Chapter III

Adaptation of an Agile Information System Development Method

Mehmet N. Aydin, University of Twente, The Netherlands

Frank Harmsen, Capgemini, The Netherlands

Jos van Hillegersberg, University of Twente, The Netherlands

Robert A. Stegwee, University of Twente, The Netherlands

Abstract

Little specific research has been conducted to date on the adaptation of agile information systems development (ISD) methods. This chapter presents the work practice in dealing with the adaptation of such a method in the ISD department of one of the leading financial institutes in Europe. The chapter introduces the idea of method adaptation as an underlying phenomenon concerning how an agile method has been adapted to a project situation or vice versa in the case organization. In this respect, method adaptation is conceptualized as a process or capability in which agents holding intentions...
through responsive changes in, and dynamic interplays between, contexts and method fragments determine an appropriate method for a specific project situation. Two forms of method adaptation, static adaptation and dynamic adaptation, are introduced and discussed in detail. We provide some insights plus an instrument that the ISD department studied uses to deal with the dynamic method adaptation. To enhance our understanding of the observed practice, we take into account two complementary perspectives: the engineering perspective and the socio-organizational perspective. Practical and theoretical implications of this study are discussed.

Introduction

Despite the best endeavors in the area of information systems research and practice, the effective use of information systems development methods (ISDMs) remains an issue on both academics’ and practitioners’ agendas (Iivari, Hirschheim, & Klein, 2001). In the 1980s and 1990s, the rationales behind structured, brand-named ISDMs, the so-called conventional methods, were being questioned as being IT oriented, complex, rigid, and inappropriate for postmodern forms of organizations whose distinctive character was to be adaptable to continual change (Sauer & Lau, 1997). Recently, agile—denoting “having a quick resourceful and adaptable character” (Merriam-Webster Online, 2003)—ISDMs, agile methods in short, have appeared as a solution to the long-standing problems related to conventional methods.

This chapter is mainly concerned with the adaptability of agile methods (i.e., the extent to which a method is to be adapted to the project situation at hand or vice versa) yet points out the need for further research in order to understand other distinctive aspects of agile systems’ development and to make sense out of the dispersed field of agile methods (Abrahamsson, Warsta, Siponen, & Ronkainen, 2003). As we shall see later on, many studies concerning the effective use of ISDMs adopt the notion of adaptation but use different terms or concepts in their theoretical constructs, for example, “method fragment adaptation” in Baskerville and Stage (2001), “scenario use” in Offenbeek and Koopman (1996), “method tailoring” in Fitzgerald, Russo, and O’Kane (2000), “situational” or “situated method engineering” in Harmsen, Brinkkemper, and Oei (1994) and Slooten and Brinkkemper (1993),
Related Content

IAIS: A Methodology to Enable Inter-Agency Information Sharing in eGovernment
[www.irma-international.org/article/iais-methodology-enable-inter-agency/3303/](www.irma-international.org/article/iais-methodology-enable-inter-agency/3303/)

A Cost-Based Range Estimation for Mapping Top-k Selection Queries over Relational Databases
[www.irma-international.org/article/cost-based-range-estimation-mapping/37210/](www.irma-international.org/article/cost-based-range-estimation-mapping/37210/)

Integrative Information Systems Architecture: Document & Content Management
[www.irma-international.org/chapter/integrative-information-systems-architecture/20754/](www.irma-international.org/chapter/integrative-information-systems-architecture/20754/)

Privacy-Preserving Outsourced Similarity Search
[www.irma-international.org/article/privacy-preserving-outsourced-similarity-search/118088/](www.irma-international.org/article/privacy-preserving-outsourced-similarity-search/118088/)

Formal Models and Hybrid Approaches for Efficient Manual Image Annotation and Retrieval
Rong Yan, Apostol Natsev and Murray Campbell (2009). *Semantic Mining Technologies for Multimedia Databases* (pp. 272-297).
[www.irma-international.org/chapter/formal-models-hybrid-approaches-efficient/28838/](www.irma-international.org/chapter/formal-models-hybrid-approaches-efficient/28838/)