



Knowledge management intersects with customer relationship management (CRM) for increased organizational competitiveness

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1 Introduction

In today's economy of decreased earnings, decreasing working capital and low consumer confidence, organizations are looking for ways to retain customers, and increase customer profitability and top line growth. Since the cost of acquiring new customers is nearly five times greater than the cost of retaining existing ones, organizations are seeking to develop sound customer relationship management (CRM) strategies that have an integral knowledge management component to significantly impact the bottom line (whether that line is profitability or return on capital employed).

Many organizations have developed and implemented CRM initiatives in an attempt to learn more about customers and to develop relationships with them with the aim of increasing customer satisfaction and loyalty. However, without properly capturing and managing customer data and converting this data into valuable customer knowledge that can be shared and utilized to improve and customize product and service offerings to customers, CRM initiatives will never reach their fullest potential of converting mere clients into a loyal, lifetime customer asset.

This research investigated how the incorporation of knowledge management (KM) practices and principles in CRM initiatives lead to greater customer loyalty. Loyal and satisfied customers allow an organization to retain and even increase its existing market share, ultimately resulting in an improved strategic competitive position in the market place.

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2 Problem statement

The problem statement of this research was how the incorporation of KM practices and principles in customer relationship management initiatives increased the efficiency and effectiveness of CRM and therefore organizational strategic competitiveness. The research investigated:

- what KM is and how it intersects with marketing and, more specifically, CRM;
- what CRM is, what the benefits of employing CRM in an organization are and what the main dimensions of CRM are. It was also investigated how these dimensions can be related to KM;
- how KM enhances the effectiveness and efficiency of Web-enabled CRM;
- how knowledge management can be used to enhance the efficiency and profitability of CRM call centres and therefore customer service; and
- how KM can make predictive CRM more effective, that is, ensure that the knowledge gleaned from predictive CRM is properly shared and leveraged.

Various electronic sources were consulted to shed some light on the above-mentioned issues.

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3 KM intersects with marketing and CRM

KM is a business discipline that attempts to:

- identify and capture knowledge;
- promote the sharing of knowledge between individuals;
- utilize existing knowledge for the creation of new knowledge; and
- use knowledge to define and improve business practices (Gallagher 2001).

KM is therefore the practice of treating knowledge like any other business asset as something to be used, maintained and exploited to the benefit of the organization. KM powerfully intersects with marketing, as knowledge-based strategies help marketers to adapt their principles to the new economy.

According to Allen (2000), KM and marketing intersect when businesses use database technology to aggregate customer information, position products and services to serve profitable segments and to communicate with markets using integrated strategies and then measure the results.

KM, aided by information technology, can convert a company's customer data into a source of competitive advantage. The customer data can be mined to reveal valuable customer knowledge pertaining to purchasing behaviours, brand selection and product loyalty. This knowledge can then be used to customize products and services according to individual customer needs and preferences and also to offer new products and services in response to

changing and new needs. This results in better and more profitable customer relationships. KM thus enables customer data to be effectively converted into valuable customer knowledge that can be appropriately stored, shared and utilized to improve CRM within the organization.

In essence, KM integrates with CRM to create a powerful weapon for responding to change, thereby increasing competitive advantage. Internal and/or external knowledge can be aligned to anticipate, address and respond to shifts in markets and the associated customer needs and preferences. An integrated CRM and KM strategy provides the opportunity to create a lasting bond between the company and the customer in rapidly evolving markets and economies. As such, the implementing company becomes an agent of change and allows the customer to dictate the value proposition of a product or service.

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4 Benefits and dimensions of CRM

4.1 CRM defined

CRM can be broadly defined as a company's activities related to developing and retaining customers. It is a combination of internal business processes, such as sales, marketing and customer support, and technology and data capturing techniques. CRM is all about building long-term business relationships with customers (AB Office Solutions 2003).

CRM initiatives have two main purposes within the organization. The first is to collect high quality customer information and create customer profiles. With access to detailed, up-to-date customer information, employees can handle customers' queries more effectively. Priority treatment can be given to favoured customers. Further sales leads and product development related to customers' buying preferences can occur. Secondly, CRM initiatives should provide an interactive Web site or extranet to allow customers to access relevant information quickly and to serve themselves.

According to Henricks (2000), the tasks of CRM include:

- collecting customer data in one place;
- making it widely available;
- identifying the best customers;
- finding more like them;
- determining their needs; and eventually
- turning prospects and first-time buyers into long-term loyal customers.

CRM therefore allows an organization to generate better sales leads, enable faster response to changing customer needs and ensure that everyone in sales and marketing has the right information at the right time for every customer.

4.2 Benefits of implementing a CRM initiative in an organization

CRM makes provision for the formation of individualized relationships with customers. It aims to improve customer satisfaction, maximize profits, identify the most profitable customers and provide the highest level of service. CRM increases customer retention, revenue, loyalty, satisfaction and, most importantly, provides employees with the information and processes needed to know their customers, understand their needs and effectively build relationships between the company, its customer base and distribution partners.

However, it is the pooling, sharing and effective management of customer knowledge that is

at the core of successful CRM implementation. Knowledge management practices and principles must be employed to ensure that the appropriate architecture (e.g. repositories with well structured taxonomies for retrieving knowledge and groupware technology such as Lotus Notes to pool and share customer knowledge) and culture are in place for capturing, organizing, retrieving, sharing, distributing and maintaining customer knowledge. This effective management of customer knowledge will lead to increased sales, customer loyalty and competitive advantage.

A company that has both customer knowledge and the applications to share and use this knowledge has the ability to reap the following rewards:

Increased customer retention by enhancing satisfaction as a result of higher responsiveness;

- knowledge of the most profitable customers – customers can be treated according to the 80–20 rule, that is, 20% of customers generate 80% of the company's revenue and must receive special treatment;
- reduced marketing costs through effective targeted campaigns;
- direct qualified leads to appropriate sales channels;
- increased sales through offering the correct additional products (cross-selling [selling additional unrelated company products] and up-selling [encouraging customer to buy more expensive versions of the same product]);
- higher return on investment (ROI) by increasing profits per sale, streamlining the sales cycle managed by interdepartmental workflow and centralizing common activities that can also eliminate redundant functions;
- lower costs by reducing errors that occur from multiple uncoordinated interaction points, which can improve understanding of customer needs by using their preferred channel of communication;
- take advantage of previous contacts with other customers for the current interaction; and
- render accurate estimates of future sales, marketing, and service activities based on analysis of past performance.

4.3 Dimensions of CRM

The primary dimensions of CRM are:

- the three core areas of functionality (namely sales, marketing and customer service);
- a consistent, shared customer data repository; and
- analytical tools for mining the customer data to convert it into useful customer knowledge.

4.3.1 Three areas of functionality

According to Magic Software Enterprises (2000), there is almost uniform agreement among industry analysts that service, sales and marketing are the three pillars of functionality that must be addressed when putting together a CRM offering. It is at these primary areas where the customer makes contact with the organization, either in a pre-sale, sale or post-sale situation, or as part of an ongoing relationship that requires service and information, as well as the option of additional purchases.

Service

The customer service that an enterprise provides is key to its ability to maintain satisfied, loyal customers. Customer service involves all types of customer queries, including product concerns, information needs, order requests and fulfillment enquiries. Call centre agents must be knowledge-enabled to satisfy the customers.

Sales

The interaction of the sales force with a prospective customer in an attempt to turn that person into a customer, and then maintaining a loyal relationship with the customer, is a core business concern for enterprise success. Sales personnel are an essential source of information for the enterprise and must have the tools both to access up-to-date field information and to share this information with others.

Marketing

Marketing activities are evolving from traditional telemarketing to Web and e-mail campaigns. These Web-based marketing activities give prospective customers a better experience, allowing the relevant information to be retrieved by prospective customers on their own terms and in their own time. Information gathered from customers on Web sites must be converted into useful knowledge and shared and utilized.

4.3.2 Consistent, shared customer repository

Integrating customer interactions across the enterprise shifts organizations from departmentalized silos of customer contact to an environment where all customer interactions are coordinated and consistent. The customer repository must be at the center of the sales, marketing and service efforts. An organization that functions with independent sources of information has duplicate, conflicting and out-of-date information that negatively influences the effectiveness of the entire enterprise. Knowledge management technology can be used to prevent this. An effective KM infrastructure is capable of:

- capturing knowledge from many different locations;
- organizing it into centralized repositories with an accompanying well-structured taxonomy for efficient search and retrieval;
- providing groupware capabilities such as Lotus Notes for the sharing, distribution and presentation of that knowledge on various different intranet homepages within different departments; and
- maintaining the currency of the knowledge.

4.3.3 Analytical capabilities

Real-time quantitative and qualitative analyses are an important dimension of CRM. An intelligent in-depth analysis requires consistent customer data as the starting point with all enterprise applications participating in the analytical environment. Added value is achieved by feeding the analysis results back to management and throughout the organization. The enterprise decision makers must then utilize this knowledge to make more informed and timely business decisions.

A thorough analysis is required of the customers to determine the value they contribute to the enterprise, as well as to measure their level of satisfaction. Relevant data should be readily available and must enable intelligent insight into customer behaviour. The gathered knowledge reveals, for example, customer ranking, service level and critical bottlenecks. It also provides the basis for management reports and an assortment of enterprise tasks such as prioritizing leads, monitoring time spent on certain phases of the search cycle and identifying types of problems that are being dealt with.

By making KM a priority and by integrating KM principles in the CRM initiative, all the relevant customer knowledge that is revealed through the analytical tools will be sent to top management and shared throughout the organization. This will ensure better and more informed decisions and more satisfied customers, thus resulting in greater customer responsiveness and a corresponding increase in profitability, market share and competitiveness.

4.3.4 Dimensions of CRM intersect with KM

According to Tanoury (2002), the CRM industry is based on the simple and brilliant premise of 'if I know something about a customer, I will be able to sell to him or her with greater success, and service his or her needs with greater efficiency'.

At the core of this premise is the 'know something'. This knowledge about an individual customer is very valuable and is the fundamental foundation of CRM. This 'know something' also implies using the knowledge to do something, which may be a change of message, communication or treatment based on the unique characteristics known about each customer.

The areas of CRM where KM and its associative technologies are most needed and can provide the most benefits (of increased functionality, profitability and cost-effectiveness) include:

Web-enabled CRM, which corresponds to the marketing functionality of CRM where e-marketing has become a priority;

- CRM call centers, which correspond to the service functionality; and
- analytical and predictive CRM tools and techniques.

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5 KM increases the effectiveness of Web-enabled CRM

According to Trepper (2002), today's e-business customers demand instant access to companies with which they do business and expect each person in the company who they contact to have full knowledge of their account. Fully personalized service has become a standard.

Interactive customer relationship management (ICRM) is enabled through customers interacting with Web sites. The fundamental goal of ICRM is to create greater customer loyalty, sales and satisfaction and to provide a rich source of customer knowledge that can be used to gain a deeper understanding of customers. This knowledge helps to identify the most profitable customers, leads to a richer product set and improves sales opportunity and the customer relationship.

The challenge for companies is to use ICRM to develop strong ties with customers and provide excellent service. To reach this goal, companies must consider some strategic issues, namely:

- end-to-end customer care;
- providing ongoing value to retain customers;
- personalization; and
- making sense of customer data.

End-to-end customer care involves tracking a customer's order from sale to delivery, including following up on customer satisfaction. ICRM provides specialized sales suggestions, delivery notification and built-in satisfaction surveys. The knowledge from these surveys must be fed into back office systems where it must be studied and managed to maintain customer relationships.

The power of interactive Web technologies must be used to provide ongoing value to retain customers. This is to serve customers better, faster and more economically than competitors

can.

Creating a customer profile and using customer feedback and knowledge for new, improved and personalized products or services are key to e-business success in an increasingly competitive environment. Companies must use customer knowledge to adapt to customer needs and to keep them satisfied. ICRM tools must be adapted to capture customer knowledge that can be used to individualize product assortment, pricing strategies and loyalty campaigns for the individual customer.

ICRM tools must provide details of each interaction, purchase decision, question and support needed to make sense of customer data. These messages feed the databases that empower the customer service representatives and drive the marketing and sales programmes, which depend on knowing how price, promotion and assortment influence customers. Knowledge management must be employed to ensure that this data are captured, shared, utilized and put to work for the customer (i.e. the knowledge is used to customize and personalize customer product and service offerings).

Web sites allow the effective capturing, sharing and managing of increased knowledge about customers. Web sites allow organizations to customize, tailor and better target products and services to customers. This increases efficiency, quality and satisfaction and thus creates loyalty based on an enriched customer experience.

According to Tanoury (2002), the Internet is a never-ending source of information about customers. Some sources are self-identified by the customer who provides information, other information is provided by self-service applications and monitoring of what the customer does within a Web site. Web sites can therefore show what products were looked at, what was downloaded and what sections of a Web-based store front were visited.

Customers express their interests, preferences and propensities with every click of their mouse while exploring Web sites. This information has to be captured and converted into valuable customer knowledge. A knowledge conversion team must be assigned to constantly monitor a company's Web site and extract useful information. This information must then be codified, converted into knowledge and stored in the knowledge repository with an accompanying special alert tag for the marketing department. This will ensure that valuable and accurate customer knowledge gets to the right people (the marketing personnel) at the right time so that product and service offerings and customer profiles can be adjusted accordingly and timeously.

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6 KM improves CRM call centre efficiency and profitability

KM makes it possible to deliver expert knowledge to all departments in geographic locations within an enterprise. KM also helps to reduce the effects of personnel turnover and job changes, since captured knowledge remains accessible at all times. KM strategies deliver the latest and most up-to-date answers and information across the enterprise, because knowledge sharing and replication ensure that all captured knowledge is current and available. With proper management support, training and a committed effort to make implicit knowledge explicit, KM can be used to enhance customer satisfaction and reduce support costs through effective customer service. This customer service includes customer support, technical support and product support and is primarily provided via customer care call centres.

KM enables companies to organize, search, use and adapt any explicit body of knowledge in

response to changing customer needs, circumstances and technologies. KM is effective and profitable in the following ways:

- The ratio of call centre agents to customers can be controlled and the interaction can be made more efficient. Effective KM helps agents solve cases faster and enables the organization to use its service and support staff to concentrate on more complex calls and provide faster problem and query resolution.
- Increasing call volumes can be reduced via Web self-service. Offering customers self-service access to support knowledge permits consumers of knowledge to handle many of their own queries. They also get the convenience of year round access to information via the Web. According to Gartner (2002), by 2005, more than 70% of customer service interactions for information and remote transactions will be automated. Additionally, the cost of Web service transactions is much less than traditional phone interactions.
- Expertise can be shared. KM captures scarce expertise and makes that expertise available to all support and service agents uniformly. Organizations can therefore make their knowledge more broadly and consistently available to their customers, partners or end-users.
- Turnover and job changes do not cripple the system. KM captures knowledge and makes it accessible to all service and support agents. Knowledge therefore does not stay with those who hold or discover it, but becomes an organizational asset that is available to all who need it. Two essential problems are thus addressed: the challenge of making the job more effective and satisfying so that key people stay with the company, as well as addressing the problem of how to keep the knowledge in the company if a key person does leave. KM can thus reduce turnover and minimize the impact when it does occur.
- Identical queries can be answered from already discovered solutions. According to Rigley (2001), when an agent resolves a problem, the organization must have him or her publish the resolution immediately so that all other agents can use it. Once knowledge is captured in a KM solution, it is readily accessible to all agents. Therefore, once a question is researched and answered, the benefits of that work are available to anyone who needs access to that information. This results in increased productivity, allowing agents more time to deal with new queries and improved customer satisfaction.
- Information is accessible to all agents when knowledge is captured in a KM solution and individual agents can reach the same level of expertise by building on each other's knowledge and experience. High level, built-in mechanisms for enterprise-wide replication in KM solutions enable agents in remote offices to have access to the same information as agents in the organization's headquarters – ensuring consistent and right answers.

According to Rufo (2001), call centre KM is an integral component of customer support success. A good KM strategy benefits call centres by making agents more efficient in answering customer questions and decreasing training time for newer agents. Additionally, field service engineers and customers themselves can benefit from call centre KM via self-service implementations.

However, to realize the benefits of incorporating a KM system or architecture in a call centre, an appropriate knowledge-sharing culture must be in place. According to Case and Lochner (2002), it is critical to recognize that a call centre needs a knowledge-sharing culture that integrates how people conduct their day-to-day business. Processes and technology that drive consistent and swift access to information and communities without needing multiple locations to access must support a knowledge-sharing culture.

Ultimately, the success of knowledge-enabled customer service through call centres can be

measured by:

- a cost reduction within the contact centre;
- revenue generation through cross-selling and up-selling; and
- an increase in overall customer satisfaction and loyalty.

KM therefore plays an integral part in any call centre's goal of achieving maximum efficiency and productivity for customer service representatives.

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7 KM enables better leveraging of predictive CRM data

According to Crowder (2001), predictive CRM is the discipline of getting to know your customers by performing complex analyses on data about them. It is rapidly changing the way companies make operational and strategic decisions about procurement, production, as well as the marketing and sales of products and services.

Today, the new business need is to better understand customer requirements and preferences and to translate that information into the right products and services. The application of predictive CRM enables companies to institute better real-time analysis of customer data and lets enterprises more effectively forecast, price and promote products and services in the market.

According to Harney (2003), predictive analytics is a subset of data mining that enables you to derive new insight or new information from existing information. It lets you perform activities like predicting 'estimated life-time customer profitability – going beyond how much a customer has spent so far to how much we anticipate that customer to spend over his life-time with us as the seller'.

Customer knowledge that is generated through analytical tools must be relevant, up to date and timeously produced to aid strategic and tactical decision making. Through the application of KM principles (and the associated KM architecture) to the analytical CRM process, the organization will be able to ensure that the data are fed into the correct repository and categories for timely and efficient analysis. A KM architecture can also be used to ensure that the extracted knowledge is timeously fed into an organization's business intelligence system where it can be shared and utilized for improved decision making.

Therefore, to realize the full benefits of predictive CRM analytics, an organization must implement and apply KM practices and principles. All customer data that are collected from numerous customer 'touch points' must be captured, collected and categorized into the appropriate knowledge repositories. All these repositories must be linked to one another to allow for a seamless link between data where data mining tools can be put to work. The knowledge gleaned from these tools and from other customer analytical tools must be captured, categorized and assigned to the appropriate intuitive keywords for easy search and retrieval. It must be made available on an organization's knowledge network to ensure that the valuable customer knowledge is shared and can be utilized by the correct personnel and put to work for the organization. This will lead to the organization's better understanding and responding to customer needs and preferences, ensuring more satisfied and loyal customers and increased revenue, market share and profitability.

7.1 Predictive CRM makes provision for improved business intelligence

According to Haimila (2000), new business intelligence and other KM technology are enabling retailers to get to know their customers better than ever, while allowing them to

offer personalized attention – no matter how large the business.

The knowledge generated by predictive CRM tools (e.g. data mining) can be fed into a KM business intelligence (BI) system, which can allow organizations to build a central knowledge repository that will enable them to better understand customers and facilitate personalized marketing. The system can be used to profile customer purchases and then use the profiles for future mailing of targeted promotional material. The BI system can also be used to create an in-depth profile of customers and their preferences and needs, as well as track birthdays, anniversaries and other special occasions for customers who supply their information.

According to Lamont (2001), business intelligence solutions, which once focused primarily on operational data, are extending their reach into analysis of CRM data. CRM systems alone were designed to merely document customer transactions, not to aggregate and analyse the resulting data. To really make the most of that data, powerful analytic tools and statistical techniques must be applied.

The effective application of KM will ensure that predictive CRM analytical tools, as well as the customer knowledge generated by these tools, are constantly integrated with an organization's business intelligence system. This will ensure that the knowledge generated can be used to make important strategic relationship and marketing decisions. In other words, the data will not just remain operational with no contribution of value to important strategic decisions that will determine the organization's success, profitability and competitiveness in the market.

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8 Conclusion

Without knowledge, especially knowledge about an organization's customer base, an organization will not be able to capitalize on this vital intellectual asset. Organizations that use KM to capture and share customer knowledge will be able to understand their customers better and be able to dramatically improve their revenue by using their knowledge to service key customers better and thereby retain their lifetime loyalty. Organizations that place customer knowledge at the heart of the organization and make that knowledge available to all employees are the ones that have excelled and will continue to excel in their industries.

Ultimately, KM ensures that customer data are properly captured, mined for valuable knowledge, categorized, assigned intuitive keywords and stored in the relevant repository for retrieval by users. KM ensures that the customer knowledge gets to the right people at the right time to aid in strategic customer decision making (i.e. fine-tuning customer profiles, offering special promotions to key customers to gain their loyalty, etc.). Improved strategic decisions result in better customer targeting, better service and responsiveness to new and changing needs. This in turn leads to increased customer satisfaction and loyalty and therefore increased strategic competitiveness and profitability for an organization.

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