

THE SIGNIFICANCE OF E-BUSINESS AND KNOWLEDGE-BASED CUSTOMER RELATIONSHIP IN THE E-MARKETPLACE ENVIRONMENT

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ABSTRACT

Freedom, choice and simplicity brought about by e-business and knowledge-based customer relationships are creating the next Internet and mobile wave. The Value Web Technology of enterprise interactions has emerged in the consumer centric world. The combination of evolving business drivers (e.g: globalisation, downsizing), changing customers' demands and the evolution of enabling technology is producing e-business applications in the e-marketplace environment. The Internet and mobile technology inform an organisation that the network offers an opportunity to establish more personal, efficient and competitive relationships with the customers in a new scenario. This paper focuses on the e-marketplace environment and presents some of the findings within an organization using e-business. This organisation focuses on the knowledge-based customer relationship as one of the core competency strategies to gain a competitive advantage at the e-marketplace.

INTRODUCTION

The Internet, mobile and e-commerce affect the traditional dynamics of all industries in the marketplace. Today's businesses are caught in a state of flux, and it is under such a circumstance that nimble and innovative companies can exploit the Internet, mobile technology and e-commerce to adopt a new model, new technologies and create a new role in the marketplace.

In response, forward-thinking Asian companies are shifting gears from managing product portfolios to managing customer portfolios. The focus today is on customer relationship management (CRM). Companies

emphasize customer growth and retention of customers, in addition to finding new ones. They are compiling database on individual customers so that they can understand them better and construct individualized offerings and messages. They are replacing monologues with customer dialogues and improving their methods of measuring customer profitability and customer value. (Kotler *et al.*, 2003)

Knowledge-based customer relationship management is the 'in thing' in today's environment. This paper presents the practical applications used for organisations in different industries. Walker (2001) acknowledges the fact that more companies are recognizing the fact that the service center is critical to their success. They are placing much emphasis on the service center's mission of keeping their own employees productive. They also realize the value of providing good customer service.

This paper discusses the new economy at the e-marketplace commerce web as being given a facelift by the e-business phenomenon with the focus on knowledge-based customer relationship. The knowledge-based customer relationship provides the knowledge for an organisation to look at the root causes of problems in customer relationship that impact the organisations especially the marketing department. This paper suggests an initiative for e-business strategies.

E-BUSINESS AND KNOWLEDGE-BASED CUSTOMER RELATIONSHIP

Electronic business (e-business) is no longer the buzz word but it is very much considered as a vital strategic tool among companies. Although e-business has brought about change in the way

businesses are conducted and has constantly appeared in the national media, there is still no one universally accepted definition of e-business.

Botto (2000), refers to e-business as a generic term used to describe business processes implemented in electronic or virtual environments like the World Wide Web. Turban *et al.*, (2004) describe e-business which includes not just the buying and selling of goods and services, but also servicing customers, collaborating with business partners and conducting electronic transactions within an organisation.

Van H., *et al.* (2001) define e-business as "a secured, flexible and integrated approach to delivering differentiated business value by combining the systems and processes that run core business operations with the simplicity and reach made possible by the Internet Technology."

E-business facilitates businesses through the Internet and the mobile platform. E-business has also created the value web technology of enterprise interaction in the consumer centric world, as shown in Figure 1. The Value Web comprises of Organisations, Customers, Suppliers and Dealers.

Basically, the value web is a network that integrates Customers and Partners with the organisation. In short, e-business facilitates the integration of processes, applications and information systems that synergizes the collaboration, coordination and relationship in the new economy model of e-marketplace commerce web.

In Digital Capital Tapscott *et al.*, (2000) suggest that the currency of the new economy is not hard capital but knowledge and relationship capital. Tiwana, (2001) lists the key factors that

have driven businesses from the 1960s to the present as shown in Table 1.

E-MARKETPLACE COMMERCE MODEL

E-marketplace is an environment where the marketplace exists electronically. The Internet is where the e-marketplace surfaces and the next big wave of e-marketplace will be on the mobile technology.

Figure 2 shows the e-marketplace commerce web model. This is the work done by the author who lectures and trains participants and post-graduate students. The E-marketplace Commerce Web model is supported by the Interoperability Services, Supplier Network and Commerce Services Providers. Interoperability Services such as the Internet Service Provider (ISP), Telecommunication firms, and Gateways provide users with the infrastructure to gain access to the Internet and mobile network, whereas the Supplier Network such as system, service providers, and software provides users with the interface for communication.

In the business environment, one cannot neglect the role of commerce service providers who support the completion of the actual transaction between the seller and the buyer in the e-commerce environment. Commerce service providers can be divided into two categories: e-payment (Banking) that ensures the flow of money and the e-fulfillment (logistics) that ensures the flow of goods and services, whereas the insurance and inspection services can fall under the e-payment or e-fulfillment categories may act as assurance.

The Electronic Commerce Web model in Figure 2 shows the Business to Business (B 2 B),

Table 1. Emergence of Business Drivers, 1960 -2000 (After Tiwana, 2001)

Era	Emergent Forces
1960s	New products
1970s	Low Cost manufacturing
1980s	Total Quality Management
1990s	Customer relationships and one-to-one marketing
2000s	Knowledge-enabled relationship management and e-business

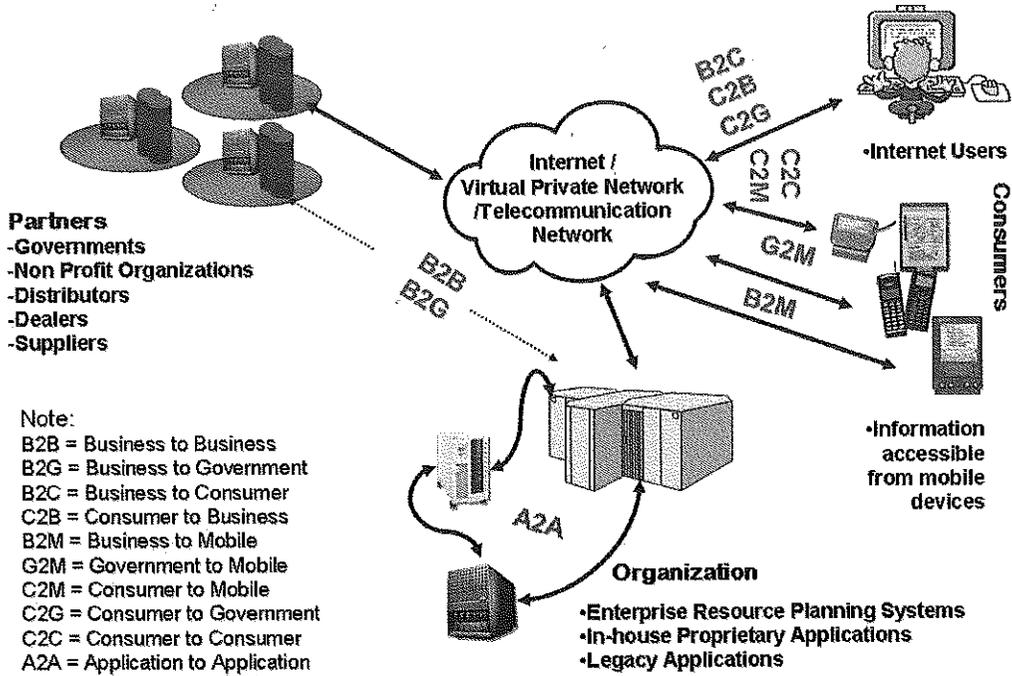


Figure 1. Architecture Overview of Value Web Technology

Business to Consumer (B 2 C), Business to Government (B 2 G) and Business to Mobile (B 2 M) model that support the complete seller-to-buyer relationship (e-commerce) in the e-marketplace environment. The seller and buyer relationship (e-commerce) can also be extended to other parties like government organisations, for example, the government to government (G 2 G) as well as consumer, like the consumer to consumer (C 2 C).

Electronic commerce is a subset of e-business that appears in the national media. It becomes a point of discussion during business meetings and social gatherings frequently. If we look at the e-marketplace commerce web, e-business facilitates the integration of processes, applications, and information systems that synergise the collaboration, coordination and relationship in the new economy model as shown in Figure 1 (Architecture overview of value web technology). As unpredictable opportunities for value creation emerge, e-business must be able to see the windows of opportunity and fill them through what management guru Drucker (1999) calls purposeful opportunism.

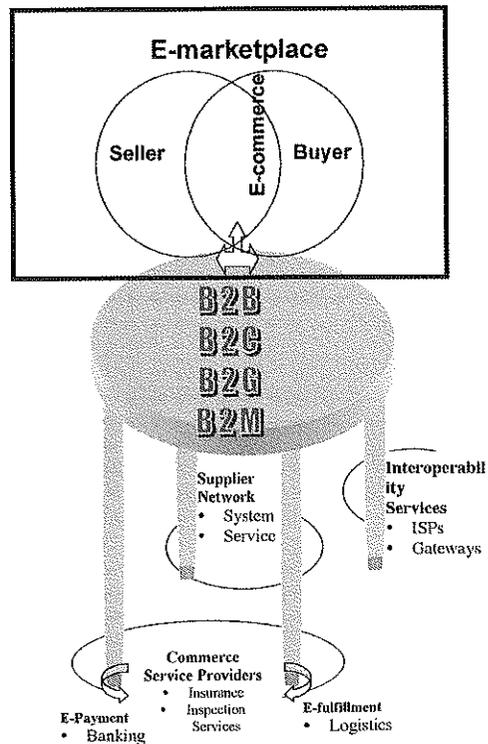


Figure 2. E-marketplace Commerce Web Model

Organisations with more foresight recognise that "a tide taken at the flood can lead to fortune" (cited from Julius Caesar, written by William Shakespeare, 1599). But, where does this tide lead to, and what does it imply for the role of e-business and knowledge-based customer relationship in the e-marketplace commerce web?

The following sections present the root causes of problems in customer relationship and strategies for managing knowledge-based customer relationship with initiatives of short term and long-term outlook of e-business synergy for practical applications in organisations.

CONSUMER CENTRIC WORLD

In the Consumer Centric World, the customers and not the sellers are in control. The consumers submit a bid and businesses will respond partially or in total to the submitted bid. The new paradigm will cause great change from the perspectives of Information Technology as well as marketing. In the 7 days x 24 hours x 365 days environment that is highly scaleable, available and global, the technology changes everyone's role. Pine (1999) suggests that offering memorable experiences is a way to create value and add differentiation

The Internet and mobile teach an organisation that the network offers an opportunity to establish more personal, efficient and competitive relationships with the customers in a new paradigm. The Value Web model in Figure 1 shows how each section of the value web integrates with each other to increase the business value in the e-marketplace environment. This realization is what initiates the e-business journey.

E-BUSINESS STRATEGIES FOR MANAGING KNOWLEDGE-BASED CUSTOMER RELATIONSHIP

Brown (2000) emphasizes that Customer Relationship Management is an enterprise-wide approach to not only acquire customers, but also to improve and automate business processes that deliver value to an organisation's customers, suppliers, dealers and employees.

The root causes of problems in customer relationship and strategies for managing knowledge-based customer relationship with

initiatives of short term and long-term outlook of e-business synergy are shown in Table 2 in a marketing department.

Marketing (Sales)

Sales start when a customer makes a purchase of products or services from an organisation. It is vital for an organization to understand the customers so that the sale can be closed. The poor matching of customer to plan during a sales process is one of the root causes of losing potential customers. The initiatives from the e-business side will be the online portal which incorporates an intelligent system.

The short term strategy will focus on incorporating plan-matching worksheet such as mobile services which include international call, voice conferencing services, itemised billing. These services are incorporated into rate-plan brochures. The long term strategy, on the other hand, will focus on computer-based plan matching tool with competitors' plan for the purpose of comparison. The information will help managers to make good decisions.

One of the root causes of problems in customer relationship during the marketing period is that the customers do not fully understand the company's plan or promotion; thus the company's initial expectations do not match subsequent realities or results. A strategy of managing this area will be through interactive web-based applications for dealers and customer service. The short-term strategies include providing a customer checklist in the service agreement and providing take-away on rates or promotions to the dealer. In the long term, the organisation may develop a new, standardised dealer training curriculum, and encourage dealers to attend such training.

Some organisations, like Maxis, have already set up the "Dealernet" portal to support their dealers nationwide with constant upgrading on contents. The area of conflicting information in points of sales and customer care on rate plans, promotions, handset policies and others can be overcome with online customer service via phone or web. In the short term, it will be ideal for an organisation to provide points of sales gifts with

Table 2: E-business Strategies for managing knowledge-based Customer Relationship

Impact	Root Causes (Problems)	Short-Term Initiatives	Long-Term Initiatives	E-Business Initiatives
Marketing (Sales, Points of Sales)	Poor matching of customer to plan during sales process	Incorporate plan-matching worksheet into rate-plan brochures	Computer-based plan matching tool with competitor comparison	Online portal with Intelligent system
	Customers do not fully understand their plan/promotion and initial expectations do not match subsequent reality	↑ Include customer checklist in service agreement and provide take-away on rates/promotions	Develop new standardized dealer training curriculum and encourage dealers to attend training	Soft Forms Dealer Interactive (Dealernet)
	Conflicting information from POS and CC on rates, promotions, handset policies, etc.	Provide POS gifts with special customer care phone line	Consistent training of customer care and POS representatives	Online Customer Service (phone & web)
Marketing (Billing)	Customers are unclear about new products and services	Educate customers on features and key issues	Develop integrated product marketing program	Integrated Home page Market Intelligence
	Dealers are not given incentive to engage in retention marketing	↑ Change dealer incentives to include activated/deactivated quota	Implement communication channel between dealers and marketing group	Online Dealer management
Marketing (Collection)	Customers are unable to easily upgrade plans and promotions	↑ Introduce system to up-sell customers who call customer care	Allow upgrade to new promotion and rate plans without losing benefits	Online Customer Services
Marketing (Customer Care)	CC managers do not have service quality measurements that are accurate/actionable	Modify quality scoring measurements with greater weight on resolution	Implement improved call-monitoring system	Customer Management Support System
Marketing (Loyalty)	Customer Service Relations (CSRs) lack tools and authority to resolve calls quickly	↑ Empower CSRs to make minor changes to customer accounts	Develop CSRs interface and integrate it with new CSR call guidelines	Empowerment through automated routing
	Inaccurate information provided to customers due to outdated info. Systems	Provide incentives to collect latest information for database.	Assign responsibility for updating central rates and policy database	Customer relationship management system

CC : Customer Care CSR : Customer Service Relations POS : Points of Sales

special customer care phone lines that have already been updated with the latest information.

Consistent training of customer care and points of sales representatives are vital in servicing customers in the long term. However, it is also important to address the needs of the customers in an ongoing process. For instance, Maxis has the Maxis call centers that take care of customers by providing good customer services; the Maxis Academy Center provides training and staff development to enhance the quality of services provided by their staff.

Marketing (Billing and Collection)

Marketing has its role to play in billing and collection. Furthermore, billing and collection are vital for an organization to be in business. It is the role of an organization to gather and provide relevant information to dealers and customers so that the process of billing and collection can be smooth.

The integrated homepage with market intelligence is used to provide information to customers who are unclear about new products and services. In the short term, the organisation may educate customers on features and key issues of the organisation, while in the long term, the organization will develop an integrated product marketing programme to update customers on any news and latest offers. The organisation faces the challenge of attracting the customers to visit the home page, as well as collecting frequent feedback. Updating information about customers is important so that an organisation can proceed with the billing and collection.

If the customers are not satisfied, there will be a tendency of not paying the organisation that supplies the product or service. O'Connor *et al.* (2001) express that today's customers are more demanding, and less willing to forgive companies whose products and services do not meet their high standards. Furthermore, the demand for greater flexibility in the purchase of goods and services leads to proliferation of distribution channels and customers.

Therefore, it is vital for an organisation to ensure that the customers are satisfied and will pay for the products or services. This also extends

to the parties that liaise with the customers like the dealers. Dealers may be one of the main channels of distribution but dealers are often not given any incentive to engage in loyalty marketing since the dealers are given incentives only when the customers sign up and make the payment.

The e-business initiatives of the online dealer's management of marketing activities to retain customers, including using Short Messaging Services (SMS) alert for instant prompting, is vital. In the short term, the organisation may need to change dealer incentives to include activated or deactivated quota while in the long run it may implement a communication channel between dealers and marketing groups through online dealer management.

Tiwana (2001) agrees that knowledge gained from Customer Relationship Management techniques enables a business to efficiently create new delivery channels and capture massive amounts of actionable data from existing customers' need in real time.

Inability to easily upgrade plans and promotions for customers is another root cause of churn (the process of customer turnover); a high churn rate implies high customer disloyalty. Plans and promotions need to be supported with e-business initiatives of onlines customer services. In the short term, the organization may introduce a system to "up-sell" customers who call the customer care phone lines, while in the long run, the organization can upgrade itself through new promotions and rate plans, without losing online benefits (the self service concept).

Some organizations like Maxis Berhad have already moved into this area by introducing their e-customer service online whereby Maxis customers can view and change services, as well as make payments online at <http://www.maxis.com.my/eservices/login.asp>

Marketing (Customer Care and Loyalty)

Consumers often encounter some form of "moment of truth" in one way or another. The moment of truth is when the service really happens (Hultman, 2005). These moments include the marketing that covers the sales or points of sales, leading to the billing, collection, customer

care, and loyalty marketing. Carlzon (1989) expressed that it is in the moment of truth encounters that customers receive a snapshot of the organisation's service quality and each encounter contributes to the customers' overall point of view of the organisation. Each encounter thus presents an opportunity to prove the organizations potential as a quality service provider, and to enhance customer loyalty.

Customers of any organisation would have certain expectations of that organization. Expectation can be described as beliefs about the service offered which, when compared with the perceived quality that is actually delivered, are presumed to influence the satisfaction and perception of the value of that service offered (Coye, 2004). Therefore, it is vital for organisations to strategize to gain higher customers' satisfaction.

Another root cause of the customer relationship is that the customer care managers do not have service quality measurements that are accurate or practical. This can be solved by the e-business initiatives of the customer management support system. In the short term, organisations will need to modify the quality scoring measurements which place greater weight on resolution. At the same time, organisations need to implement an improved call-monitoring system in the long-term plan.

The strategy of empowerment through automated routing on the system helps to serve the customers better by improving the service provided by customer service relation personnel (CSRs) that currently lacks the tools and authorities to resolve calls quickly. Empowering customer service relation personnel to make minor changes to customers' accounts is a short term solution while developing a customer service relation interface and integrating it with new customer service relation call guidelines are beneficial in the long run. Inaccurate information provided to customers due to an outdated Information system is another problem.

This can be solved with e-business initiative of customer relationship management information systems. In the short term, the organisation will need to provide incentives to

collect the latest information for its database while assigning responsibility for updating central rates and the policy database in the long run. Organisations may like to set up a loyalty marketing department like Maxis One Club to support this area in the long term.

Malhotra (2000) agrees that access to an organisation information base, authority to take decisive action, and the requisite skills are embedded in the front lines where real action takes place so that strategy is devised and implemented in real-time.

CONCLUSIONS, IMPLICATIONS AND FURTHER RESEARCH

The knowledge of customers that was derived from the information collected does help the management in decision-making. An organization that wishes to be competitive in the e-marketplace will need to look at its e-business strategies and incorporate knowledge-based customer relationships in real time. This can also be one of the organizations core competencies.

In the consumer centric world, it is vital for an organization to identify the root causes of problems in customer relationship and provide strategies for managing customers like the initiatives of e-business through short term and long term views, as shown in Table 2, using the architecture overview of value web technology shown in Figure 1.

It is hoped that this paper serves as an eye-opener on a fairly new area of e-business which can be explored through further studies and research in numerous areas. A few areas of interest are as follows:

- a) In the Information Technology (IT) or Information Communication Technology (ICT), the end to end value web integration as discussed in the paper has enabled a greater network accessibility and availability. At the same time it calls for greater security.
- b) For marketers:
The knowledge-based customer relationship management system will be able to provide a platform for further research in consumers' behaviour and other areas of study.

- c) For Management:
Organisations are given a greater integrated spectrum of managing including areas like processes and operations. Management can look into Business Process Management for further study.

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