

CUSTOMER RELATIONSHIP MANAGEMENT AND BUSINESS ANALYTICS: A LEAD NURTURING APPROACH

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Abstract: This paper makes an exploratory combination of operative customer relationship management (CRM) and business analytics (BA). Based on Delen & Demirkan (2012a), the three categories of business analytics (descriptive, predictive and prescriptive) are related to the operative CRM perspective. The combination results in an exploratory framework that imply possibilities to increase our understanding of different critical CRM based questions that management need to address on the operative level. Apart from this the framework aim at contributing to the development of the Microsoft Dynamics CRM platform by underlining the importance of business analytics in the decision making of sales and marketing executives and managers. This is done by focusing on the sales process and especially on lead nurturing by presenting three lead scenarios and discussing how the scenarios could be analyzed.

INTRODUCTION

The marketing discipline has gone through a substantial change in perspective over the last 20 years. This perspective has changed from a product and production focus, to a customer and user centric approach (see e.g. Grönroos, 2000; Storbacka & Lehtinen, 2001; Payne, 2006). Another change in focus is the change from the transaction approach which has been dominant in traditional marketing, to a customer relationship approach. This shift in perspective has mobilized academics to conduct research and increase our understanding of the customer as the most central component in business, and to explore concepts and create models that describe and analyze the customer relationship.

This paper will deal with the operative perspective to CRM that has mainly focused on the management of customer relationships. This approach has been focusing on the supplier or seller and their ambition to manage customer relationships efficiently. The approach has tight correlations to the literature of sales, campaign and service management. Apart from these theoretical marketing fields, the operative CRM approach has been developed by the strong progress in information technology. Especially from 1995 to date, software vendors like Microsoft, Oracle, Siebelⁱ, Baanⁱⁱ, Salesforce etc., have systemized and automated the sales and campaign processes in companies, by developing and launching IT systems for CRM.

Business analytics is a field with its roots in management information systems, business intelligence and artificial intelligence. Davenport (2013) present three eras in the development of analytics; Analytics 1.0 - the era of business intelligence, Analytics 2.0 - the era of big data and Analytics 3.0 the era of data enriched offerings. The past 20 year's development of the fixed and now mobile internet infrastructure and the explosion of user and customer generated data has increased the need to develop agile and service oriented decision support systems (see e.g. Delen & Demirkan, 2012b). A convergence of the information technology ecosystem is taking place, in which service oriented architectures (SOA), Web 2,0 (3,0) and cloud computing are creating new opportunities for more efficient analytics. However, the user generated data is often highly unstructured and therefore complex in nature, which thus poses a challenge to the data, information and analytics process. According to Delen & Demirkan (2012a), business analytics as a service can be divided in three categories; descriptive analytics, predictive analytics and prescriptive analytics.

AIM

The aim of this paper is to combine operative customer relationship management and business analytics to present an exploratory framework that explores the two areas. This is further elaborated with a focus on the sales process based on lead nurturing.

CUSTOMER RELATIONSHIP MANAGEMENT

Operative CRM has mainly focused on efficient management of customer relationships and is related primarily to the sales management literature. The traditional core in sales management is the sales process approach. This approach focuses on the sales process, from a sales opportunity being generated to an order being placed, i.e. the whole sales pipeline and the central operative activities related to it. Another central area of literature is campaign management which focuses on planning, launching and evaluating different marketing campaigns to potential or existing customers. A third area of literature which is important for the operative approach, is that of service management. Service management literature tends to focus on the process of creating services as an interaction between the service provider and the customer. This is clearly evident in the definition of a service given by Grönroos (2000);

“A service is a process that consist of activities that are more or less tangible. The activities are usually but not necessarily always taking place in the interaction between a customer and service personnel, and/or physical resources or products and/or the system of the service provider. The service is a solution to a customer’s problem.”

When theories of sales management, campaign management and service management are combined, applied and used in the analysis of a practical customer relationship context, certain managerial challenges arise. The common denominator of these challenges is managing the data related to the sales process, campaign management and field service encounters. In the beginning of the 1990’s, software vendors identified these critical business challenges and started to develop CRM software to deal with them (Dyche, 2002). The big difference with these management information systems was that they did not focus on data structured from a production or product perspective, but instead structured from a customer perspective, i.e. creating customer based information concerning the sales process, campaign management and field services.

In this paper the focus will be on the sales process and the concept of lead nurturing will be explored and later related to the business analytics framework. In figure 1 the sales process is presented from the perspective of three lead scenarios.

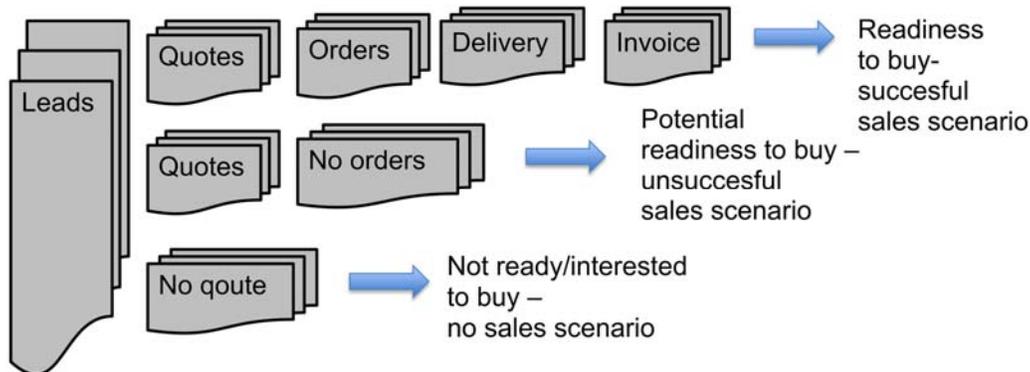


Figure 1: Lead scenarios

The successful sales scenario is based on a fact that the customer is in a state of readiness to buy which is indicated by the requested quote or quotes that the customer receives. The customer has also decided to buy your company’s products and/or services, i.e. they have decided to place an order to your company. The unsuccessful sales scenario is based on a potential readiness to buy which is indicated by the requested quote or quotes that the customer receives. However, the customer decides not to place an order to your company, which makes it an unsuccessful sales scenario. This does not automatically indicate that you have lost the deal it might also be that the customer decide to cancel or postpone the purchasing process altogether. Finally, if the customer is not ready to buy, i.e. no quote is requested then there are no sales scenario. The Microsoft Dynamics CRM 2013 sales process is structured according to the presented sales process with data being registered from a lead to an invoice.

BUSINESS ANALYTICS

Management information systems and business intelligence has for years created decision support systems (DSS) to help top and middle management to control and assess business processes, and to support decision making. The rapid developments in IT infrastructure and software have created new opportunities to organize and implement decision support systems. According to Demirkan & Delen (2012b), there is clear need for a shift from a system development methodology which is product oriented (i.e. focusing on application acquisition, installing, configuration and maintaining), to a service-oriented platform focusing on agile, dynamic, value creating and rented service solutions. A service oriented architecture (SOA) is emerging that is tightly connected with cloud computing. The rapid development of IT infrastructure, and increased and cheaper data storage capacity has created challenges for organizations to manage the large amount of data, i.e. big data. Gartner (2012) define big data as high volume, high velocity, and/or high variety information assets that require new forms of processing to enable enhanced decision making, insight discovery and process optimization. IBM research has also identified a need to evaluate the veracity of data, i.e. the truth of data (Rometty, 2013).

Approaching cloud computing as a combination of software-as-a-service, infrastructure-as-a-service and platform-as-a-service, requires companies to start to focus on the decision maker. If a service approach is applied instead of a product approach, then a critical step is to identify the decision makers concerns and needs (i.e. problems and opportunities), to support efficient and innovative decision making. Microsoft Dynamics CRM 2013 has just last year (2013) taken this step to offer software, infrastructure and platform as a service. This is a big step that has consequences to how the service and not the product should be developed in the future. The user and decision maker approach becomes the most critical element in the future service development.

Delen & Demirkan (2012b) have developed a conceptual framework for service oriented decision support systems (SODSS). In this framework, the input data for decision making comes from the business processes and external data. This data is then managed and structured to provide information and eventually processed by analytic models in an SOA. As a result of utilizing the SOA, the decision maker will acquire information and knowledge that enhances their possibility to solve problems more efficiently and to identify value creating business opportunities. A step further is the era of Analytics 3.0 where Davenport (2013) presents a vision of creating customer value based data-enriched offerings in any industry. "Today it's not just firms and online companies that can create products and services from analyses of data. It's every firm in every industry."

Analytics-as-a-Service

According to Demirkan & Delen (2012a), analytics aim at reaching business objectives through reporting data and analyzing trends, creating predictive models to foresee future problems and opportunities, as well as analyzing or optimizing business processes to improve performance. They divide business analytics in three categories, i.e. descriptive, predictive and prescriptive (figure 2).

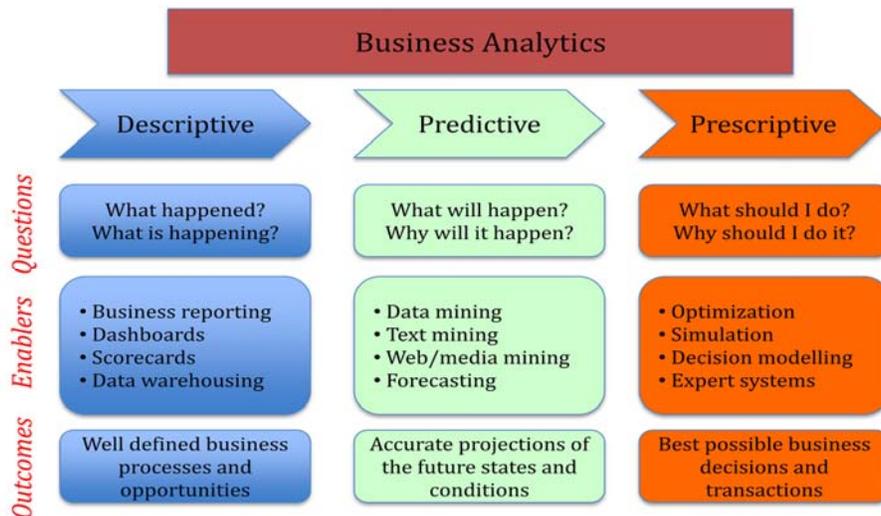


Figure 2: Business analytics (Demirkan & Delen, 2012a)

Descriptive analytics answer the questions "what happened?" and "what is happening?". This type of analytics is traditionally periodic, ad-hoc or interactive business reporting which aims at identifying business problems and opportunities. Predictive analytics answer questions like "what will happen?" and "why will it happen?". The enablers for predictive analytics are data mining, text mining, web mining and forecasting, with the objective of making accurate projections of the future. Prescriptive analytics searches for answers to questions like "what should I do?" and "why should I do it?". To be able to address these questions we need mathematical algorithms to conduct optimization, simulation, and decision modeling, and to create expert systems with the aim of identifying the best possible business decisions and transactions.

CRM AND BUSINESS ANALYTICS

This paper has discussed operative CRM and the three business analytics perspectives: descriptive, predictive and prescriptive. To make an exploratory relation between operative CRM and business analytics, we have combined these in a single table (table 1).

Table 1: CRM and Business Analytics

	Descriptive analytics	Predictive analytics	Prescriptive analytics
Operative CRM	What is happening with our sales pipeline, campaigns and field services?	What will happen with our sales, campaigns and field services?	What should we do to increase our sales? What should we do to make the sales, campaign and service processes better?

In table 1, critical questions are asked for operative CRM. By stating these questions, the aim is to identify what type of data, metrics and KPIs would be needed when engaging in descriptive, predictive and prescriptive business analytics.

To illustrate business analytics on a more practical level we here use the lead nurturing approach and elaborate on how information and knowledge could be created that would benefit operative CRM decision making. This is done by analyzing the three lead scenarios (see table 2).

Table 2: Lead scenario analysis

Lead scenarios	Data	Quantity	% of total leads	Characteristics of the scenario?	Pattern of behavior
Readiness to buy- successful sales scenario	What? Where? How?	How many?	Percentage	How and why?	Knowledge
Potential readiness to buy – unsuccessful sales scenario	What? Where? How?	How many?	Percentage	How and why?	Knowledge

Not ready/interested to buy – no sales scenario	What? Where? How?	How many?	Percentage	How and why?	Knowledge
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To be able to analyze the lead scenarios we first need to identify what type of data is needed as well as where and how this data can be collected. Then based on the quantity of the different types of scenarios we calculate a percentage of the total number of sales scenarios. To be able to generate knowledge for decision making we then need to identify characteristics of the different scenarios and finally generate knowledge about the pattern of customer purchasing behavior. This can eventually be related to the business analytics framework presented earlier to be able to develop more accurate lead nurturing based on descriptive, predictive and/or prescriptive business analytics.

CONCLUSIONS

It is important to note that these are only exploratory steps to combine operative CRM and business analytics, and therefore the enablers and outcomes cannot yet be discussed. This however implies that there are interesting possibilities to widen the scope of operative CRM in relation to the three BA approaches and introduce new insight in decision making concerning sales and marketing on both strategic and operative management level.

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ⁱ Siebel was acquired by Oracle Corporation in September 2005

ⁱⁱ Baan was acquired by Invensys in June 2000