Chapter 7
The Intelligence Continuum and Emergency and Disaster Scenarios

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ABSTRACT

Application of germane knowledge and pertinent information is always important; however, it is imperative in emergency and disaster situations where a few seconds lost reading irrelevant data can translate into loss of life. To address the issue, this chapter discusses the intelligence continuum, which ensures the systematic and appropriate application of the critical tools, techniques, technologies, and tactics of knowledge management (KM) to ensure that only relevant knowledge is used at all times.

INTRODUCTION

Recently, the world has witnessed several large scale natural disasters, the Tsunami that devastated many of the countries around the rim of the Indian Ocean in December 2004, extensive flooding in many parts of Europe in August 2005 and hurricane Katrina in September 2005 and the earthquakes in Pakistan. These emergency and disaster situations (E&DS) serve to underscore the utter chaos that ensues in the aftermath of such disasters, the many casualties and loss of life not
to mention the devastation and destruction that is left behind. One recurring theme that is apparent in all these situations is that irrespective of warnings of the eminent threats, countries have not been prepared and ready to exhibit effective and efficient crisis management. This chapter examines the application of the tools, techniques and technologies of the knowledge economy to develop a prescriptive model that will support superior decision making in E&DS and thereby enable effective and efficient crisis management. A critical and common theme for effecting any and all appropriate crisis management is to quickly extract pertinent and useful data which is by nature multi-spectral and residing in various and often disparate locations, analyze these data in aggregate to develop a complete picture in order to support superior decisions. To do this effectively and efficiently it is imperative to embrace the tools, techniques and processes of the knowledge economy in general (Wickramasinghe, 2006; Wickramasinghe and Schaffer, 2006; Liebowittz, 1999; Shapiro and Verian, 1999; Zack, 1999; Wilcox, 1997; Wigg, 1993) and more specifically the intelligence continuum.

DESCRIPTION OF MODEL

The Intelligence Continuum consists of a collection of key tools, techniques and processes of the knowledge economy; i.e. including data mining, business intelligence/analytics and knowledge management which are applied to a generic system of people, process and technology in a systematic and ordered fashion (Wickramasinghe and Schaffer, 2006). Taken together, they represent a powerful instrument for refining the raw data material stored in data marts and/or data warehouses and thereby maximizing the value and utility of these data assets. As depicted in Figure 1 the intelligence continuum is applied to the output of the generic information system. Once applied, the results become part of the data set that are reintroduced into the system and combined with the other inputs of people, processes, and technology to develop an improvement continuum. Thus, the intelligence continuum includes the generation of data, the analysis of these data to provide a “diagnosis” and the reintroduction into the cycle as a “prescriptive” solution.

The key capabilities and power of the model are in analyzing large volumes of disparate, multi-spectral data so that superior decision making can ensue. This is achieved through the incorporation of the various intelligence tools and techniques which taken together make it possible to analyze all data elements in aggregate. Currently, most analysis of data is applied to single data sets and uses at most two of these techniques (Wickramasinghe, 2006; Wickramasinghe and Schaffer, 2006; Newell et al., 2002; Schultze and Leidner, 2002; Nonaka and Nishiguchi, 2001; Nonaka, 1994). Thus, there are neither the power nor the capabilities to analyze
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