Chapter VIII
Management, Monitoring, and Mining of Service Knowledge

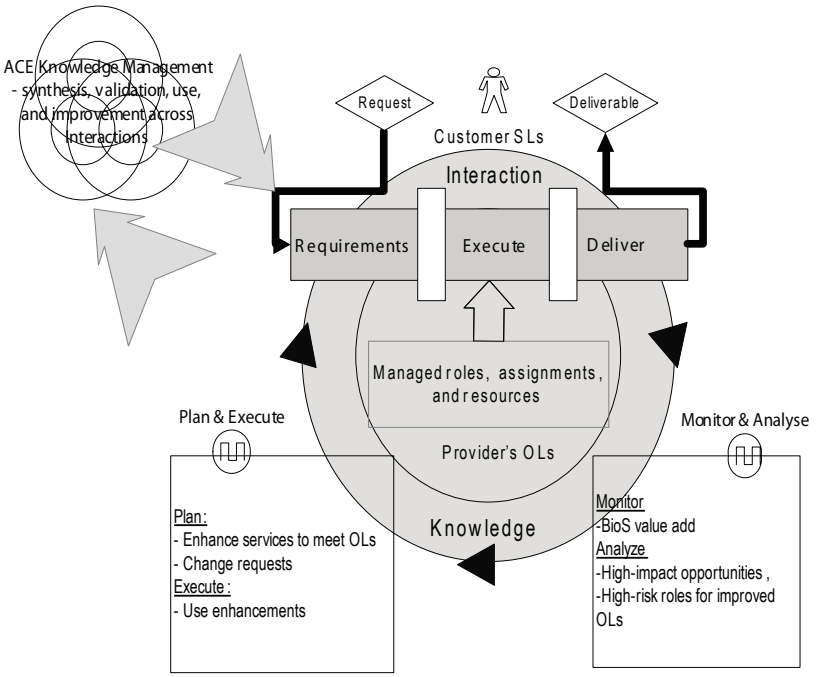
ABSTRACT

There is consensus that *explicit* knowledge is information. In addition there is *tacit knowledge* that exists in the human minds. Tacit knowledge is applied unconsciously. It is a result of people \ Agents Interactions with each other and the environment. While explicit knowledge in the form of skills and competencies is normally acquired through training and Interaction, tacit knowledge is difficult to articulate. It is something that often cannot be expressed (Polyani 1966, Polyani 1996). Here we present various ways in which the creation and use of tacit knowledge can be assisted to become part of the Enterprise Knowledge Infrastructure to enable the BioS goals of the complex system.

How does knowledge management benefit the organization?

- How is knowledge used in the delivery of services and to reduce Interaction costs?
- What are the different aids to knowledge management?
- How can knowledge be captured?
- What processes and electronic tools enable the evolution of practice knowledge?

Figure 1. Knowledge management goals for service delivery - providers perspective



Knowledge is a "fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knower. In organizations, it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices, and norms" (Davenport 1998). The business challenge for service-oriented organizations is to provide an environment within which knowledge is actively discovered, captured, shared, vetted, and delivered to improve the service. Since Knowledge is an asset, to what extent should investments be made in its management?

Knowledge discovery related to services is the process of discovering interesting, non-trivial patterns in information that help deliver more effectively. The discovery process targets Interactions and knowledge applied by Roles. Knowledge is often discovered by generating information from data *while practicing*. This type of *reflective knowledge* (Schon 1979) can be obtained by monitoring Interactions and by *abstracting or mining* non-trivial patterns (rules or associations for example) from the information. The discovery process can also be done using numerous methods and aids - visualization, data mining, statistics, neural networks, mathematical modeling and simulation, or even organizational processes. See Despres and Chauval 2000 for an overview.