



Chapter 5

Three Problems of Organizational Memory Information Systems Development

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Organizational memory information systems have a diversity of contents and may need a variety of information technologies. To cope with this diversity, OMIS requires specific development methodological guidelines. First the OMIS's objectives have to be stated in organizational functional requirements. Second, the conceptual OMIS model has to be defined at a high level in terms of organizational memory subsystems, and a diversity of modelling techniques are required to develop these subsystems. An OMIS also may profit more from a description of its technological and organizational infrastructure than from a business-led architecture definition. An OMIS needs clear role definitions of its stakeholders, an organizational (improvisational) change scenario, and a non-linear systems procurement scenario. Much of OMIS development happens in its use-stage. Consequently OMIS development has to cope with high levels of complexity, diversity and organizational and IT developments. Several suggestions for further research complete the paper.

ORGANIZATIONAL MEMORY INFORMATION SYSTEMS

An OMIS is an information system containing all kinds of knowledge and information in some more or less coherent way (Stein & Zwass, 1995; Wijnhoven, 1999). Technically, an OMIS may be realized by several subsystems that may be technologically integrated in one package, or may be more loosely coupled by intranet links or intersubsystem interfaces (Gaines, 1994; Stein & Zwass, 1995; Wijnhoven, 1999). Personally, an OMIS provides support to a person's memory and helps to associate thoughts and information without any physical (IT or organizational) hindrance (Stein & Zwass, 1995). Therefore, OMIS-use has to cope well with human aspects of the OMIS-person interactions in its design and implementation. Organizationally, an OMIS is an extension of memory of organization members by electronic access and sharing of data and knowledge, and facilitating search and transfer of memory among organization members (Stein & Zwass, 1995; Wijnhoven, 1998). Like with any information system, an OMIS is expected to help the handling of certain information for specific organizational goals and functions.

OMIS is technologically not really new, but the concept is. The innovation is summarized in the following statements:

1. OMIS provides an *integration of organizational memory content* by easing the linking and transfer of information among people and different information systems. This issue is typical for OMIS as has been mentioned before by Stein & Zwass (1995), Wang (1999), and Weiser & Morisson (1998). It is not unique for OMIS, as different kinds of groupware (Enterprise Resource Planning systems, electronic commerce systems and group decision support systems) share this challenge. It is nevertheless a challenge.
2. OMIS handles a *diversity of memory contents* (varying from very formal to very informal, and from abstract to concrete; Boisot, 1998; Stein, 1995) in a seemingly united system. Because people are used to handle different kind of memory, with very different levels of abstraction and codification, an organizational memory system would not be a memory system if this would not be enabled (Weick, 1979). This means that systems with very diverse contents will require very different technologies (media) and content representation methodologies. Together with the requirement of integration this makes OMIS development very complex.
3. A memory has two features that an OMIS should try to emulate to be effective in memory processes: (1) much of a person's memory is personal and not overt, and (2) it is constantly changing as a consequence of learning. For OMIS this implies that it should be as close as possible to the user's mind and support

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