Chapter XIX
Restructuring the Marketing Information System for eCRM: An Application of the Eriksson–Penker Method

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ABSTRACT

This chapter considers the importance of business modelling for implementing e-CRM systems. The introduction of e-business models requires the adaptation of the Marketing Information System the specific characteristics of the online environment. The representation of various components of the Marketing Information System, and of the flows of information among various organizational departments, represents an essential step for the successful implementation of e-CRM systems. Considering the specific requirements of this restructuring process, chapter presents the advantages of the Eriksson-Penker Business Extensions of the Unifying Modeling Language (UML), and exemplifies their use for modeling the Marketing Information System during the implementation of an interactive e-CRM approach.

INTRODUCTION

The development and introduction of new information technology applications and marketing paradigms are forcing business organisations to continuously evaluate and restructure their ***Marketing Information System (MIS).*** However, the complexity of the ***MIS*** and its connections with various organisational departments, functions and processes, creates important challenges for the restructuring process. From this perspective, the application of a ***business modeling*** approach represents an essential pre-requisite for identifying the ***MIS*** components that need to be adapted to the new competitive conditions and for representing their future integration in the organisational architecture. This chapter presents the advantages of the ***Eriksson-Penker Business Extensions*** of the ***Unified Modeling Language (UML)***, and exemplifies their use for modeling the ***Marketing***

Information System during the implementation of an interactive ***eCRM*** approach.

BACKGROUND

The opportunities provided by the rapidly evolving online markets have determined many firms to initiate e-business operations. However, the success of these initiatives is determined by capacity of enterprises to properly understand the specificity of the Internet, and to restructure their ***Marketing Information Systems*** in order to develop a competitive advantage. In this context, the ***eCRM*** systems represent interesting solutions for adopting a customer-centric approach and for increasing the online value propositions (Jayachandran, Sharma, Kaufman, & Raman 2005; Payne, & Frow 2005; Srinivasan, & Moorman 2005). Value maximisation happens when firms and customers engage in long-term relationships (Vargo, & Lusch 2004), co-creating personalised value (Prahalad, & Ramaswamy 2004), based on information exchange and close collaboration in all the stages of product R&D, manufacturing and commercialisation.

The ***eCRM*** system comprises a number of business processes, inter-linked in a logical succession:

- Market segmentation: the collection of historical data, complemented with information provided by third parties (such as marketing research agencies), is segmented on the basis of ***customer life-time value (CLV)*** criteria, using data mining applications.
- Capturing the customer: the potential customer is attracted to the web site of the firm through targeted promotional messages, diffused through various communication channels.
- Customer information retrieval: The information retrieval process can be either implicit or explicit. When implicit, the information retrieval process registers the web behaviour of customers, using specialized software applications, such as 'cookies'. On the other hand, explicit information can be gathered through direct input of demographic data by the customer (using online registration forms or questionnaires). Often, these two categories of information are connected at database level.
- Customer Profile definition: the customer information collected is analyzed in relation with the target market segments identified through data mining, and a particular customer profile is defined. The profile can be enriched with additional data, e.g. external information from marketing information providers. This combination creates a holistic view of the customer, its needs, wants, interests and behaviors (Pan, & Lee, 2003).
- Personalization of firm-customer interaction: the customer profile is used to identify the best customer management campaign (CMC), which is applied to personalize the company-customer online interaction.
- Resource management: the company-customer transaction require complex resource management operations, which are partially managed automatically, through specialized IT-applications such as Enterprise Resource Planning (ERP) or Supply Chain Management (SCM), and partly through the direct involvement and co-ordination of operational managers.

BUSINESS MODELING IN THE DIGITAL ENVIRONMENT

The effective functioning of the ***eCRM*** system requires a gradual process of planning, design and implementation, which can be greatly enhanced through ***business modeling***. The selection of an appropriate ***business modeling*** language is essential for the successful implementation of the eCRM system, and consequently, for evaluating and improving its performance (Kotorov, 2002). The starting point for this selection is an analysis