

A POLICY FOR MANAGING DATA QUALITY TO IMPROVE CUSTOMER RELATIONSHIP MANAGEMENT

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ABSTRACT

Customer Relationship Management (CRM) is the center of attention now, especially in light of a slow economy. In order to serve customers better, the enterprises will need to understand them better. Unfortunately, the quality of the data that many businesses collect about their customers is often faulty. This paper presents arguments and recommendation on having a data management policy to improve the data quality, which would in turn improve the CRM.

Keywords: Customer Relationship Management, Data quality

INTRODUCTION

It has become necessary for business enterprises to establish and maintain a relationship with its customers to understand their needs and preferences and use that information to generate a higher level of satisfaction in the customer. Successful implementation of marketing on the basis of customer relationship requires integration of timely and accurate data about the market, customer, and product or services. Business organizations have spent large amounts of money into systems integration, customer relationship management (CRM). and e-business applications that use customer data across the organization. As businesses increasingly rely on data as a resource to obtain sufficient return on the technology investment, the quality of data is becoming as important as the data content. As often cited, “CRM systems are only as good as the information they contain” (11).

It is not uncommon, however, for managers to be unaware of the data quality concerns because of the misconception of equating “automatic data handling” with “perfect data.” When customer data does not reflect real world conditions, or is not easily used and understood by the data user, it may be of poor quality (7, 12).

This paper discusses the importance of data quality to customer relationship management, the problem of poor data quality, and some approaches to managing the data quality that may assist in obtaining a high return on investment that has been made in the CRM systems.

CRM AND DATA QUALITY

CRM is an integration of methodologies, strategies, software, and other web-based capabilities that help an enterprise organize and manage customer relationships (8). An important objective of CRM is to retain existing customers by knowing them, understanding what they wanted, and satisfying their needs through a high level of service that is personalized as much as possible. The focus of marketing based on customer relationship, also known as relationship marketing, is on attracting and retaining customers through cooperation, trust, and sharing of information.

Relationship marketing facilitates a company's effort to identify, maintain, and build up a network with individual consumers and to continuously strengthen such network through interactive, individualized and value-added contacts over a long period of time (13). It seeks to establish, maintain, enhance, and commercialize customer relationships so that the objectives of the parties involved are met, which is done by a mutual exchange and fulfillment of promises (3).

Developing and enhancing long-term relationships with customers requires using quality data about the customers, and unfortunately the problem of "bad data" has hindered the growth of CRM (6, 7, 9, 11, 16). Customer data can be captured at many points, mostly where a contact is made with the customer such as at the point-of-sale, customer service interaction, and inquiries (7). Many companies are using frequency programs to capture accurate customer data. One example is the use of credit and loyalty cards that enables capturing of detailed data about what and how often the customers buy. Typically, customer data has been stored in marketing databases of a company. However, when the customer interacts with various units in a company, such as customer service, technical support, and shipping, any data resulting from that interaction may end up on multiple databases across the company. Unless all pieces of the customer data are made available to the CRM system, it will become difficult to get a total view of the customer behavior. Marketing strategies and programs change rapidly, and to get the most out of relationship marketing, the customer data has to be current. Accurate, complete, and relevant customer data is the core of CRM.

PROBLEMS WITH CUSTOMER DATA QUALITY

Data today is available in greater quantities with greater complexity and from more sources than ever. Being eager to extract intelligence and the opportunities that are possible due it from the data, many companies assume the quality of data as given and ignore critical issues of data quality. This can be costly, since CRM systems must have accurate, complete and integrated data as their core in order to be effective (12). For example, data quality issues in implementation of SAP systems were studied and it was found that several types of data quality problems can undermine the performance of SAP systems (15).

As organizations increasingly depend upon their databases to support business process and decision-making, and the number of databases continues to multiply, the number of errors in stored data and the organizational impact of these errors are likely to increase (5). One of the common causes of defective data in general and customer data in particular is field originated transaction errors (6, 7). Whatever data error accrues during data capture in the field multiplies when additional errors occur at the time of keying in of the captured data by a third party at a separate time, which is usually out of context in which it was captured.

As business goes global, the data that are generated and entered by one group (e.g., sales persons) in one part of the continent or the world are used for decision-making by another group (e.g., marketing managers) thousands of miles away. Unless there is constant and thorough communication between all the parties concerned, there could be different interpretation about the context of the data between the data generator and the data user leading to poor decision-making. Data that are gathered for one business purpose and intended to be stored in a single

database may actually be used for many business purposes and replicated in a number of databases and used by multiple users (4, 9).

The difficult task of quality assurance further complicates the data quality problem at the source. In a world of multiple, ad hoc data users, much of the certainty of the data production environment disappear (1). Not only that the quality of data is uncertain, their uses may be known only in part. Additionally, inspection procedures do not have a proven track for effectiveness, since the data undergo a series of ad hoc processing procedures. Other factors include the uncertainty regarding what constitutes the data resource that should be maintained, the perceived lack of data quality importance, the multiplicity of potential problems with data, the inadequate documentation of data definitions and meaning, and the uncertainty regarding the seriousness of deficiencies.

It is important to understand the specific factors, many of which are described above, that can debase data value. The data can become an expensive burden if it undermines the goals of systems that use it. To some, it is not an option not to have a CRM (7, 10, 16). No matter how sophisticated the CRM, e-business or other IT implementations are, users of the technology will reject it if they cannot trust the information it contains. Inconsistencies, omissions, and inaccuracies in customer information destroy its reliability and therefore, value. Therefore, managing data quality becomes both a necessity and a challenge for those organizations that are attempting to compete by planning and implementing CRM.

DATA QUALITY MANAGEMENT

Data quality problems are caused basically by managerial decisions, but some with the backdrop of earlier technological limitations. For example, Y2K problem stem from the memory limitation which forced companies to compress the year field. Data kept in old format need to be converted to new system. Frequently the rarely used data will be lost because no one in the organization knows their data format any more (7).

One of the problem of the “customer-facing” system is that all reports must be designed for “human consumption” (6, 7, 12). and the managerial procedures may render certain data unsuitable. For example, internal documents may contain abbreviations that are only known within the company or experts. To complicate the issue even more, most of the data were originally collected for record keeping, thus its format and contents are built around transactions – which do not have a user-friendly presentation. In addition to data entry error, inconsistent data entry policy could contribute to the poor data quality as well.

A clear understanding of the meaning of the concept of “data” is critical to planning and implementing a data quality management program. “Data” is a multi-faceted and complex concept. Fox et al. (2) proposed a view from a data life-cycle perspective. The data life cycle includes the sequence of phases through which data pass as they progress from creation to storage and use. At different stages in their life, data change in many ways. Thus, data must be defined in a way that it counts for the fundamental operations of defining conceptual data models and views, collecting and updating values, storing, retrieving, and manipulating data, and presenting and using them for a variety of purposes (2).

Once the notion of data becomes clear, a number of conditions or triggers can lead to an emerging awareness of data quality problems in a company. CRM implementation is one such trigger, since the assessment often brings the problems to the surface (7). CRM involves a technology push such as migration of services or data processing operations to the e-business environment, which may require, for example, integration of multiple databases or standardizing data formats. If the design of the CRM system allows customers to access the system, then the customer-driven process (e.g., customers cannot use the data because of poor quality) can also bring about awareness of data quality problems. Other conditions that can drive such awareness are event driven processes, that is, events that involve considerable costs and losses, and management initiatives such as the implementation of TQM programs, CRM being a component of it. As researchers point out, data quality is not just a CRM or data warehouse issue; it is an operational systems issue (9) and must have a unified view (6, 12).

DATA MANAGEMENT POLICY FOR IMPROVING CRM

A data quality management program should involve the determination of a data policy, the identification of techniques, and the use of procedures designed to ensure that organizational data resource possesses a level of quality commensurate with the various current and potential uses of the data (1). Thus, within the context of CRM, management should develop a data policy that is compatible with the other policies define quality objectives, such as performance, costs and losses regarding data creation and consumption, and establish a data quality system, including the organizational structure, responsibilities, procedures and resources for implementing data quality management in CRM. Such a policy should apply to all phases of data production, from initial identification to final satisfaction of requirements. The policy proposed here identifies roles of data quality management that supports specific CRM goals. The following goals of CRM are the driving factors for the policy.

- Improve sales effectiveness
- Increase customer satisfaction
- Increase revenues
- Improve communications
- Improve management effectiveness
- Decrease costs

Improving Sales Effectiveness

The customer data should be able to clearly reveal preferences and buying trends through full customer history that reduce the sales cycle. The data should help produce better trend detection and open up opportunities for cross-detecting products and services that would have a higher acceptance rate by the customer. This should be possible through relationship grouping achieved by relationship management where relationships between records are identified by comparing new and corrected data with existing records. The data management should empower more effective sales management with better customer sales tracking. Sales effectiveness would improve if the data quality improved sufficiently to provide more accurate forecasting. It would be necessary to manage customer data to the extent that it enables better tracking as customers

turn from prospects to buyers and back to prospects. The data should support better team sales with consistent information across all channels, team contact points, and customer data sources.

Increasing Customer Satisfaction

A complete customer view reflecting every customer interaction with the company is the foundation of effective CRM, sound tactical and strategic decisions and successful IT initiatives. Some typical units in an enterprise with which a customer may interact or units that store and manage customer data are sales, call center, e-commerce, and back end / legacy. For example, transactional receipts and warranties data are maintained by the sales department, e-mails and click stream data are available with the e-commerce department, inquiries, complaints and returns data are logged with the call center, and invoices and account histories are retained by the back end operations. It is necessary to collect the entire customer data within the enterprise so that customer service is supported based on the entire customer picture. After the entire data set is collected, it should be conveniently analyzable so that service can be focused on most loyal and profitable customers based on all accounts and relationships. With the availability of a single customer view, all efforts must be made to reduce customer frustration that comes from inconsistent messaging, duplicated attempts across departments to serve the customer, and data inaccuracy between departments.

Increasing Revenues

CRM is a business strategy designed to optimize profitability, revenue, and customer satisfaction. Customer loyalty lowers the initial resistance to investment that many customers naturally have – barriers such as absence of trust and price sensitivity. With repeated encounters, customer revenues increase – up on average 50% between first and second purchases (14). Price sensitivity decreases with new appreciation of the business and susceptibility to targeted cross-sell and up-sell efforts increases. The result is higher customer yield, which ultimately drives higher revenue. Thus a customer data management policy that advises acquiring better customer knowledge should increase value of the customer data assets. It should support more productive marketing and sales efforts. The level of data quality should empower more profitable strategies and tactics, and support higher customer yield (benefits less costs). higher profitability, higher lifetime values, and continuing sales cycles.

Improving Communications

The single, complete, and accurate customer view should enable better targeting and reduce mailing duplications to individuals and households. This would be possible only if the customer data is capable of supporting a CRM that is expanded to include relationships between customers, employees of the same business, members of the same household, and shares of similar purchasing patterns and other groupings. By creating and maintaining complex, multi-level customer understandings, companies can more accurately know the customer's total costs and benefits and provide service based on the entire customer relationship. For example, it can promote tailored messaging and promotions based on full picture of interactions, tendencies, and preferences. The multi-level 360-degree view of the customer relationship is still more beneficial when it helps explain why customers act the way they do and supports the development of

targeted strategies and tactics based on this new understanding. It eliminates “data compartmentalization” that produces incomplete, inaccurate, and fractured customer views.

Improving Management Effectiveness

Creation of a single, enterprise-wide customer view would empower strategic planning. Customer data has to be organized and refined so that it supports more accurate and real-time analytics, and enables faster, more relevant feedback/evaluation/action cycles. A complete customer view would make it possible to support real-time customer-centric tactics by associating customer actions with customer view in real time.

Decreasing Costs

When high quality customer data is utilized by the CRM, it inculcates customer loyalty, and has a better customer knowledge. This in turn lowers marketing and sales overhead that is required to produce sales, decreasing customer costs. For example, targeted messaging allows the business to produce more with less as the company’s ability to respond to customer needs and motivations increases. Customer data management would improve company’s ability to let customer self-service across multiple channels, thus cutting costs, while maintaining desired responsive levels. Customer retention would be promoted, reducing customer acquisition costs. An objective of data quality management would be to minimize duplication, inaccuracies, and incompleteness in customer records, which would then reduce operational inefficiencies and consequent costs. Efficient management of customer data would decrease liabilities due to bad data in accounting and shipping data storages, reduce mailing and shipping costs, and reduce burden of redundant data in storage infrastructure.

To take advantage of new opportunities, companies must look closely at their existing data as well as their unique data requirements, understanding the business drivers for data quality, how data is used and who uses it. The investigation uncovers the relative importance of different kinds of data. The discovery would help in constructing a policy for managing customer data to support the CRM in the enterprise.

CONCLUSIONS

It is obvious that CRM is here to stay, and it is equally obvious that CRM is more than just about installing software, or automating touchpoints (10). It requires a comprehensive, unified view of the corporate structure as well as the structure of data collection. This paper assesses sources of poor data quality and points out that many data quality problems originate from managerial decisions and operational procedures. In order to fix the data quality from the root, data management policy must be set. More importantly, these policies must be set with constructing a single-customer view in mind that would allow the consolidation of company databases.

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