

Managing Customer Relations in Electronic Business

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Abstract

This paper highlights the importance of customer relationship management in electronic commerce. It provides an overview of the functions and tools that can be applied to enhance customer service and discusses how Australian organisations manage customer relations. The findings of a research project conducted in Australia to establish e-commerce trends highlighted the fact that customer service in electronic commerce is vital. The paper illustrates the strategies for successful customer relationship management in the electronic commerce environment, where the merchant and the customer do not meet face to face, and there is the vulnerability of losing a client with the click of a mouse.

Keywords

Electronic Commerce, Customer Relationship Management, HAO702 Electronic Markets, HAO801 Electronic Mail, GA01 Competitive Use of IS

INTRODUCTION

The novel and diverse opportunities afforded by electronic commerce have received much attention in the popular and academic presses. Individuals and businesses alike are implored “to take a ride and travel along the information super-highway” with the expectation of great gains for minimal effort. Often the perception is that it is only necessary to build a web site, and customers will beat a path to your business’ door. The reality is that organisations must completely adopt an electronic viewpoint with regard to their business and processes, to take advantage of the reported improved operational efficiencies and boosted revenues promised by proponents of electronic commerce. Yet, in itself, this strategy is not enough.

Today, the most important asset a company must maintain, is its customers. As suggested by Kalakota and Robinson (1999) it costs six times as much to sell to a new customer than to sell to an existing one; and a typical dissatisfied customer will tell eight to ten people about his or her experience. In addition, a company can boost its profit 85% by increasing its annual customer retention by only 5%; with the odds of selling a product to a new customer at only

15% whereas the odds of selling a product to an existing customer are at the 50% level. Further findings indicated that 70% of complaining customers will repeat business with a company if it quickly takes care of a service fault. However, they have also established that at present more than 90% of existing companies don't have the necessary sales and service integration to support e-commerce. Electronic commerce is exponentially increasing the availability of information, giving customers access to more knowledge, of better quality and faster than before. With electronic commerce, power is shifting to the customers, a click of a mouse is enough to select a new provider. Business online provides an information rich environment that speeds up processes by which competitors can identify, match and improve product innovation.

Effective customer relationship management is important in electronic commerce, where clients are more discerning with increased options and solutions available to them online. As customers assimilate technology their expectations about service, support, and how they make purchases are changing. This paper discusses the importance of customer relationship management while examining tools and techniques for enhancing customer service in an electronic commerce environment. Issues are identified from a study of Australian organisations, which illustrate the importance of customer relations. Although the study aimed to investigate electronic commerce objectives, opportunities, challenges and the technological infrastructure requirements of electronic commerce, this paper presents the further finding that customer service, support and expansion were the major motivations for adopting online business.

Customer Relationship Management in Electronic Commerce

Customer relationship management (CRM) is an integrated sales, marketing and service strategy that precludes lone showmanship and depends on coordinated actions (Kalakota and Robinson, 1999). CRM utilises existing relationships to increase revenue by identifying, attracting and retaining the best customers. Information is integrated to improve service, save customers' time and ease frustration. Customer service applications in electronic commerce have become important with the proliferation of customer contact channels. Many more employees are involved in sales, necessitating consistency in account management and selling. A company that can respond to the needs of customers and accommodate their requests promptly creates value and wins customer patronage and loyalty. A proactive solution strategy to resolve problems at first call also satisfies customers. Organisations should surprise customers with information indicating how well they know them and avoid customer repetition of information to different departments in the organisation.

Mok (1999) emphasised that CRM is a technology, which acts as the central nervous system of the company. It seeks to make the entire business more connected and intelligent by linking the company's back-end system and front-end applications, customer interfaces, as well as data sources, together, which in turn allows information to be shared and displayed. Mok also goes on to say that if customer relationship is effectively managed, it can enable the organisation to become more competitive and attain a growth in business.

As suggested by Turban et al (2000) customer service in electronic commerce is more critical than in conventional sales, since customers and merchants do not meet face to face. The increased information available to marketers and advertisers, the streamlined supply chain, and the new retail channel made possible by electronic commerce significantly affect the satisfaction of a business's customers whether they are individual consumers or in other businesses (Adam et al (1998). Archer and Yuan (2000) emphasise that building and

maintaining customer relationship is the key to success in e-commerce and, unless service is maintained, customer loss may result, more than offsetting any cost efficiencies due to the introduction of e-commerce technology. Relationships in the business-to-business environment are based heavily on information exchange, which has a fundamental effect on market growth and structure. Supplier-customer relationships depend upon the functional activities such as incoming logistics, operations, outgoing logistics, marketing and sales, and services (Porter, 1985). Archer and Yuan further explain that when a network links supplier and customer, in each of these functions information is entered, used, generated, and transmitted by internal information systems which potentially may be shared between the parties. In each function there are opportunities to gather information during customer procurement activities, and to use this information to improve the possibility of continuing a profitable relationship between partners. Ho and Wu (1999) are of the opinion that in electronic commerce all potential Internet users are potential customers. For businesses to win these potential customers and to convert them into real ones depends on effective customer relationship management.

Electronic Commerce Customer Service Functions

Customer service functions according to Turban et. al., 2000, and Watson et al (1999) that enhance relationships in electronic commerce are:

Answering Customer Inquiries

Customers place great importance on the ability to get free information on demand. Detailed information as well as general browsing, readily available at the click of a mouse on a point of interest provided as a service during the prepurchase phase, becomes as important as the purchase itself. Innovative use of links and key words need to be the norm for building Web sites that keep the consumer coming back for more. The Internet provides the ability to embed numerous links to other information sites to get further useful information or transactions. These links may include related information from experts and incorporate web site 'attractors' with facilities for interaction.

Support in the form of intelligent and software agents may also be provided. These are computer programs that help customers find and compare products. Such agents enable customers to conduct routine tasks, search and retrieve information, support decision making and act as domain experts without the need for human intervention.

Providing search and comparison capabilities

One of the major problems in electronic commerce is finding what you want. With so many stores online and many more added constantly, it is difficult for a customer to find what they want even inside a single mall. Once a product/service is found, the customer usually wants to compare prices. Several sites provide efficient search engines for such purposes. Such a search engine as described by Turban et al (2000) p. 103, is a '*computer program that can automatically contact other network resources on the Internet, search for specific information or key words and report the results*'.

Providing technical and other information

Interactive experiences need to be tailored to induce the customer to commit to a purchase. The follow up experience of service takes a partnering role in developing market research that will enable the business to capitalise on the preferences and needs of the Web customer. For example, airlines and hotels are offering customers the advantage of direct booking. These customer services include providing maps, price comparisons, push technology that sends

email information about cheap tickets to favourite destinations, weather, travellers' experiences, and other relevant news.

Letting customers track accounts or order status

Customers can view their account balance at a financial institution and check their merchandise shipping status anywhere, at any time. The traditional banker's hours have left the scene, and individual and business customers can check balances, transfer funds between accounts and make and monitor investments at their own convenience. Similarly clients can easily find the status of their stock portfolio, loan applications and track their packages. Notification to customers by e-mail of the acceptance of an order, the anticipated delivery date, and later the actual delivery date is a further service that customers appreciate.

Allowing customers to customise and order online

The ability to place orders at any time over the Internet has expanded business hours to be round-the-clock for both vendors and consumers. Customer service by Dell Computers includes pre-packaged 'specials' to customers who are given the option to 'custom-build' systems. Add ons, troubleshooting, and frequently encountered problems are handled with ease on these sites. The ability to download manuals and problem solutions at any time is another innovation of electronic commerce customer service.

Tools for Customer Relationship Management

There are many innovative Web-related tools to enhance customer service in electronic commerce. These include:

Personalised Web Pages

Many companies are allowing customers to create their own Web pages. These pages can be used to record purchases and preferences. Also, customised information such as product details, add-on purchases and warranty information can be delivered on these Web pages. The information is easily disseminated when the customer logs on to the electronic commerce Web site. Not only can the customer pull information as needed, but also information is pushed to him or her. The customer databases record purchases, problems and requests. This information can be utilised to improve customer service.

FAQ's

Frequently asked questions (FAQ's) is the simplest and least expensive tool to deal with repetitive customer questions. FAQ's are developed to provide answers to common questions about products, services or their applications. Customers use this tool by themselves (on the Web) which makes delivery cost minimal.

A Chat Room

Chat Rooms attract new customers, increase customer loyalty and enhance relationships. For example, a virtual vineyard's chat room allows a customer to discuss issues with both company experts and wine lovers.

Email and automated response

The most popular tool of customer service is e-mail. Inexpensive and fast, e-mail is used to disseminate information (eg. confirmations), to send product information, to conduct correspondence regarding any topic, but mostly inquiries from customers. To answer a large number of e-mails quickly and cost efficiently automated e-mail reply systems can be implemented. Automated e-mail reply systems can respond to customer inquiries using intelligent agents that recognise key words.

Help Desks and Call Centres

To find answers to electronic commerce queries customers can communicate by telephone, fax or e-mail. However, because initially this communication was done by phone these remote help desks are referred to as *call centres*. For electronic commerce new products are extending the functionality of the conventional call centre to e-mail and to Web interaction, integrating these into one product. For example, *eFrontOffice* combines Web channels such as automated e-mail reply, Web knowledge bases, and portal-like self service, with call centre agents or field service personnel. Such centres are sometimes called *telewebs*.

Ho and Wu's (1999) research indicates that the most important factors in electronic commerce customer service are logistical support, technological characteristics, information characteristics, homepage presentation and product characteristics. Logistical support requires quick response to customers' needs via e-mail or fax, quickly delivering goods for customers, and providing after sales service. Technological factors include modern computer and network facilities and well-structured information systems. Information factors encompass reliable output information and secure transaction. Homepage presentation should provide for an easy to use interface and detailed information about goods. Product characteristics take in the variety of goods and services made available at lower prices.

Turban et al (2000) also suggest that customer loyalty can be increased by increasing customer satisfaction. In electronic commerce this can be achieved by gaining information about customers and their potential needs. Trust is particularly important in global business due to the difficulties of taking legal actions in case of a fraud and the different cultures and business environments involved. It is also necessary for customers to have trust in electronic commerce infrastructure and environment.

RESEARCH METHODOLOGY

During 1999 an exploratory study in electronic commerce was conducted to identify electronic commerce initiatives, opportunities and trends in Australia. This study was an extension of a US study initiated by Georgia State University to Australia. Data was gathered from 20 companies by means of semi-structured interviews, based on the proforma developed for the Georgia State University study. The interviews explored patterns of adoption, perceived benefits, challenges encountered and the impact of electronic commerce on business. The companies were selected on the basis that they had been identified as significant e-commerce initiatives within the state of Victoria. The names of companies were acquired from documents that listed them as 'electronic commerce success stories' (Phillips, 1998) and from Internet searches. Victorian companies that had a presence on the Internet with online transaction capability were identified from different search engines. Although it was intended to investigate different industry sectors, the 20 case studies are representatives of those organisations with whom interviews could be arranged in the year 1999. Initial

contact was made by telephone with the person who headed the electronic commerce project at the organisation.

Extending the US study in Australia required the use of the same research methodology, which incorporated case studies. The case study approach was considered to be the most appropriate, since the project was exploratory. Yin (1994), describes exploratory studies to contain a number of 'what' and 'how many' type of inquiries, which were the nature of questions, included in the interview tool used to collect data. The interview tool comprised 5 major sections that included questions on the objectives of developing electronic commerce, the opportunities, challenges, technological requirements and the impact on business. With the permission of the interviewees all interviews were recorded on tape and later transcribed. Data collected were qualitatively analysed using a meta-matrix. Meta-matrices have been described by Miles and Huberman (1994) as master charts assembling descriptive data from each of several cases in standard format.

Companies Investigated

For reasons of confidentiality, names of companies discussed are not identified. In this paper they are referred to as Companies A to T listed in Table 1. Of these, Companies E, I and T are virtual organisations, while the others are examples of bricks and mortar organisations that have adopted the Internet as a new channel of business. Although all of them have some business-to-business (B2B) e-commerce, Companies D and S are examples of B2B e-commerce only. Companies G, K, L and N are examples of Government, City Council and University services to consumers while the others are examples of business to consumer retail businesses.

Case	Initiatives and Opportunities
Company A A weekly newspaper for sale of second hand items	Increased circulation of advertisements, expanded existing market, reached out to customers at greater distances, reduced costs, reduced the time required to process an order, new ways of doing business, faster searching of items by customers, allow users to place adverts, allow customers to edit their adverts. online
Company B A retail outlet	A better relationship with customers, expanded customer base, increased sales, getting to know customers
Company C A multinational computer manufacturer	Captured markets both nationally and internationally, Reduced the need for middle people, traced buying habits of customers, easy demand forecasts, dealing with customers directly,
Company D A business to business steel distributor	Increased business, automated repetitive processes, reduced stock, shifted business to business transactions to the Internet
Company E Electronic lottery ticket retailer	Increased sales, expanded customer base, won the confidence of customers with increased credit card payments,
Company F Information and research broker	Savings on labour costs, automated processes, improved customer relationship by offering 24 hour service, reached out to non-Australian customers.
Company G Government and City Council services	Online booking and payment, better account monitoring, reduced the number of middleman, increase business-to-business and business-to-customer linkages.
Company H Entertainment event ticket broker	Reduced the number of middleman, obtained new distribution channels, expanded business
Company I Vendor of stamps and philatelic supplies	Increased sales and customer base , educate potential customers
Company J Retail product sales/ catalogue services	Increased customer base both nationally and internationally, add services such as catalogues, provide the best customer service
Company K	Improved customer service, improved business with 'smart technology'.

City Council	
Company L Government Department	Quick and improved transaction records, reduced paper work, reduced costs, provide customers with a better service and increase options
Company M Travel agent	Better customer service with 'click, talk, walk', to be competitive, 24 hr shopfront, reduced costs
Company N University	Provide campus services online, better customer service, reduce face to face contact, increase the use of remote offices, incorporate e-commerce with multimedia for a better service to customers
Company O Retail (durable good (flowers))	Increase customer base, improve customer service, promote business, competitive advantage, gaining knowledge and technologies
Company P Software Company	Reaching clients at greater distances, quick retrieval of information, amass large amount of information,
Company Q Australia Post	Capture new customers, exploit new technologies to offer better customer service, offer customised products and services
Company R Bookseller (Retail)	Provision of updated information to customers, improved efficiency, reduced costs thus reduced prices to consumers
Company S B2B hardware	Wider clientel, apply 'push' technology to increase business, improve business processes, reduce overheads, reduced cost for warehousing, easy marketing, speeds negotiation process, access to international markets, improved lead times
Company T Bookseller (virtual)	No overheads, no cost of warehousing, quick dissemination of information, marketing on the Web, electronic information delivery

Table 1: Electronic Commerce Initiatives and Opportunities

FINDINGS

Although the findings of this research project identified numerous e-commerce issues, the discussion in this paper concentrates on customer relationship issues. It is apparent from Table 1 that customer service and support is one of the most promising areas of electronic commerce. With electronic commerce, Australian organisations are developing stronger relationships with their business partners and customers. They have encouraged patronage with their customers by offering them value-added services. Customer service functions and tools identified from this research that were popular with Australian e-commerce organisations are discussed in the following section.

Convenience

With online business, enterprises have opened their doors '24 hours, 7 days' allowing customers to shop at times convenient to them. Customers have the opportunity to surf through the site and place their orders online. Respondents believe that giving customers the power to control their shopping enhances satisfaction. Through automated customer services such as entering orders and tracking the transaction and shipment status of goods ordered, organisations have increased their customer base and retention rate.

Valuable one-to-one relationship

One of the respondents emphasised that '*via e-mail order acknowledgment, we recognise and address our customers by their first names*', developing a valuable one-to-one relationship. In many cases the suppliers were now dealing with customers directly forming strategic bonds with them. This contact also increases customer interaction and online business. They are also gauging customer opinions about products and services and accordingly improving efficiency in service, support and order entry functions. Another respondent's view was that '*a close relationship with customers can be developed from a distance in electronic business*'.

Accurate order entry and payment

Orders received online as compared to handwritten ones received via fax has assured accuracy and further improved customer satisfaction. Electronic payment methods have been offered to customers so that transactions are completed online at the customers' convenience. Customers are given control by allowing them simple inquiries like account history and checking order status. Account balances can be called up and simple problems solved independently by clients. They can enquire and inform the supplier about any discrepancies in their orders such as incomplete information, typographical errors and incorrect account details.

Data Mining

Companies C, O and S captured customer information, analysed it to determine customer demands and interests, and responded to customers in real time. The web activities of users provide a significant opportunity to create user profiling to build a customer database for direct selling of value added goods and services. Company C implemented a system integrated to its web page, to gather and store information about individual customers, which can be accessed every time an individual interfaces with the organisation. It is to understand customers' changing needs and placing a process to satisfy those needs.

Security

Many of these online organizations are including security information on their web sites to win customer confidence. The perceived security risks of Internet transactions discourage some users from making transactions online. It was emphasized by one of the respondents that *'many potential Web shoppers abort their transactions due to security fears'*.

Customer Care Including Presale And Post-Sale Assistance

Companies C, P and T included customer care such as pre-sale and post-sale assistance with photographs, product information, frequently asked questions (FAQ's), and opinions of some valued customers on their web sites. With the hyper link capability of the web organisations have been able to provide additional information about new products and services to prospects and customers. They were applying technologies such e-mail, fax on demand, online information and chat to provide better pre and post sale information.

Electronic commerce technologies can be directly focussed on improving customer service. Some organizations were convinced that *'customer service is improved through the introduction of comprehensive electronic tools'*. Effective web sites, help-desks, technical support systems, web site attractors, FAQ's, chat and automated responses were some of the technologies applied by the organizations investigated. New and fresh information on the web site is essential to keep customers visiting the site again and again. As quoted by one of the respondents *'it is important to regularly update web pages to keep customers interested'*. One organization capitalised on multimedia applications to better present information and services to customers. Another organisation programmed web capabilities to deliver gratitude, congratulations and confirmations to clients.

Other findings include providing a *'one-stop shop for customers'*. Organisations have realized the benefit of including all functions to complete transactions electronically. They value the role of additional information about products and services to customers. Another view captured in this research was that *'with electronic business all customers are treated the same'*. The nature of business is global and services offered on the web are the same. Therefore customers from different countries, regions, social status and age are treated the

same. Although B2B electronic commerce examples in this research were few, an important finding is that *'with B2B electronic commerce regular feedback from customers and business partners is very important'* to build customer loyalty and to further develop enterprise relationship management. Designing web pages that are easy to navigate and self explanatory help customers complete a transaction electronically. Tools, assistance and support, along with products and services made available online will result in satisfied first time customers who will *'gain the education/knowledge to use it again'*.

DISCUSSION

The success of a company is measured by how effectively it interacts with its customers. Thus customer-centricity facilitated by the Internet and the Web, is at the heart of electronic commerce. These research findings have confirmed that customer relationship management is important in electronic business to acquire and retain clientele. Although electronic commerce is a new way of doing business in Australia, and at the time this research was conducted most of the participating organizations were novices with this phenomena, it is interesting to note that improved customer service was one of their main objectives of doing business on the Web.

It is evident from this research that Australian organisations are harnessing the Internet and the Web to become customer-centric. To assist customers determine needs, textual descriptions of products, video presentations, articles and reviews, sound, photographs of products and other features of electronic marketing have been incorporated in their web sites. Online order entry, negotiations, closing of sale, downloadable software, security information and delivery details have been utilised by both product and service industries to support customers. Sustaining customer support on an ongoing basis with online user groups, online technical support, frequently asked questions and answers, resource libraries, newsletters and online renewal of subscriptions were some of the less popular customer services implemented, however, it is evident that business enterprises were quickly identifying tools to acquire new, and retain existing customers. Helping customers to dispose a service or product with online resale and classified advertisements as suggested by Turban et al (2000) were not utilised by any of the organizations investigated.

It is clear from the findings that the five characteristics of customer satisfaction in electronic commerce, ie logistical, technological, information, homepage presentation and product characteristics, identified by Ho and Wu (1999), have been embraced by Australian organizations. Organisations have included logistical support with quick response, rapid delivery and after sale service to their customers. Technological characteristics for appropriate electronic commerce infrastructure and information issues with reliable and secure transaction features have also been incorporated. Effective homepage design, with easy navigation to support customers, although a fairly basic CRM tool, has been identified from this research to be an important customer service support. Product characteristics, which include a wide variety of goods at lower prices, an important objective of electronic commerce in Australia was not identified from this research.

In the online environment the power is fast shifting to consumers who can switch to a new provider with a click of a mouse. This necessitates that online enterprises offer extraordinary service, create positive customer experiences and thereby gain loyalty. It can be seen that a complete organisational focus on customer relationship management supported by appropriate electronic technology is required to generate predicted savings of maintaining loyal customers, to improve operational efficiencies and boost revenues as promised by

electronic commerce. It is essential to create a community of users with a well designed and easily navigable web site where customers sense comfort and return as their first point of contact with an organization. Maximum efficiency is gained when customer contacts are managed by tying web technology with back office systems such as order processing, purchasing, payment integration and after sales service. An integrated and responsive e-business is then able to present itself to the consumer as an on-line store front. Clients would then satisfactorily receive end-to-end customer service from initial contact through to the purchasing cycle from order taking to delivery and after sales service. Ideally there would be quick and appropriate responses to queries, complaint, product returns and billing adding to overall customer comfort. In a market where so many players are now customer-centric, organizations which view the web as a completely separate entity from their back-end systems and customer service functions are doomed to failure

The findings of the US study (Straub, 1998), highlighted that enhancing customer relations in electronic commerce should be a long term strategy of all organisations. It also indicated that US electronic commerce organisations managed customer services by providing personalised services, allowing customers to self-serve, building online communities to educate customers and increase customer loyalty. Other customer support functions identified in the US were the important role of e-mail for quick response and feedback, and the importance of online tracking. The study also highlighted the fact that in the USA, customers preferred e-mails to voice mails, and e-mails were important to reduce communicator frustration. It was emphasised that without quick online responses, US organisations lost customers to other traders.

To make customer relationship management an important electronic commerce strategy the importance of e-mail responses have also been highlighted by the Australian study. Tools and functions available to enhance customer support are equally applicable to all electronic commerce environments. Although Australian electronic commerce is not as developed as it is in the US, the customer service support issues identified from the two studies are similar. It has also been highlighted that many of the CRM tools discussed in the literature had not been adopted by the Australian e-commerce organisations at the time this research was conducted.

CONCLUSION

It can thus be concluded that customer relationship management in electronic commerce is crucial to sustain a competitive advantage. Issues discussed in this paper were the initial findings from a study of 20 Australian businesses moving to an electronic business environment. Maintaining and improving customer relationships was highlighted by many of the companies as a major reason to move to e-commerce. The nuances of customer service in electronic commerce need to be handled by systems that are easy to use and responsive to requests, that furnish timely and accurate responses and are intuitive to use. As customer relationship management becomes accepted as mainstream practice, several propriety software solutions are now on offer from major IT service providers. In electronic commerce customer relationship management focus is on sales automation, call centres, data warehousing, customer analytical tools and other software and hardware to acquire, retain and deliver services to customers.

Further research is required to address the impact and level of use of the CRM tools discussed earlier from the customers' point of view as well as other e-commerce models such as B2B, G2C etc. To date, participating companies are yet to report any negative implications of e-

commerce with respect to customer relationship management or even explore the many possibilities of electronically nurturing their customer base.

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