Chapter XVI
Knowledge Management Systems for Emergency Preparedness: The Claremont University Consortium Experience

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ABSTRACT

This article is about the design and implementation of an information system, using Wiki technology to improve the emergency preparedness efforts of the Claremont University Consortium. For some organizations, as in this case, responding to a crisis situation is done within a consortium environment. Managing knowledge across the various entities involved in such efforts is critical. This includes having the right set of information that is timely and relevant and that is governed by an effective communication process. This study suggests that Wiki technology might be useful to support knowledge management in the context of emergency preparedness within organizations. However, issues such as training in the use of a system(s), a knowledge-sharing culture among entities involved in emergency preparedness, and a fit between task and technology/system must be there in order to support emergency preparedness activities that are given such structures.

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INTRODUCTION

Research about emergency management information systems has accelerated since the September 11, 2001 events (Campbell, Van DeWalle, Turoff, & Deek, 2004). However, researchers do not use a common terminology to describe emergency management information systems. Jennex (2004, 2005), for instance, calls these systems emergency information systems (EIS). Campbell et al. (2004) use the term emergency response systems. Turoff (2002) uses the term emergency response management information systems (ERMIS) and extends this idea to the notion of a dynamic emergency response management information system (DERMIS) (Turoff, Chumer, Van De Walle & Yao, 2004). Nevertheless, the majority of the researchers in this area seem to agree that, despite different naming conventions, emergency management information systems should be designed to support emergency preparedness and to guide effective response during an actual crisis situation. In addition, although researchers explicitly do not link the idea of emergency management information systems to knowledge management, the influence of the latter on emergency management systems is evident in the literature.

This article presents a case study about the implementation of a Web-based knowledge management system to support the Claremont University Consortium (CUC) and the Claremont Colleges, in general, in emergency preparedness. The academic nature of this study centers on how an information system (specifically, a knowledge management system) can improve emergency preparedness within a consortium environment. The practical nature of the research concerns how CUC was made more ready to respond to and recover from emergencies that it might experience.

This study suggests that Wiki technology might be useful to support knowledge management in the context of emergency preparedness within organizations. However, issues such as training in the use of a system(s), a knowledge-sharing culture between entities involved in emergency preparedness, and a fit between task and technology/system must be there in order to support emergency preparedness activities given such structures.

Turoff et al. (2004) take a design stance in discussing emergency management systems. We suggest that design of any emergency management system can be tied to knowledge management principles. In addition, our findings suggest that, in addition to design, issues such as training with technology fit between tasks and technology and the existence of a knowledge-sharing culture are crucial when an organization intends to implement a knowledge management system to support emergency preparedness efforts.

The article proceeds as follows. Section two provides a snapshot of literature relevant to our study. Section three presents the methodology used, with emphasis on the case setting and the problem domain therein. Section four discusses how Wiki technology was used as an instantiation of a knowledge management system to overcome some of the emergency preparedness issues within the Claremont Colleges. Section five presents an evaluation of the system, which is presented in the form of qualitative data. The article ends with a discussion of how our findings might impact knowledge management theory and practice in the context of emergency preparedness.

RELEVANT LITERATURE

A knowledge management system in this study refers to any information technology (IT) based system that is "developed to support and enhance the organizational knowledge processes of knowledge creation, storage, retrieval, transfer and application" (Alavi & Leidner, 2001, p. 114). Gupta and Sharma (2004) divide knowledge management systems into several major categories, as follows: groupware, including e-mail, e-logs, and wikis; decision support systems; expert systems; docu-

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