DESIGN INDUCED REWORK

by

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Date:May 23, 2005 (Monday)Time:6:00 - 7:00 p.m.Venue:JG03, James Lee Science Building, The University of Hong Kong

ABSTRACT

The determination as to why projects fail to meet planned schedule, cost and quality parameters is a recurring theme within the construction, engineering and project management literature. Yet, the interrelatedness and behaviour of key factors that influence these project performance indicators, particularly regarding design error induced rework, have received limited academic examination. Design induced rework has been reported to contribute more than 70% of the total amount of rework experienced in construction and engineering projects. To address this situation, a forensic management approach to determining how and why rework occurred in a commercial construction project is undertaken. Using findings from this case study along with knowledge from the literature, a systemic causal model for design error induced rework is developed. Underlying behavioural dynamics that contributed to design errors (principally related to the management of the design documentation process) were modelled and simulated using system dynamics. The results of such analysis yield insights about architectural and engineering professionals' decision-making and work practices that can influence the occurrence of design errors. The mitigation of design induced errors would significantly reduce the amount of rework that architectural and engineering firms experience. This would bring with it greater profitability for such firms and improved project performance parameters (schedule, cost, quality).

ABOUT THE SPEAKER

Professor Peter Love is Director of Research for the Working for e-Business (We-B) Centre at Edith Cowan University (Australia). Professor Love acts as the Asia Pacific Editor for the *Journal of Enterprise Information Management* and is a Senior Editor for *e-Government Quarterly*. He is an Educational Advisor to the Hong Kong Institute of Real Estate, as well as acts as an *Adjunct Professor* to the Department of Construction Management at Curtin University of Technology. Professor Love is also a *Visiting Professor* to Brunel University (UK). Professor Love has been a recipient of research grants from the Australian Research Council (ARC), Engineering and Physical Sciences Research Council (EPSRC) and Research Grants Council (RGC) in Hong Kong. He serves as an editorial advisory board member for several leading international journals, as well as acted as co-and-mini-track chair at numerous major international conferences. He has co-authored/edited five books and has authored/co-authored over 300 internationally refereed research papers, which have appeared in leading international journals such as *ASCE Construction Engineering and Management, European Journal of Operational Research, IEEE Transaction on Engineering Management, Information Systems Journal, Information and Management, Journal of Management Information Systems, International Journal of Production Economics, International Journal of Operations and Production Management, and International Journal of Project Management.*

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