

Research on Customer Relationship Management in E-commerce Environment

Feng Guo*

Information School of Beijing Wuzi University, Beijing, 101149
Email: guofeng80050@sina.com

Abstract. with the rapid development of e-commerce, many changes have taken place in customer relationship management under the environment of e-commerce. From this point on, this paper analyzes the requirements and characteristics of customer relationship management system in e-commerce environment, and discusses how to effectively integrate customer relationship management system with other information systems to better meet customer needs.

1. Introduction

Customer Relationship Management (CRM) mainly refers to the business strategy that enterprises need to change from "product centered" to "pursuing customer satisfaction and customer loyalty". From the source, the theory of customer relationship is based on the market demand and the renewal of management concept, which is the need to improve the core competitiveness of enterprises and improve the business management mode. From the technical level, the core idea of customer relationship management is the customer-centered marketing concept. Through the use of advanced information technology, the interaction process between enterprises and customers is managed to increase the number of customers, maintain customer relationship, improve customer loyalty, so as to achieve maximum profit. The information technology that CRM relies on mainly includes Internet and e-commerce, multimedia technology, data warehouse and data mining, expert system and artificial intelligence. The goal of CRM is to shorten the sales cycle, reduce the cost of sales, and improve customer satisfaction, profitability and loyalty.

2. Customer Relationship Management Has Changed in E-commerce Environment

After the introduction of e-commerce, the focus of traditional enterprises has shifted from improving internal efficiency to respecting external customers, and integrating their own resources from the "internal view" management mode of ERP to the "outward oriented" mode of customer relationship management. E-commerce provides a new way of communication between enterprises and customers, but also puts forward new requirements for customer relationship management. Advanced and effective customer relationship management system must use Internet tools and platforms to realize synchronization and accuracy of various customer relations and channel relations.

2.1. Real Time and Synchronous Information Transmission

E-commerce environment can effectively support customers to access enterprise information at any time and accurately. In order to make the customer oriented departments coordinate freely and the system can run synchronously, the customer relationship management system is very important for the complete and real-time interaction of customers and the synchronous transmission and sharing of information. A successful customer relationship management system must pay attention to the



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synchronization of customer information and data, and ensure that every communication with customers can be real-time and synchronous with the application of network-based technology.

2.2. Integration of Communication Channels

Coordination of workflow based on e-commerce and customer relationship management is becoming more and more important in the era of e-commerce. Enterprises must regard e-channel and e-commerce as part of the overall strategy of customer relationship management, and coordinate interview, e-mail, telephone, fax, letter and web access into one, so as to ensure the consistency of information obtained by all channels, avoid channel conflicts, and enable enterprises to choose appropriate channels to communicate with customers according to their preferences. The customer relationship management system after channel integration should include all customer contact points, so that the communication between customers and enterprises is seamless, coherent and efficient, so that the customer relationship management system can not only provide the interface of e-commerce, but also fully support and develop e-commerce.

2.3. Support Cross Platform Operation

CRM system based on e-commerce is often no longer concentrated on the same LAN server, so it must support distributed database and distributed application, and can run on a variety of platforms and operating systems, so that enterprises can choose the best platform according to their business needs and investment ability, and help enterprises realize the smooth transition of different application levels and stages, so as to realize the real significance Cross platform operation.

2.4. Integration with Existing Systems

In the e-commerce environment, in order to make the business operation consistent, it is necessary to establish an integrated CRM solution to coordinate the background application system with the foreground and e-commerce strategy. However, it is difficult to realize seamless integration between CRM system and enterprise's existing system, which leads to the non sharing of data between information systems, and the inconsistency of customer data between different departments and different systems, which makes enterprises unable to obtain "360 degree customer view", unable to improve customer satisfaction, provide customized products and shorten response time. Only through substantive integration can we ensure the unity, consistency and efficiency Reliable and timely customer response.

3. Characteristics of Customer Relationship Management in E-commerce Environment

3.1. Personalized Customer Service and Support

In the e-commerce environment, customers can turn to the company's competitors with the click of a mouse or a phone call, so customers are more dependent on providing quality service and support. CRM system enables enterprises to have a customer-oriented front-end tool based on e-commerce, which should be more prominent in terms of speed, accuracy, efficiency and customer personalized needs. It should provide personalized technical solutions, on-site services, product maintenance and other support and services for existing customers automatically, and optimize their workflow.

3.2. Interactivity

In the environment of e-commerce, CRM can realize real-time two-way dialogue and communication mode. Due to the good interactivity and guidance of Internet, customers can choose products or services or put forward specific requirements through the Internet under the guidance of the system. Enterprises can timely produce and provide timely services according to the choices and requirements of customers. All of these can realize real-time two-way dialogue between enterprises and customers. In this mode of communication, enterprises will provide customers with more satisfactory services.

3.3. Intelligent Information Processing and Decision Support Function

The massive information brought by e-commerce era is beyond human processing. Some intelligent

processing functions must be added to CRM system, such as intelligent data analysis function, intelligent decision support function and so on. By fully mining customer behavior personality and law, customer profit point and profit space can be continuously found and expanded, so that CRM system can not only realize process automation, but also realize intelligent decision support function. Analytical tools to help managers make decisions.

3.4. Scalability and Security

Due to the change and diversity of user requirements, any application system can not cover all the needs of all users. Therefore, the CRM system based on e-commerce should have a framework that is easy to expand and open, has standard external interface, can be connected with other systems, or be personalized and improved according to the needs. At the same time, the openness, sharing and global characteristics of Internet make the influence range of e-commerce more and more large, and CRM system based on e-commerce should have high reliability and security.

3.5. Unified Sharing of Data

Under the environment of e-commerce, all the data of CRM solution should be stored and managed in a centralized way to realize the data exchange and integration with the original system. All kinds of data entering the system should be transferred to relevant functional modules according to the pre-set and internal rules and relations of management work, so as to achieve high data sharing and system integration, and ensure the data consistency between different business departments and different application software function modules.

3.6. Low Cost Operation

Internet greatly reduces the operation cost of CRM, which is the most important advantage of e-commerce. In the mode of e-commerce, any organization or individual can obtain the information from the Internet at a low cost. This has brought great benefits to both enterprises and customers, and promoted people to actively collect information and communicate actively. CRM system is not only the active choice of enterprises, but also an inevitable requirement of the majority of online customers.

3.7. Web Based Functional Support

Web is not only an indispensable channel for e-commerce, but also important in infrastructure. CRM can sell and serve customers directly through web, and realize self-service, self-service, registration time, potential customer development, contract renewal, service request and telephone feedback, etc. These greatly expand the traditional marketing and service channels in time and space, so that enterprises can provide global uninterrupted services and maximize the profit opportunities of enterprises.

4. Integration of CRM with Other Systems

At present, the management systems of many enterprises are quite complex. If these systems are isolated from each other, it is difficult to give full play to their respective functions. Under the environment of e-commerce, CRM should take on the coordination function among different systems, such as ERP, SCM, BI, etc., and form a closed system through the integration of CRM, so as to provide customers with more complete and immediate services, comprehensively improve the operation ability of enterprises and reduce the cost of IT system.

4.1. Integration of CRM and ERP

The traditional ERP system focuses on the internal management of enterprises and lacks the function of facing customers directly. However, under the environment of e-commerce, the competition among enterprises is more direct, and the business model has changed from order centered to customer-centered. As the front-end extension of enterprise management system, CRM system can directly contact with customers and fully tap the potential of customers. However, as the front desk of enterprise management, the sales, market and service information of CRM must be timely transmitted to the financial and production departments in the background, which is the key to the effective

operation of enterprises. Therefore, the integration of CRM and ERP in e-commerce environment is inevitable. The integration content can include product management, customer management, workflow management, marketing and order management; the integration method can adopt the middleware mode. Data flow can be divided into one-way and two-way in the process of integration. We should carefully consider the trade-off between meeting the business requirements and controlling the development cost. At the same time, we should also pay attention to the integrity and consistency of data integration. After the integration of CRM and ERP, enterprises can effectively combine internal and external management, optimize the process, drive the management reform of business process reengineering, and maximize profits.

4.2. Integration of CRM and SCM

SCM manages suppliers, raw materials, channels, inventory, market development, price system, brand promotion, etc., while CRM takes customers as the management center. Whether it is marketing, sales, or after-sales service, the enterprise operation revolves around customers. The design and configuration of traditional CRM and SCM systems are completely separated, which eventually leads to the "vertical shaft" development between them. CRM system in e-commerce environment extends the management object to the category of direct customers, including business agents, media partners, suppliers and so on. From this point of view, there is a large part of intersection between SCM and CRM. Integrating some links, management modules and management ideas of SCM system into CRM system is more and more widely adopted by CRM product suppliers. For example, the complete "to order production" mode adopted by Dell company is a supply chain integrating suppliers and customers, which is the integration of CRM and SCM, so that SCM extends to the final consumers and coexists with CRM. Of course, different enterprises have different customer relationship networks. How to connect with the supply chain network is a specific strategic problem. As long as these specific problems are solved, enterprises can have a business model with unique competitive advantages.

4.3. Integration of CRM and BI

When CRM interacts with customers, there is a demand for data mining and analysis, such as the analysis of the characteristics of customer clusters and the impact and reaction of market activities on each cluster. This requires Bi technology to help mining customer resources and data of CRM. Intelligent and complex functions such as regression analysis can analyze and study customers more deeply and help managers make better decisions. Therefore, under the environment of e-commerce, CRM system is introducing real-time and automatic Bi technology, and the traditional data recording mode is replaced by the more advanced Bi technology. At present, many CRM suppliers provide products with Bi technology as a part of the toolkit. By fully mining the existing data resources, capturing information, analyzing information and communicating information, many data relationships that were not known or not known in the past were found. With the deepening of the integration process of CRM and Bi, the CRM system based on Bi technology will have more characteristics of decision analysis, which makes the whole system show stronger control ability of business data and process. Of course, different industries, different demands, different CRM concepts and processes, and different Bi.

A large number of surveys and industry analysts believe that the establishment and maintenance of customer relationship is the only and most important basis for gaining competitive advantage, which is the direct result of the transformation of traditional business model by network economy and e-commerce. CRM system through the effective integration of customer management, business processes and professional technology, and ultimately provides a perfect integration for all areas of the enterprise involved in customers, so that enterprises can meet customer needs with lower cost and higher efficiency, improve customer satisfaction and loyalty, and excavate and maintain the customer group that can bring the maximum value to the enterprise. The integration system of e-commerce and CRM is not only a need of technical effectiveness, but also an innovation of operation and management. It provides a business automation solution for the enterprise in the fields of sales, customer service and decision support, so that the enterprise has a front line of facing customers based on e-commerce, so as to realize the transformation from traditional enterprise mode to e-commerce

The transformation of modern enterprise model.

5. Reference

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