

**Title:** Knowledge Management in Construction

**Sub-Title:** Examining the problematic nature of managing knowledge as a leading contractor in an Irish construction industry that is currently experiencing downsizing and knowledge loss.

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**Purpose:** Ireland's construction industry is currently experiencing a period of difficult changes; the severe downturn has resulted in much downsizing. Critical knowledge is at risk of being lost from construction organisations unless they adapt to these changes. The study aimed to examine the difficulties of managing knowledge in a leading main contractor in the changing Irish industry and provide recommendations for improving the KM process in the organisation and in the broader industry.

**Methodology:** A comprehensive Literature Review was undertaken to identify the major concepts and debates relating to the key benefits, barriers, organisational issues and tools associated with KM. A small scale, in-depth case study of one of Ireland's leading main contractors was adopted. Seven semi-structured interviews were performed with senior level management including H.R. and I.T. representatives. In addition, Engineers Ireland's Continuing Professional Development (C.P.D.) Accreditation Manager was interviewed to provide a broader view on the industry as KM forms part of the C.P.D. scheme, under which many firms, including the case study, are interested in seeking accreditation.

**Findings:** The transcending nature of KM requires that various organisational factors are considered to facilitate KM. Difficulties with strategy, culture and resources were identified in the case study. The problematic nature of using KM techniques was highlighted in relation to individual, project and organisational knowledge. Lessons Learned, face-to-face interaction, training and retention were identified as successful KM techniques. Retention will become increasingly important and may prove problematic for the case study in an industry upturn. The recently implemented Document Management System was identified as the key KM technology for facilitating KM tools, storage and transfer. The importance of utilising knowledge as a resource to overcome current industry problems was highlighted. Recommendations were provided on the case study's KM strategy, resources and sharing incentives as well as on the use of KM techniques and technologies within the organisation. Recommendations were also provided for the broader Irish construction industry in relation to improving KM practices and for areas requiring further research.

**Keywords:** knowledge loss, knowledge management, KM techniques, KM technologies, main contractor.