Chapter XV

The Management of Grey Knowledge Through Causal Maps:
A Field Example

Aboriginal creation myths tell of legendary totemic beings who had wandered over the continent in the Dreamtime, singing out the name of everything that crossed their path—birds, animals, plants, rocks, waterholes—and so singing the world into existence [...]. By singing the world into existence the Ancestors had been poets in the original sense of poiesis, meaning creation. No Aboriginal could conceive that the created world was in anyway imperfect. His religious life had a single aim: to keep the land the way it was and should be. The man who went ‘Walkabout’ was making a ritual journey. He trod the footprints of his Ancestors. He sang the Ancestors’ stanzas without changing a word or a note—and so recreated the Creation.

(Bruce Chatwin, The Songlines)
Abstract

In this chapter, through the description of concrete examples drawn from a field study, our intention is to provide the reader with a detailed account of the application of the methodological approach presented in Chapter X. The example refers to knowledge management in software development. In particular, the aim of this chapter is to apply the methodology for the investigation and management of the grey knowledge created and elaborated by software development teams in the production of new software applications. The chapter focuses on the early stages of the process when development teams have to make a choice regarding the software life cycle model that best fits given constraints concerning ambiguity of the requirements, risks, costs evaluation and scheduling. A step-by-step application to a case-study of a software company is presented in order to illustrate the main critical methodological aspects.

Knowledge Management in Software Development Through Causal Maps

Typical knowledge management tasks, such as knowledge storing, elicitation, codification, and reuse have always been relevant issues in the management of projects of new software products. Managing knowledge within knowledge-intensive organizations, such as software firms, means providing companies with suitable methodologies and tools for each phase of the knowledge value chain.

Traditionally, knowledge management practices in software development and engineering have been focused mainly on knowledge sharing and maintenance, whereas less attention has been devoted to the elicitation issues. Actually, knowledge acquisition from internal sources, such as technicians and managers involved in the development of a new software product, is one of the most critical steps in the knowledge value chain. Being often situated, tacit, and idiosyncratic, grey knowledge is not easy to be captured and embedded into new organizational artifacts. According to the theoretical framework proposed in Chapters II to V of this book, this means that a large amount of knowledge incorporated into the theories in use does not become part of the organizational memory. This implies that especially knowledge-intensive organizations, such as software companies, actually risk missing the opportunity to activate organizational learning processes by neglecting the grey knowledge that software developers enact and share.

In this chapter, by developing further the methodological aspects illustrated in Chapters X and XI, we use causal mapping for the elicitation and mapping of grey
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