

POSSIBILITIES OF USING ICT FOR INCREASE OF CUSTOMER FEELING OF EXCEPTIONALITY

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Abstract

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Accession of the Internet undoubtedly has contributed to the shift of marketing activities. With the increasing availability and wealth of online information customers become more knowledgeable and sophisticated. If a company wants to keep its customers in long term, it must offer something more than an “ordinary” product, which has comparable substitutes in tens of other companies.

At first it is necessary to identify customers behavior and thinking. Observation of his/her preferences of a demanded product line discovers products playing the key role from his/her point of view. We use methodical tools for this purpose e.g. CRM systems, Business Intelligence etc. Over gained metrics from data in data warehouses (observation subsystem) we make evaluations according to various criteria (subsystem of evaluation). In this report we methodically open up not just e.g. data mining technologies, but also based on aggregated data we infer e.g. consumer's trends.

The goal of the article is to point out suitable instruments which enable to create interaction with customers, where they'll be able to participate in creation products of their own. The Internet seems as a perfect communication channel for this interaction. Web application will consist of solution of an observation subsystem as a database application and of evaluation subsystem as the application of a row of methods e.g. multicriteria evaluation. Web applications feedback effect leads into knowledge of selected customer's characteristics, which enables to offer him/her among others a special line of standard products.

By creating a disposable web application it's possible e.g. to offer customers absolutely common products with different visual angle. Thanks to gained information and knowledge we divide customers into groups and then target on them specifically.

customer, value for customer, ICT, CRM, web application

The advent of the Internet has doubtlessly contributed to marketing scope shifting. In the course of time the possibility of acquiring abundant information has grown and consumers have become more and more knowledgeable and sophisticated. They know what is offered on the market and they ask for the best. To be able to manage such market conditions, companies need to diversify their products or services if they do not want to change them into ordinary goods for customers.

One effective way to diversify is to create a system that precisely and consistently interacts with customers. Such a system when collecting demographic data or monitoring the behavior of individual cus-

tomers can accurately target the specific requirements of each individual. This kind of targeting also helps in devising an effective plan of support or in case of potential customers recognition when a company comes to market with new products. Consistent customer interaction means that the company must retain transaction records and answers in an online system to make them available any time for its trained staff who know how to handle them, and thus could help to establish a close relationship with the customer (Rygielski *et al.*, 2002).

The current trend is the fastest and most efficient information processing as possible and editing of the collected data so that it can be effectively used to

support the management of the organization. As in the journal *Expert Systems with Applications* Ngai, Chau and Xiu state, the customer relationship management involves a set of processes and systems that allow the support of a corporate strategy in order to build long-term profitable customer relationships. The CRM strategy success depends largely on the quality of the data base of customers and the tools which the company owns. Moreover, the rapid growth of the Internet and its associated technologies has greatly expanded opportunities for marketing itself and transformed the way in which the relationship between a company and its customers is managed (Ngai *et al.*, 2009).

In the journal *Business & Information Systems Engineering* Gneiser indicates that a large number of companies are now operating in stagnant markets with a high rate of competition. Moreover, thanks to the shift of the product-oriented perspective to the relationship oriented one in the past twenty years the growing interest in customer relations is evident. Particularly in crisis situations, such as the current financial and economic crisis, the importance of strong customer relationships and a balanced portfolio of customers for the company's survival is obvious. It is therefore not surprising that the interests and decision-making processes of businesses are increasingly focusing on customer relationship (Gneiser, 2010).

This article aims to highlight possibilities offered by information technology tools to support customer relationship management. Above all, it focuses on the issue of value for the customer, hence the ways how to arouse the feeling of uniqueness in him or her.

METHODS AND RESOURCES

CRM strategy and its types

CRM Marketing Strategy seeks to create greater value for customers through individual care for each customer in the form of individual communication, special services, customized products, or special quotation (Peppers, Rogerss)¹.

As Lošťáková *et al.* stated in the last fifteen years three types of CRM strategy have gradually been implemented.

Mass personalization

At this level, customers are recognized by names and addresses, or eventually purchasing behavior. This information is used for creating a system of individual marketing communication with target customers, so that the customer has the impression that it is individually cared for him/her, although standard products are offered to him/her.

Mass customization

This strategy is based on the recognition that some customers are willing to pay more for the extra special benefits. The central point of the strategy is to let customers help shape the product to meet their individual needs and price sensitivity, but from the standard products offerings of products components.

Differentiated customization

Differentiated customization (differentiated CRM) respects different needs and requirements of customers and for individual customers there are "tailor made" products as well as the way of distribution and communication, simply the whole marketing mix personalized. The active co-making a unique value for customers based on close collaboration of the producer and customer is significant (Lošťáková *et al.*, 2009).

Application of data mining techniques in CRM

Ngai, Chau and Xiu indicate in their article that CRM consists of four dimensions: *customer identification, customer attraction, customer retention, customer development*.

These four dimensions can be understood as a closed cycle of customer management. They share a common goal of deeper understanding of customers so that organizations maximize customer value in the long term. Data mining techniques can help to achieve this goal by gaining or detecting hidden properties and behavior of customers from large databases. The generative aspect of data mining is based on the creation of models from data. Each technique for data mining can perform one or more of the following types of data modeling: *association, classification, clustering, forecasting, regression, sequences discovery and visualization*.

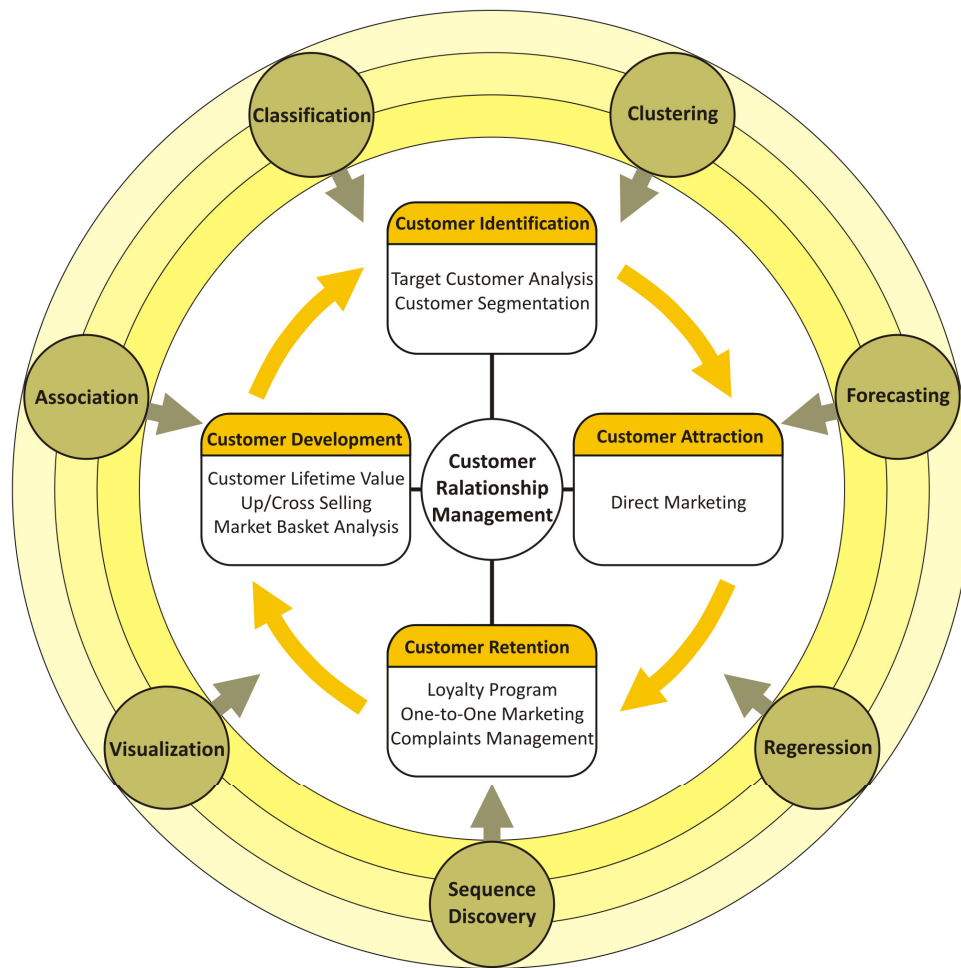
For each model there are a number of machine learning techniques. The choice of data mining techniques should depend on the characteristics of data and business requirements. Here are some examples of some commonly used algorithms for data mining: *association rules, decision trees, genetic algorithms, neural networks, k-nearest neighbor, Linear/logistic regression*.

Figure 1 is a graphical representation of the framework for using data mining techniques in CRM. This framework is based on the research of literature on the issues of data mining and CRM by Messrs. Ngai, Xiu and Chau (Ngai *et al.*, 2009).

CRM systems

Modern IT offers many opportunities to support CRM. Expansion of information technology and new discoveries of research and practice lead to the

1 Peppers, Rogerss, 2004 in (Lošťáková *et al.*, 2009), p. 18.



1: Classification framework for data mining techniques in CRM. (Ngai et al., 2009)

fact that CRM systems are being constantly changed and their scope and capabilities are being modified with new features and functionalities. According Hipner² the main task of a CRM system consists of:

- the systematic analysis and consolidation of customer information,
- the synchronization and support of the central operational CRM processes in marketing, sales, and services and,
- the integration and management of all communications channels between customers and company.

Individual functions of CRM systems are divided into three levels: operational, analytical and communication (collaborative). Besides these three main areas some authors have recently proposed an additional classification – electronic CRM, which includes the use of the Internet, mobile phones, etc. (Gneiser, 2010).

RESULTS

According to the known Pareto 80/20 rule eighty percent of gain bring twenty percent of key customers and the remaining twenty percent of profit being shared by eighty percent of regular customers. The situation is same in the environment of agriculture-food sector. It is necessary the key customers to access individually for example with differentiated customization. Regular customers are more than appropriate to be subdivided into groups and each group then approached in the way satisfying the customers classified in it. Customer segmentation can be carried out according to four basic aspects: geographic, demographic, behavioral, and psychographical. Company's approaches to the customers are based on to what group he/she belongs. The customer gets the impression that the company knows his/her needs and is able to satisfy it, and thus he/she acquires a feeling of uniqueness. The clustering or classification algorithms using neural networks

2 Hipner, 2007, in (Gneiser, 2010).

are popular to be used for customer segmentation. To identify key customers we can use for instance a scale model determining the value of a customer³.

Approach to regular customers

For example in commercial food chains, the regular customers are going to be divided by segmentation into different groups to which we proceed subsequently uniformly. For each group, we will monitor trends in the marketability of products. It is very appropriate to use the prediction of trends using neural networks for this purpose.

For the most popular products in each category, we discover their complements by using association rules. Then this knowledge can be utilized creating the bid when the customer – with the purchase of a specific product such as this is offered – receives a discount on the complement of the product. Using association rules we can detect even substitutes as well. In the event that there is a substitute for the particular product and its sale is more advantageous for the company, it is possible to offer such a product to the company's customers.

An interesting option is to participate in own product creating. A customers can design the own product by him/herself choosing individual components and then the producer ensures that this product fulfills all customer's requirements. To give an example: compiling computers or proposing a design of one's T-shirts⁴ from many different types of shirts, color combinations and images and texts, or even uploading one's own image. In this way the customer will choose exactly what he/she wants.

The world of the Internet supplies the possibility of such interactions. By creating interactive web applications the company will open a new customer communication channel from which it may draw more items of information. Through this channel they can track which products are the most interesting for its customers and thus focus attention on them. It is very appropriate to offer other options such as visualization of the final product so that the customer could have a survey on the outcome. Customers often need a piece of advice and so it is appropriate to create a system that will automatically answer their questions. For example, Turčinek (Turčinek, 2007) deals with this issue in his thesis.

Approach to key customers

As already stated, we use the concept of differentiated customization for approaching to key customers. To store all available information about these customers is necessary. For this purpose, in the

framework of the monitoring subsystem the tools Business Intelligence, especially data warehouses will be used. Then analyses can be carried out over this data.

There is the need to meet key customers' requirements for their satisfaction. Is it possible to use all of the above given recommendations as for regular customers. However, with the difference that all particular analyses are carried out for each key customer separately. For example, in finding that the given customer is a potential consumer of the product. The company will send him/her such a product for free to test it, etc.

The customer may not always be a natural person. The customer may be a firm. Transactions are much more numerous in this case, contracts with several partners are varied and the pricing is much more complicated. CRM tools help to smooth the process when various representatives of selling and buying companies communicate with each other and cooperate. Catalogs tailored, personalized business portals and targeted product offerings can simplify the process of intermediation and increase efficiency for both companies. Obtaining high-quality suppliers, these companies can gain an advantage in their markets, which will significantly increase the value that such relationship brings to them.

DISCUSSION

Using ICT instruments for tracking and other CRM tools we can obtain very valuable information thanks to which it is possible to identify customers' behavior. Knowing that the company can adapt its behavior. And thus it is easier for the company to induce a feeling of uniqueness in its customer.

Web applications can improve customer interaction significantly. Through the Internet the customer can be provided with online services around the clock. Customers can solve their problems from the comfort of their home or office, thereby having markedly increased their convenience and thus the value that their relationship with the company brings to them.

Achieved results are relevant and they are consistent with theoretical expectations and intentions of authors. At `:\hujer.mendelu.cz\turcinek\dip` may be beyond the cases mentioned in the paper test also others tools of customer relationship management not just for services but by choosing the appropriate criteria for companies of primary agriculture production as well. However, that is beyond the scope of this paper.

³ With this issue deal Chalupová in her doctoral thesis (Chalupová, 2009).

⁴ As an example is possible to name company T-shock, Ltd. and its Web portal <http://www.t-shock.eu>.

SUMMARY

Accession of the Internet undoubtedly has contributed to the shift of marketing activities. With the increasing availability and wealth of online information customers become more knowledgeable and sophisticated. If a company wants to keep its customers in long term, it must offer something more than an "ordinary" product, which has comparable substitutes in tens of other companies.

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By creating a disposable web application it's possible e.g. to offer customers absolutely common products with different visual angle. Thanks to gained information and knowledge we divide customers into groups and then target on them specifically. When customers feel that the company cares about them and offers them what they demand, it significantly decreases probability of their leaving for other companies.

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