

## Chapter 26

# Augmenting Analytical CRM Strategies with Social BI

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### ABSTRACT

*Large communities built around social media on the Internet offer an opportunity to augment analytical customer relationship management (CRM) strategies. The purpose of this paper is to provide direction to advance the conceptual design of business intelligence (BI) systems for implementing CRM strategies. After introducing social CRM and social BI as emerging fields of research, the authors match CRM strategies with a re-engineered conceptual data model of Facebook in order to illustrate the strategic value of these data. Subsequently, the authors design a multi-dimensional data model for social BI and demonstrate its applicability by designing management reports in a retail scenario. Building on the service blueprinting framework, the authors propose a structured research agenda for the emerging field of social BI.*

### 1. INTRODUCTION

In October 2012 Facebook announced that their online social network had exceeded one billion active users. Facebook and other social media services, such as Twitter with about 500 million members and YouTube with over 48 million members, provide a massive amount of user-generated content. Online social networks are among the most important landmarks in the history of IS and marketing research. Social media permeates almost all activities of professional and social life. Facebook has even introduced a chronicle

that provides a complete, year-long footprint of each member's social activities.

The combination of data from online social networks with the customer data stored in common enterprise application systems can greatly enhance customer relationship management (CRM) such that customer data analysis delivers much more reliable and holistic results. One opportunity is offered by accessing a customer's social ties in online social networks. Knowledge about their customers' current life situations might enable companies to offer their clients integrated and customized solutions that benefit suppliers and

DOI: 10.4018/978-1-4666-6114-1.ch026

customers at the same time. Access to customer interests, interest group memberships, and/or social event attendance could also augment customer profiles in CRM systems.

The strategic potential of online social networks for organizations lies in the complementarity of the data offered with the data that is already available in internal data bases. Rosemann, Andersson, and Lind (2011) conceptualizes online social networks as complementary digital public assets (DPA), goods that, since they are characterized by non-excludability, non-rivalry, versatility, and positive network effects, differ significantly from common enterprise-wide systems that can be fully controlled by organizations. DPAs are external assets that can be freely consumed by organizations for their own purposes. In this paper, we investigate how data that is administrated on DPA can be used to augment analytical CRM strategies with user-generated content. We focus on the conceptual design of BI systems and the design of management reports.

This paper makes four primary contributions. First, we conceptualize social CRM and social business intelligence (social BI) as emerging research phenomena in the IS discipline. Second, we present how data from online social networks can augment analytical CRM strategies by matching CRM strategies with the data objects contained in a re-engineered data model of the online social network Facebook. Third, by designing a multidimensional data model for structuring business reports, we inform the conceptual design of future social BI systems. Finally, we propose a research agenda for the emerging field of social BI based on the service blueprinting framework.

The paper is structured as follows: Section 2 reviews related work on social media, social CRM, social BI, and multidimensional data modeling. Section 3 begins with an analysis of the data requirements of analytical CRM strategies that aim to maximize the lifetime value of customers, then reverse-engineers Facebook's conceptual data model based on the data visible

from a user's perspective, and finally discusses how these data might contribute to fulfilling the information requirements of CRM strategies. Section 4 demonstrates the applicability and usefulness of the multidimensional data model by presenting management reports for a fictional retail company. Section 5 proposes a structured research agenda for the emerging field of social BI, and Section 6 concludes and reviews the limitations of the research.

## **2. RELATED WORK**

### **2.1. Using Social Media Along the Customer Lifecycle**

Kaplan and Haenlein (2010, p. 61) define social media as "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of user generated content." The content that users generate in social media has become increasingly relevant to product and brand marketing (e.g. Kaplan & Haenlein, 2010; Thompson & Sinha, 2008).

Building on a four-stage categorization of a customer's lifecycle (Rygielski, Wang, & Yen, 2002), we describe the potential benefits that social media contribute to product and brand marketing. The first category or stage of a customer's lifecycle is that of the *prospect*. Prospects are potential customers who have yet to make contact with the company. Marketing experts can use existing online social networks to influence network members who might be potential customers by engendering a sense of loyalty, thereby increasing the likelihood that the members will make a purchase (Thompson & Sinha, 2008).

The second stage of a customer's lifecycle is that of the *responder*. Recommendation methods have been developed to increase the number of people who may show an interest in a product or service. For instance, Liu and Maes (2005)

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