



Chapter XVII

Lessons Learned in Reference Modeling

Wolfgang Höhnel, PPI Consulting Group GmbH, Germany

Daniela Krahel, PPI Consulting Group GmbH, Germany

Dirk Schreiber, University of Applied Sciences Bonn-Rhein-Sieg, Germany

Abstract

A reference model is always developed in order to support a specific purpose. The development environment is setting the broader context. Limitations are not only set by size and experience of the modeler team or by budget and time constraints. The intended usage scenario also defines the fundamental contour of a reference model. During the practical work with reference models, a range of key issues has come up to increase the suitability of reference models for daily use. As the result of many projects, the authors have summarized the key issues and formulated critical success factors for reference modeling projects.

Introduction

In the '80s, the overall target of discussions on reference models was aimed at "how to construct." Today, the focal point was shifted to "how to use." Since many reference models for various purposes are available now, the discussion on concrete usage aspects of the models is more important to the practitioners. In the same way, the types of usage scenarios for reference models have increased. Reference models do not only provide a basis for application development as an aid for navigation and structuring (Schuette, 1998). They are also used to model the business in terms of operational and organizational structures. In fact, the same reference model supports a "make or buy" decision for a business application as well as a definition of a migration path between two applications. Additionally, it provides the starting point for an individual application development or organization development project. Furthermore, the reference model can be used as a template for organizational decisions during evaluation and the customization process of a standard application (Becker & Knackstedt, 2003; Keller, Lietschulte, & Curran, 1999; Kruse, 1996). Steve Hitchman defines reference models also as a "framework of strategic thinking" (Hitchman, 2005). This framework is applicable to all operations of an enterprise and assists in designing the business processes.

We share the common criticism on usability of reference models (Patel, Sim, & Weber, 1998). Nevertheless, in our opinion an enterprise will have its advantages if models are being used in well-defined environments (Schuette, 1998). Some investment is necessary in order to benefit from the use of reference models as anticipated. There is a danger to underestimate the effort of preparing the modelers' training and of adopting the reference model to the changing requirements over time. In the following sections, we outline our lessons learned.

A long-time relationship with the organization-wide data model of the German Savings Bank Organization, also known as the SKO Data Model, has been the bases of our experience. The SKO Data Model covers efficiently all business areas of savings banks (Krahel & Kittlaus, 1998). It is a reference model that has been deducted and further developed from the IBM Financial Services Data Model (IBM FSDM) (Financial Services Data Model, 1993).

Typical processes to construct, to apply and to maintain reference models are described in section "The Process of Managing a Reference Model." In the section, "Critical Success Factors," we formulate a set of critical success factors to determine the success for conducting the processes described in the previous section. The section "Exemplary Scenarios for Using a Reference Model" illustrates the implementation of these identified factors by presenting three usage scenarios of the SKO data model. "Summary and Outlook: Perspectives on Reference Modeling" summarizes the lessons learned and points out some perspectives for reference modeling.

The Process of Managing a Reference Model

The activities in reference modeling can be grouped into three main processes: construction, customization and maintenance of the model.

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